

# Species and Habitats Guide



This Habitats and Species Guide provides information, including photos, about the life and the environment visitors may experience on the Refuge. Find the Guide in notebooks at the Refuge Headquarters and the Visitor's Center, and online at <u>https://www.friendsoftualatinrefuge.org/Habitat-Species-Guide</u>. The online Guide includes references to the authors' sources following each habitat and species article. Ask for a Watchable Wildlife brochure at the Vistor's Center. Currently, this guide only has information about birds. Additional species and habitats will be added.

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# Commonly Seen Birds at The Tualatin River National Wildlife Refuge



Canada Goose



Mallard



American Crow



Great Egret



Cackling Goose



American Coot



Steller's Jay



Great Blue Heron



Northern Pintail



Killdeer



Calfornia Scrub-Jay



Barn Swallow

#### Commonly Seen Birds



**Common Yellowthroat** 



**Red-winged Blackbird** 



Song Sparrow



Bald Eagle

Click image for species information



White-crowned Sparrow



Spotted Towhee



Dark-eyed Junko



Red-tailed Hawk

Click image for species information

## Grebes

Cormorants



**Pied-billed Grebe** 



**Double-crested Comorant** 

# Bitterns, Herons and Egrets



Great Blue Heron



Great Egret



Green Heron

## Swans, Geese and Ducks



Cackling Goose



Canada Goose



Greater White-fronted Goose

#### **Bird Photos**



Snow Goose



Northern Shoveler



Ring-necked Duck



Tundra Swan



Northern Pintail



Click image for species information

**Cinnamon Teal** 



Green-winged Teal



Ruddy Duck



Mallard



Gadwall



American Wigeon



Bufflehead

**Bird Photos** 





Wood Duck



Lesser Scaup



**Blue-winged Teal** 



Hooded Merganser



Killdeer

Mourning Dove

**Black-necked Stilt** 

## Sandpipers and Phalaropes



**Greater Yellowlegs** 



Dunlin



Sandpipers



Long-billed Dowitcher

## Owls



Gulls

**Gull Species** 

# Hummingbirds



Anna's Hummingbird



Western Screech Owl

## Kingfishers



Belted Kingfisher



Great Horned Owl

## Vultures



Turkey Vulture

## Woodpeckers



Downy Woodpecker



Pileated Woodpecker



Northern Flicker



Red-breasted Sapsucker

## Crows, Jays and Magpies



American Crow



Steller's Jay



Calfornia Scrub-Jay

## Swallows



Violet Green/Tree Swallow



Barn Swallow



Northern Rough-winged Swallow



**Purple Martin** 

## **Titmice and Chickadees**



Black-capped Chickadee



Chestnut-backed Chickadee

# Nuthatches



**Bushtits** 

Bushtit

## Creepers



Red-breasted Nuthatch



White-breasted Nuthatch



**Brown Creeper** 

## Wrens



Bewick's Wren



Pacific (Winter) Wren

Kinglets



Marsh Wren

## Starlings



Golden-crowned Kinglet



**Ruby-crowned Kinglet** 

## Thrushes



**European Starling** 



Western Bluebird



American Robin



Swainson's Thrush



Varied Thrush

#### **Bird Photos**

Click image for species information

# Waxwings Tanagers Swifts



Cedar Waxwing



Western Tanager

Wood Warblers



Vaux's Swift



Orange-crowned Warbler



Common Yellowthroat



Yellow-rumped Warbler



Wilson's Warbler



Townsend's Warbler



Yellow-breasted Chat

## Falcons and Caracaras



American Kestrel



Peregrine Falcon

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## Ospreys, Kites, Hawks and Eagles



Osprey



**Bald Eagle** 



Northern Harrier



Sharp-shinned Hawk



Cooper's Hawk

**Sparrows and Towhees** 



Red-tailed Hawk



Spotted Towhee



Golden-crowned Sparrow



Song Sparrow



Savannah Sparrow



White-crowned Sparrow



Dark-eyed Junko

#### **Bird Photos**

## Cardinals, Grosbeaks and Allies



Black-headed Grosbeak



Lazuli Bunting

## **Blackbirds and Orioles**



Red-winged Blackbird



Western Meadowlark

## Finches



Brewer's Blackbird



House/Purple Finch



American Goldfinch

**Gallinaceous Birds** 



**Evening Grosbeak** 



**Ring-necked Pheasant** 



California Quail

## Pied-billed Grebe (*Podilymbus podiceps*)

## Description

When you look at open water areas of the Tualatin River National Wildlife Refuge, you may see a small, plump, dark brown, duck-like bird with a thick, stubby bill and almost no tail. It will not be part of a flock of ducks or geese, but all by itself. It may be floating on the water one minute, and then suddenly dive beneath the water – only to pop up a little while later. This is the Pied-billed Grebe.

Although resembling ducks, the Piedbilled Grebe is in a different family, the *Podicipedidae* – Grebes. Other members of this group in Oregon include the Rednecked, Horned, Eared, Western and Clark's grebes. Of these, the Pied-billed is the only one you can often see at the Refuge.

Pied-billed Grebes are 12-15 inches long, with a wingspan of 18-24 inches. During the summer months, their bills are light grey with a broad black band. This coloration is why they are called "piedbilled" grebes. Males and females are similar, but juveniles have black and white streaks on their faces and upper necks.







Pied-billed Grebes (Ken Durbin)

You will probably not see the feet of this species, but they are webbed. Each toe has lobes that stick out to the side. These are like paddles and enable Pied-billed Grebes to swim and dive very well. The location of the feet, far back on the body, gives them excellent diving ability. However, this makes it difficult to walk on land. The Pied-billed Grebe's species name, *Podiceps*, is Latin and refers to its foot location toward the rear of the body. (Pod = foot; ices = rear.)

## **Diet and Feeding Behavior**

Pied-billed Grebes will eat aquatic plants, but they mainly eat insects (such as beetles and dragonfly nymphs), crayfish, frogs, tadpoles, salamanders, snails, shrimp, leeches, and even fish. All their food comes from their watery habitat. They forage (hunt for food) by diving and swimming underwater, using their lobed feet. Pied-billed Grebes capture most of their food during these underwater dives. Pied-billed Grebes may eat their own feathers. Adults may feed their feathers to their young. It is thought that this aids digestion.

## Reproduction

After a courtship that involves a lot of calling and male/female duets, a Pied-billed Grebe pair builds a nest that is made of aquatic vegetation – both fresh and decayed. Their brown color provides good camouflage in their marshy nesting habitats. The nest floats but is securely attached to emergent plants (aquatic plants that are partially above the water surface). By late April, the female lays 4-7 light blue eggs (although occasionally she might lay as few as 2 or as many as 10). Both parents incubate (keep warm) the eggs. If the parents leave the nest, they will cover the eggs with rotting vegetation, which hides the eggs from predators and maintains a proper temperature.

Baby Grebes hatch after 20-27 days and may leave the nest within 24 hours. Although they can swim and dive from birth, baby Pied-billed Grebes mostly stay out of the water, and sleep on their parents' backs. At this early age, the baby Grebes will also hop onto their parents' backs

Grebes

when frightened. However, young Grebes start swimming within a month and eventually learn to dive when frightened.

This species is territorial during the breeding season and will defend its nesting site out to about 55 yards. Therefore, small lakes and ponds may have only one breeding pair.

## **Distribution and Habitat**

The Pied-billed Grebe is a water bird. It feeds in open water (even on sewage treatment ponds), and breeds at edges of freshwater lakes, ponds, wetlands, marshes, and even slow-flowing rivers.

The species has a huge range. It is found throughout North America, Central America, the Caribbean, and South America. It breeds from central Canada as far south as central Chile and southern Argentina.

Pied-billed Grebes that live in <sup>bill</sup> areas where water freezes in the winter will migrate. They do this at night.



Pied-billed Grebe Range Map. https://www.allaboutbirds.org/guide/Piedbilled\_Grebe/maps-range

## Conservation

The Pied-billed Grebe is widespread and common in Oregon and throughout most of its range. But in New England, they are declining, and it is a mystery as to why. Overall, there are no immediate concerns about the species. However, they are very sensitive to disturbance, especially humans. If scared while breeding, adults may abandon their nests. Waves from boats can destroy nests. Loss of habitat is the main threat to the species, especially draining and filling of wetlands.

## Grebes

## **Fun Facts**

- Pied-billed Grebes have several nicknames, including dabchick, devil-diver, helldiver, water witch, and divedapper.
- The Pied-billed Grebe is rarely seen flying. It escapes predators by diving or slowly sinking beneath the water like a submarine. It will rise carefully



Partially submerged Pied-billed Grebe (Ken Durbin)

to see if the coast is clear by sticking only its head above water.

- Pied-billed Grebes make strange yelping noises that sound like kuk-kuk-coow-coow-coow-cowp-cowp-cowp.
- Fossils of the Pied-billed Grebes we see today are more than 30 million years old.

# Cormorants

## Double-crested Cormorant (Phalacrocorax auritus)

The Double-crested Cormorant is a large, skinny waterbird with a long, snaky neck. Its feathers, legs and webbed feet are black. It has a yellow-orange face. Juveniles are grayer overall and lighter on the neck, chest, and belly. The Double-crested Cormorant's bill is as long as its head and hooked at the end. Its overall length beak to tail is 28 to 36 inches, with a wingspan of about 45 inches. The Doublecrested Cormorant weighs 2.5 to Only breeding pounds. 5.5 males have crests This infrequently seen crest consists of white feathers where ears might Double-crested be. Cormorants often nest, fly, and hang out in groups that range from a few to thousands.



Double-crested Cormorant (Ken Durbin)



## **Diet and Feeding Behavior**

Double-crested Cormorants swim low in the water and dive to catch fish, their primary food. They are strong swimmers and may look like they are flying underwater. Double-crested Cormorants also eat crayfish, crabs, frogs, salamanders, and even insects. They may swallow small fish underwater, but for larger ones, they surface to clean or stun the fish

#### Cormorants

before swallowing it. After eating, Double-crested Cormorants find a rock, post, or branch to perch on and spread their wings to dry. They spend a lot of time resting.

## Reproduction

Double-crested Cormorants nest in colonies. One colony may be a dozen, hundreds, or thousands of nests spread across several trees, cliffs, or the ground. A colony may include other bird species. The male picks a spot, attracts a female, and brings her nest materials. These are mostly sticks, but often include rope, fish nets, plastic, flat balloons, and even parts of dead birds. The female builds the nest and keeps other Cormorants from stealing her materials. The finished nest is 1.5 to 3 feet across and 4 to 17 inches deep. The female usually lays 3 or 4 eggs. Both adults incubate the eggs (keep warm), which hatch after 25 to 28 days. Both use their beaks to bring food (and water when it's hot) to the young. The chicks can leave the nest at 3 to 4 weeks old, fly after another 2 weeks, and swim a week after that. The average lifespan in the wild is 6 years.

## **Distribution and Habitat**

Double-crested Cormorants are widespread. They live along the Pacific, Atlantic, and Gulf Coasts of North America. An interior population North breeds in Central US and Central Canada, most heavily along the Great Lakes. The interior population migrates to the three coasts in winter. Double-crested Cormorants are the only cormorants commonly found in fresh water. In Oregon, this is primarily the Columbia River, but



Double-crested Cormorant Range Map. https://www.allaboutbirds.org/guide/Doublecrested\_Cormorant/maps-range

#### Cormorants

they may spread to almost any river, pond, or lake that has fish. At the Refuge, look for Double-crested Cormorants in the main ponds near the Visitor Center in spring and fall. They do not nest on the Refuge.

## Conservation

Double-crested Cormorant populations declined for many years due to shooting and pesticide poisoning, but they are now widespread and abundant, with an estimated 740,000 in North America. In general, they are of low concern.

As the Double-crested Cormorant population rebounded in the Pacific Northwest people became concerned about this fish-eating bird's impact on fingerling salmon. Double-crested Cormorants and salmon coexisted in the Pacific Northwest long before humans arrived here and for thousands of years after humans arrived. Human activities, including the Columbia River dams now threaten or endanger several salmon runs.

The US Army Corps of Engineers (Corps) dredges the Columbia River so that ships can safely navigate the river to Portland and beyond. As part of its dredging operations the Corps deposited dredged sand to enlarge East Sand Island near the mouth of the Columbia. Doublecrested Cormorants found East Sand Island much to their liking as a nesting site. The colony became the largest known Double-crested Cormorant nesting site with 12,000 pairs by 2015.

To protect the fingerling salmon headed past East Sand Island to the ocean, the Corps proposed killing East Sand Island Double-crested Cormorants by shooting the birds and taking other actions to discourage nesting. The Corps applied to the US Fish & Wildlife Service (FWS) for a permit to kill the Cormorants, which FWS granted. Since the FWS is charged with protecting the Cormorants under the Migratory Bird Treaty Act, the Corps could not kill the Cormorants without a permit.

From 2015-2017 the Corps killed thousands of Double-crested Cormorants and otherwise interfered with nesting. In 2017 the East Sand Island colony collapsed. It is not clear that the Corps efforts helped the salmon. The population of nesting Double-crested Cormorants upriver from the East Sand Island increased. Some scientists believe that there is a greater diversity of prey for Double-crested Cormorants near East Sand Island. Thus, the diversion of Double-crested Cormorants away from East Sand Island may increase the birds' predation on fingerling salmon. The controversy over salmon protection, in general, and Double-crested Cormorant management, in particular, continues.

## Fun Facts

- Up close, one might see that Double-crested Cormorants have bright blue eyes and a bright blue inside of the mouth. Two rivals may open their mouths to show the shocking blue, shake their heads, and hiss at each other. A male also uses its blue mouth to attract a mate.
- A Double-crested Cormorant may carry stones to its nest and treat them like eggs.
- Sometimes all the poop from a colony builds up and kills the nest tree. When that happens, the birds may nest on the ground.
- Cormorants are called shags in Great Britain and former British territories like New Zealand.
- The oldest known Double-crested Cormorant in the wild was 22 years 6 months, banded in Ontario and found in Louisiana.

# Herons and Egrets Great Blue Heron (Ardea herodias)

The Great Blue Heron is a wading bird and belongs to the family Ardeidae which includes herons, night-herons, egrets and bitterns. The genus name *Ardea* (Latin) and the species name *herodias* (Greek) both mean heron.

The Great Blue Heron is the largest member of this family in North America, standing a little over five feet tall (160 cm), with a body length from beak to tail of 38 to 54 inches (97 to 137 cm) and weighing 4.5 to 5.5 pounds (2.1 to 2.5 kg). Adults have a bluish gray upper body and a



Great Blue Heron (Ken Durbin)

rust-brown neck with white and black streaks in the front. Their heads are white with a dark blue streak above the eye that extends to the back of the head. They have yellow eyes, a long yellowish beak, and very long brownish or greenish legs. The sexes are very similar. Instead of the distinctly white crown on the heads of adults, juveniles have a dark gray crown, which gets progressively whiter with each molt until attaining adult plumage by their third autumn.

Great Blue Herons fly with a slow and deep wing beat, carry their long necks in an S-shape curve, and extend their legs straight behind them. When resting, the Great Blue Heron holds its neck in an S-shaped curve. When hunting it extends its neck out straight, ready to strike.

## **Diet and Feeding Behavior**

Great Blue Herons feed on a variety of animals – mostly fish, but also amphibians, large invertebrates, mammals, reptiles, and even birds. At Tualatin River National Wildlife Refuge, visitors often observe Great Blue Herons hunting 1) fish or frogs in the marshes or along steams or 2) small mammals (e.g., voles) and large insects in the uplands. A Great Blue Heron often uses its long, tapered beak to spear prey. It then manipulates the prey with the upper and lower mandibles of its beak until it can swallow the prey whole. The Great Blue Heron digests the bones of its prey, but often regurgitates the hair from mammalian prey as a pellet.

## Reproduction

Most Great Blue Herons can start breeding during their third spring (22 months). The majority of herons nest in breeding colonies that may have hundreds of nests in tall trees. Each pair constructs a nest made of sticks. Great Blue Herons take 3 days to two weeks to construct a nest. The male brings, and the female places, the sticks. In



Great Blue Heron nesting colony (Rick Bennett)

Oregon, egg laying starts as early as late February. A female lays a clutch of 2 to 6 eggs – one egg laid about every other day. Both males and females incubate (warm) the eggs. Incubation usually starts before all eggs are laid – sometimes as early as after the first egg. The incubation time until hatching for each egg is about 27 days, but the early onset of incubation means that hatching is asynchronous (i.e., the hatch time between the first and last chick may be 2 to 8 days apart).

#### Herons and Egrets

Pale gray down covers newly hatched chicks' head, back and sides. Wings are mostly naked. Eyes are open and bluish. Both parents feed the chicks and brood them when it is cold. For the first month, parents usually regurgitate food into the nest for chicks to eat. Later, chicks take food items directly from the parents' beaks. Chicks start wing-flapping at about four weeks and start short hops to nearby branches at seven weeks.

Chicks leave the nest in an average of 81 days (range: 64 to 91 days). The chicks grow from about 1.75 ounces (50 g) at hatch to adult size (i.e., about 40 to 50 times heavier than at hatching) when they leave the nest. Fledglings may return to the nest to be fed by their parents for a few weeks, but become independent after that.

Great Blue Herons in Oregon generally raise no more than one successful brood per year. Late starting nests are thought to be renesting attempts by pairs whose first nest failed. Annual average reproductive success for colonies studied throughout North America

ranged from 0.5 to 2.7 fledglings per nest initiated. Several studies show greater reproductive success in larger colonies.

#### **Distribution and Habitat**

Great Blue Herons are widespread and adapt to a variety of habitats. The Great Blue Heron's range includes all of the United States (except Alaska and Hawaii), Mexico, and southern Canada (Figure 3). While Great Blue Herons inhabit a wide variety of aquatic habitats (e.g., marshes, lake shores, rivers and streams, estuaries, and ocean shorelines), they also use upland meadows and grasslands.



Map by Cornell Lab of Ornithology Range data by NatureServe

Figure 3: Great Blue Heron Range Map

Herons and Egrets

Tualatin River National Wildlife Refuge visitors find Great Blue Herons in most refuge habitat types, including the open marshes, Rock and Chicken Creeks, the seasonal ponds, the oak savannah, and habitat edges. While most often seen standing on the ground or in shallow water, Great Blue Herons also perch on tree branches.

Based on long-term trends reported by the Breeding Bird Survey, Great Blue Heron populations are generally increasing in the United States, but decreasing in Canada. Populations are increasing in the Willamette Valley, but are stable or decreasing in other areas of Oregon.

## Conservation

Like many other herons, hunting for food and plumes decimated Great Blue Heron populations in the late 1800s, but by the 1970s they had rebounded throughout most of their range. However, Great Blue Herons' dependence on wetlands for feeding and relatively undisturbed wooded sites for breeding makes them vulnerable to human disturbances to wetlands and near breeding colonies.

## **Fun Facts**

- We often see Great Blue Herons hunting during the day at Tualatin River National Wildlife Refuge, but they also hunt at night thanks to a high percentage of rod-type photoreceptors in their eyes that improve their night vision.
- A Great Blue Heron can swallow prey items that are many times wider than its narrow neck.
- Great Blue Herons have specialized powder-down feathers on their chest that continually grow and fray. The herons comb these feathers with a fringed claw on their middle toes, using the down from the feathers like a washcloth to remove fish slime and other oils from their other body feathers as they preen.
- Although scientists have calculated that the average age of breeding herons is about 5 years old, the oldest Great Blue Heron, based on banding recovery, was 24 years old.

## Great Egret (Ardea alba)

The Great Egret stands out because it is a large, white heron with an S-shaped neck. The species has a long, pointed yellow bill and long black legs and black feet. It is much larger than its close relatives, the Snowy and the Cattle Egret (which are not found in the Tualatin River NWR). The Great Egret is not as large as another relative, the Great Blue Heron (they are both in the genus Ardea), which is a different species. They do not interbreed. During the breeding season, adult Great Egrets sport beautiful long plumes of white feathers that extend beyond their tails.

#### **Diet and Feeding Behavior**

Great Egrets feed in lakes, marshes, ponds, meadows, pastures and streams. They



Great Egret (Ken Durbin)



Egret Chicks. (KatVitulano Photos), 05/01/2017 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-ncnd/4.0/

have quite a varied diet, consisting of small fish, snakes, frogs, salamanders, crayfish, lizards, mice, snails, moles and insects. It is fun to watch them slowly stalk their prey, and suddenly strike with their long bills.

#### Reproduction

Great Egrets breed every on continent except Antarctica. In the Pacific Northwest, the species southeastern breeds in Oregon, Washington, east-central and southern Idaho, and occasionally on the southern Oregon Coast. The largest nesting colony in Oregon is at the Malheur National Wildlife Refuge, which has their preferred breeding habitat—bullrush and cattail marshes. Breeding starts in early April, and young egrets fledge



Cough it up Mum! (Andy Morffew), 04/02/2015 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

(fly) by the end of August. The Great Egret lays between 3 and 5 eggs in a nest made of sticks. The nests are usually in willow and other trees. Great Egrets are colonial nesting birds, meaning that several pairs each build a nest in the same tree or nearby trees.

## **Distribution and Habitat**

Great Egrets breed on every continent Antarctica. In except the Pacific Northwest, the species breeds in Oregon, southeastern east-central Washington, and southern Idaho, and occasionally on the southern Oregon Coast. The largest nesting colony in Oregon is at the Malheur National Wildlife Refuge, which has their preferred breeding habitat-bullrush and cattail marshes. Breeding starts in early April, and young egrets fledge (fly) by the end of August. The Great Egret lays between 3 and 5 eggs in a nest made of sticks.



Great Egret Range Map. https://www.allaboutbirds.org/guid e/Great\_Egret/maps-range

The nests are usually in willow and other trees. Great Egrets are colonial nesting birds, meaning that several pairs each build a nest in the same tree or nearby trees.

#### Conservation

People once hunted Great Egrets to near-extinction in the 1890's for their beautiful plumes, which were used to decorate women's hats. Efforts of the Audubon Society and the federal government stopped the hunting and protected the species. More recent concerns are unstable breeding conditions caused by drought or high water.

## **Fun Facts**

- Both male and female Great Egrets incubate eggs for 23-24 days.
- The species is fairly new to western Oregon. Up until 1940, only one bird had been found (in 1933 at Swan Island in downtown Portland). It wasn't until the 1960's that they were regular visitors.
- Great Egrets can forage (hunt for food) 5-10 miles from their nests!

## Herons and Egrets





Great Egrets at Tualatin River National Wildlife Refuge (Ken Durbin)

# Green Heron (Butorides virescens)

The Green Heron is a small heron with a dagger-like bill and yellow-green legs. Its feather colors are striking. An adult has a dark green back and crown. Its breast neck are and chestnutcolored. The Green Heron can raise its dark cap into a crest. Its neck may look short and thick but is long, as can be seen when the Green Heron stretches it out. The Green Heron is about 18 inches head to tail and weighs about a half pound. That is roughly 1/3 the size and 1/10 the weight of a Great Blue Heron, commonly at the seen Refuge. A juvenile Green Heron has a striped chest.

#### **Diet and Feeding Behavior**

Green Herons eat mostly small fish, but also eat insects, spiders, and other small animals. They may stalk along the water's edge or stand in one spot, then lunge to grab or spear food



Green Heron (Ken Durbin)

with their beaks. Since Green Herons are small, they prefer water that

is 4 inches or less deep. However, sometimes they dive to catch a fish and then swim back to shore.

## Reproduction

The male Green Heron selects a territory and calls for a mate. He starts building a nest of twigs, then brings more for the female to place. Green Herons usually nest over or near water in a shrub or on a tree branch. Green Herons take advantage of overhanging branches to conceal the nest. A pair may nest alone or as part of a colony. The flat nest is 8 to 12 inches across. The female lays 3 to 5 eggs. Both parents keep the eggs warm (incubate) for 19 to 21 days. They both tend the young. Hatchlings stay in the nest 16 or 17 days and on branches nearby for another 5 or 6 days. The young are then ready to fly. The adults regurgitate food to the young. A pair of Green Herons may have one or two broods a year.

## **Distribution and Habitat**

Green Herons have a wide range. They breed along the US West Coast, the eastern half of the US, and much of Mexico. Central America. and the Caribbean Islands. Those from northern areas migrate south for the winter. Green Herons like the edges of lakes and ponds, swamps, and rivers. Outside of nesting season, they are usually alone. At the Refuge, look carefully along pond edges and on snags in the river in spring, summer, and fall. If you see a bird in flight that looks like a small Great Blue Heron (neck crooked back with legs trailing the body), it is



Green Heron Range Map.

https://www.allaboutbirds.org/guide/Green\_Heron/ maps-range

likely a Green Heron. The Green Heron is a secretive bird, so seeing one is a treat.

## Conservation

Due to its secretive nature, it is difficult to estimate the Green Heron population. Various sources disagree whether the Green Heron population is increasing, stable, or decreasing overall. Green Herons may be increasing along the US west coast. Threats include snakes, raccoons, crows, and habitat loss.

## Fun facts

- Some references classify Green Herons, Striated Herons, and Galapagos Herons as the same species. Others say they are separate species.
- Green Herons use tools, sometimes dropping feathers and insects in the water as bait to catch fish.
- The oldest known Green Heron was 7 years 11 months when captured in Mexico. It had been banded in Oklahoma.

# New World Vultures Turkey Vulture (Catharses aura)

If you see a very large, dark bird with long, broad wings and a very small head, chances are it is a Turkey Vulture. At first glance, you may think you're seeing a bald eagle or a hawk. But there are things to look for which indicate it's a Turkey Vulture. Turkey Vultures are smaller than eagles, but larger than hawks.



Turkey Vulture (Ken Durbin)

The head of an adult Turkey Vulture appears small (and red) because it lacks feathers. Juveniles have gray heads; otherwise sexes are similar.

When soaring, Turkey Vultures hold their wings in a "V" position called a dihedral, and they teeter-totter. Turkey Vultures rely on air currents to keep them airborne, and rarely flap their wings. The underside of their wings has a silvery sheen on the outer part of their feathers, giving them a two-tone appearance.

When perching, this 25-32-inch-long bird has a hunched posture. But this species often spreads its wings (which can span 70 inches) in the morning. Turkey Vultures do this to warm themselves and dry nighttime dew from their feathers.

Turkey Vultures rarely make any sounds, other than with their wingbeats. Once in a while, they make a soft hissing sound or grunt.

#### New World Vultures

#### New World Vultures

## **Diet and Feeding Behavior**

**Vultures** Turkey are scavengers, meaning they eat rotting meat called carrion. Unlike most other birds, the part of their brain with smell receptors (called the olfactory bulb) is very large. This enables them to locate their food by detecting a chemical produced by rotting meat. Turkey Vultures soar over large areas, searching for dead animals. Turkey Vultures use their strong, pale beaks to rip apart the carcass, holding it



Turkey Vulture Head. (Brian Smucker)

down with their feet. Several Turkey Vultures sometimes work as a team to tear a carcass apart, especially if it's tough. Turkey Vultures' heads lack feathers, so they can pry deep into carcasses without risking infection from microbes and toxins found in decaying flesh. Turkey Vultures have very good immune systems which also protect them from disease.

Although it was once believed that Turkey Vultures eat only dead animals, they have been observed eating ripe or rotting fruit, bird eggs, and even bird nestlings!

#### Reproduction

Turkey Vultures don't breed until they are 6-8 years old. They do not build nests, but instead nest in caves, on cliff ledges, and in hollow trees or logs. Turkey Vultures may use the same nest site for years—even a decade or more. Females lay 1-3 eggs (usually 2) between May and July, and both parents incubate the eggs (keep warm) for 38-41 days. The newly hatched vultures are often blind and defenseless. Both
parents feed the young by regurgitating (throwing up) food into their mouths. The young fledge (leave the nest) 8-13 weeks after hatching. Both parents care for the young for a long time.

## **Distribution and Habitat**

Turkey Vultures breed throughout the U.S., southern Canada, and Central and South America. Turkey Vultures are often the first migratory birds see returning you'll to the Refuge in the spring. The western Oregon Turkey Vultures winter in northern California. Other populations of the species winter in Arizona, Texas, much of the southeastern U.S., and in South America. Turkey Vultures leave the Willamette Valley in mid-September to early October.





This is a species that spends time soaring over open areas such as farmland, ranches, and broad valleys. However, in the late afternoon, Turkey Vultures fly away to roost in tall dead or dying trees (or sometimes on large utility towers), often in very large numbers. There they will stay until morning, waiting until the air is warm enough to create updrafts for soaring.

Turkey Vultures are found in nearly every habitat in Oregon, from sea level to mountains, while scavenging. However, they do not spend time in dense forests, and do not breed at very high elevations.

#### Conservation

The Turkey Vulture is doing well in the Pacific Northwest, and may be expanding its range, searching for roadkill. However, because they eat rotting meat, they can be poisoned by lead bullet fragments in animal carcasses left by hunters.

- It was long thought that Turkey Vultures were close relatives of hawks. But scientists now know that they are most closely related to storks. Other close relatives are the Black Vulture and the California Condor.
- Turkey Vultures' legs are whitish because they spray their feces (poop) onto their legs. When the poop evaporates, it cools their legs.
- Turkey Vultures are often called buzzards in the U.S., but in Europe a buzzard is a hawk.

# Swans, Geese and Ducks Cackling Goose (*Branta hutchinsii*)

If you're visiting the Tualatin River National Wildlife Refuge and you see a fairly large goose with a black head and neck with a white "chinstrap" on its face, you might think it's a Canada Goose. But take a more careful look. That goose may be a separate species the Cackling Goose.



Cackling Goose. (Ken Durbin)

Although they resemble Canada Geese, "Cacklers" are smaller (only 22-30 inches verses 45 inches in length), and they have rounder heads, shorter necks, and smaller bills. Some old bird books show Cackling Geese as one of several subspecies of Canada Goose. However, genetic testing has shown that the four smallest of these subspecies are actually a separate species, "Cacklers".



Cackling Goose Goslings. Alaska Region U.S. Fish & Wildlife Service, 06/23/2010 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/bync-nd/4.0/

Cackling Goose Nest. Alaska Region U.S. Fish & Wildlife Service, 06/12/2016 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-

The voice of the Cackling Goose is higher-pitched than that of the Canada Goose, and sounds like "yeek" or "uriik".

## **Diet and Feeding Behavior**

Cackling Geese eat a variety of plants, including grasses, grains, and berries. You might see them grazing in small flocks on the Refuge. When feeding in water bodies, they will put their entire heads under water to reach aquatic plants.

### Reproduction

Female Cackling Geese lay between 2 and 8 creamy-white eggs in a nest made of dry grasses, mosses, and lichens. Nests are usually on higher ground near water. The babies (goslings) are covered with down when they hatch. Within the next 24 hours, the goslings leave the nest and can feed and swim.

## **Distribution and Habitat**

Cackling Geese breed in the far north of North America—in Alaska and Canada—and lay their eggs along streams and ponds in the tundra. Some "Cacklers" nest in coastal marshes.

Cackling Geese used to migrate over the Willamette Valley and Lower Columbia River to winter in California's Central Valley. However, many started to winter in northwestern Oregon and southwestern Washington in 1985 after hunting regulations changed to protect them.



This species is abundant at the Refuge during the Spring, Fall, and Winter.

## Conservation

It's thought that Cackling Geese are doing pretty well overall. The Aleutian Cackling Goose (a type of Cackling Goose that winters on the Oregon coast) was once on the Endangered Species List, but it was removed in 2001.

- Male and female Cackling Geese look alike.
- Cackling Geese also live in Japan, eastern China, the eastern part of Russia (called Siberia) and the large Russian peninsula known as Kamchatka.
- The species' scientific name "*huchinsii,*" honors Thomas Hutchins, who was an English surgeon with the Hudson's Bay Company.

# Canada Goose (Branta canadensis)

Canada Geese are hard to miss if you visit the Tualatin River National Wildlife Refuge. They are large geese (45 inches long with a 60-inch wingspan) with long black necks, heads, and bills. Although you can't always see their legs and large feet, those are also black. Their backs are brownish-gray. The large white face patch on their heads



Canada Geese (Brian Smucker)

(sometimes called a "chinstrap") is very noticeable. This species weighs nearly 10 pounds, which is pretty heavy for a bird. Adult males and females look alike.

Canada Geese are one of the noisiest birds on the Refuge. Their "karonk, ka-ronk, ka-ronk" sounds give them the nickname, "Honker". The calls can be heard throughout the year, and are lower-pitched than a look-alike goose species also found on the Refuge—the Cackling Goose. (There are other ways of telling these species apart. The Cackling Goose is smaller than the Canada Goose—only 25 inches long with a 43-inch wingspan. The "Cacklers" have much shorter necks, rounder heads, and shorter bills. They have darker breasts than the Canada Geese).

Canada Geese tend to fly in flocks in a "V-formation", so be sure to look up in the sky when you visit the Refuge.

## **Diet and Feeding Behavior**

Canada Geese are herbivores (plant-eaters), but occasionally eat insects and small fish. They are "grazers" and prefer to nibble on the tips of tender, young grasses. Because Canada Geese forage (search for, and eat) grains and other crops, they benefit from human agriculture.

### Swans, Geese and Ducks

But this has caused problems for some farmers. In the Willamette Valley, the federal government established several national wildlife refuges to help keep geese away from agricultural areas. Canada Geese also like to eat grass in parks and golf courses, leaving their feces (poop) behind.

During the winter, Canada Geese usually make two flights each day from nighttime roost areas in order to forage. The first is around sunrise, and they fly back to their roost areas around mid-morning. They go back out to feed in the afternoon, but return to the roost sites at dusk or soon after that.

### Reproduction

Canada Geese nest on the ground at the edges of wetlands, on small islands, on vegetative "mats" in marshes, on haystacks, and on human-built platforms, if available. They are known to nest on canyon cliff ledges.

Nesting begins in March in most parts of Oregon. Only the female incubates the eggs, but the male stands



Canada Goose Gosling (Brian Smucker)

on-guard nearby. The female may take short breaks in the early morning and late afternoon to feed, drink, bathe, and preen. The male goes with her and keeps an eye out for her while she does these things.

A female Canada Goose lays between 2 and 9 eggs (the average is 5), and incubates them for about a month. All of the eggs that are laid (called a "clutch") hatch within about one day, after which the parents lead the downy youngsters (goslings) away to water. Once in the water, the goslings are safer from predators. Adult Canada Geese are very

protective of their young, and will chase and attack any animal (including a human) that gets too close.

# **Distribution and Habitat**

Canada Geese are among the most widely distributed of all North American waterfowl. The species breeds in Canada and the northern United States, including Alaska and Oregon. They leave their breeding areas in autumn and fly south to spend the winter.

During the Pacific Northwest winter, the species is numerous in the Willamette Valley, the Klamath Basin, the Columbia Basin of Washington and Oregon, and parts of Idaho. In Oregon, Canada Geese start



Canada Goose Range Map. https://www.allaboutbirds.org/guide/Canada\_Goose/ maps-range

arriving by December, but most show up in January.

At the Refuge, Canada Geese are abundant in the Fall and Winter, but common in the Spring and summer. Most Canada Geese are migratory, but there are many that remain year-round, especially if there is food to eat. In the spring and summer, you may see families of Canada Geese, including with the rapidly growing goslings, at the Refuge.

#### Conservation

Although common, Canada Geese have challenges, including loss of breeding areas, migration stopover sites, and areas to spend the winter months. Drainage and/or filling of wetlands for agriculture causes most of these habitat losses. Canada Geese (especially the babies) face other challenges, including predators such as skunks, coyotes, and crows.

- Canada Geese usually mate for life and will stay together until one of the pair dies.
- Canada Geese can live a long time. There is a record of one living more than 33 years!
- While sitting on eggs ("incubating"), mother geese make noises that the unhatched babies can hear. They actually answer by calling back!
- Scientists believe there are at least 7 subspecies of Canada Geese. Up until about 2004, they thought they were different species. One of these that occurs in Oregon is the Dusky Canada Goose.
- The male and female coordinate well during mating season. In the spring of 2019, at the Jackson Bottoms Reserve near Hillsboro, a pair of Canada Geese took over a nest platform normally used by Osprey. Osprey are large and powerful fish hunting birds. However, when the Osprey arrived to claim their nest the Canada Geese fought them off, leaving the Osprey to build a new nest nearby.

Swans, Geese and Ducks

# Greater White-fronted Goose (Anser albifrons)

Greater White-fronted The Goose (WFG) is a mediumsized goose. The WFG is noticeably larger than the Cackling Goose common at the Refuge during the winter and smaller than the common Canada Goose. The WFG reaches about 28 inches from its short bill to its tail, with a 53-inch wingspan and а weight of about 5 pounds. It is streaky brown overall, with a white rump, a stocky body, a



A Greater White-fronted Goose at the Refuge, on the pond by the Visitor Center. (Brian Smucker)

short neck, and thick orange legs. The WFG does not have the white cheeks of the Canada Goose. The "white front" in its name is an upsidedown U-shaped patch on its face, just above and beside its pinkish bill.

## **Diet and Feeding Behavior**

Greater White-fronted Geese eat sedges, grasses, berries, and tubers in summer. In winter, they eat grains left in fields, seeds, and grasses. WFG forage on land and in water, where they may look like oversized dabbling ducks.

#### Reproduction

Greater White-fronted Geese nest only in northern Alaska and the tundra of northern Canada, usually in marshy areas. The female picks a spot, preferably near a lake, in a dense patch of grass, sedge, or dwarf shrubs. She makes a scrape in the ground and adds greens to form a bowl. She usually lays 3 to 6 eggs and incubates (keeps warm) them 22 to 27 days. The young leave the nest after a day or two, able to walk, swim, and feed themselves under the watchful eye of the adults. The young can fly 38 to 45 days after hatching.

# **Distribution and Habitat**

There three are separate populations of Greater Whitefronted Geese. The first nests in Alaska and migrates over the Pacific Coast (and part of the ocean) to winter in Oregon, central California, and the West Coast of Mexico. The second group nests in Canada and migrates through the Plains states (between the Mississippi River and the Rockies) to winter in southern Texas, Louisiana, and eastern Mexico. The third group nests in Greenland and winters mostly in Ireland and Scotland, but sometimes shows



Greater White-fronted Goose Range Map. https://www.allaboutbirds.org/guide/Greater\_Whitefronted\_Goose/maps-range

up on the East Coast of the US. Greater White-fronted Geese prefer open fields, marshes, and ponds, usually sleeping on ponds. They are social and may appear in groups with other kinds of geese.

At the Refuge, look for Greater White-fronted Geese on the main ponds and in the nearby grassy areas. They may hang around at the Refuge, or they may stop briefly and move farther south. WFG are not very common here, so count yourself lucky to spot one or a group. When flying, they may be in a "V" formation or a single-file line.

#### Conservation

The Greater White-fronted Goose is common, with a stable population and is of low concern. The estimated breeding population is 2.1 million birds. Hunting is controlled, with about 269,000 a year taken by hunters. Threats are climate change, loss of habitat in their wintering areas due to swamp-draining projects, and oil drilling (if allowed to proceed) in their nesting areas, including the Arctic National Wildlife Refuge.

## Fun facts

- Greater White-fronted Goose families often stay together for extended periods. Mated pairs stay together for years, and the young from one year may help their parents tend the following year's young.
- Greater White-fronted Geese are creatures of habit. They may breed and winter in the same spots year after year.
- The species name, "albifrons," means white forehead.
- Females stock up on food before they migrate north, gaining 30% in weight.
- There is a Lesser White-fronted Goose, but not in North America. It lives in Northern Asia and Europe.
- The oldest known Greater White-fronted Goose was 25 years 6 months old when found in Louisiana. It had been banded in Nunavut, northern Canada.



Greater White-fronted Geese take flight. (Rod Roberson)

# Gadwall (Mareca strepera)

The Gadwall is a fairly large (20 inches long) duck. It is just a little smaller than the commonly seen 23-inch Mallard.

From a distance, male and female Gadwalls resemble female Mallards because of their drab appearance. However, a closer look at the male Gadwall may surprise with his handsome you feathering. A breeding male Gadwall has a delicately patterned gray back and light chestnut-colored wings. He has a buffy, puffy-looking head. The most distinguishing feature of the male Gadwall, however, is the black patch at end". its "rear Another distinguishing feature that can



Male Gadwall. Note black patch at "rear end." (Ken Durbin)



be best observed during flight is the white patch (called a "speculum") on the wing.

Female Gadwalls are slightly smaller than the males. Females are light mottled brown, like female Mallards. Female Gadwall bills are gray with orange around the edges. (Male Gadwalls' bills are dark gray or black). The heads of female Gadwalls are not as puffy-looking as the males'.

Gadwalls are quiet ducks, except when alarmed and during courtship. Male Gadwalls give a low, mep sound when courting (in the fall and early winter). Courtship also includes a display called a "burp". During a "burp" the male raises his head, arches it over his back, and then points his bill towards a female. Male Gadwalls also make loud grunt-like whistles while courting. During this display, the male Gadwall stretches his head out, with its bill dipped into the water. He will then raise his bill and send a stream of water droplets toward a female Gadwall. A female responds by arching her neck and moving her head towards the male, and then from side to side.

When alarmed, males utter a loud kack kack sound. Female Gadwalls quack like a female Mallard, but the quack is higher-pitched and more nasal.

# **Diet and Feeding Behavior**

Ducks fall into two groups based on their feeding habits—diving ducks and dabbling ducks. Diving ducks dive completely under water. Dabbling ducks tip forward and stick their heads under water. The Gadwall is a dabbling duck. Thus, the Gadwall feeds in shallow water where it can reach aquatic vegetation. It eats more leaves and stems, and fewer seeds of aquatic plants, than other dabbling ducks. Gadwalls eat pondweed, parrot-feathers (a plant with leaves that look like feathers), sedges, rushes, and widgeon grass. Sometimes, Gadwalls steal food from other ducks and American Coots.

Young Gadwalls eat insects but eventually shift to vegetation. Adult Gadwalls also eat snails, crustaceans (such as a small shrimp), water beetles, midges (small flies), and other insects. They may eat small fish, but this is rare. During the breeding season, nearly half of the diet of an adult Gadwall may consist of animals. During the winter, animals make up only about 5% of their diet.

# Reproduction

Gadwalls nest on the ground in dense vegetation, usually within 200 yards of water. When available, Gadwalls prefer islands in freshwater marshes, lakes, and ponds. Islands offer more protection against

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predators such as foxes, coyotes, and mink. A Gadwall pair will fly low over an area to select a nest site. A female Gadwall then takes a closer look on foot, guarded by the male. The female builds the nest, using grasses, twigs, and leaves, in a shallow depression. She lines the nest with soft, downy feathers plucked from her own body, and lays between 7 - 12 white eggs. It takes about a week from searching for a nest site to egg laying. Incubation (keeping the eggs warm) lasts 24-27 days. The young often leave the nest one or two days after hatching. The mother leads the youngsters to water where they must find their own food.

Male and female Gadwalls are monogamous (meaning they do not have more than one mate). Gadwalls pair up during fall migration or on their breeding grounds. Breeding begins in May and the young fledge (leave the nest) by August. A pair has only one family per year. Gadwalls are common on the Refuge in the spring and are known to breed there.

### **Distribution and Habitat**

Gadwalls most commonly breed in southwest Canada south to California, northern New Mexico, and northern Arizona. The Gadwall is a migratory duck, and winters in much of the United States and into Mexico. The Gadwall also lives in Europe and Asia. The Gadwall lives mostly on freshwater lakes, ponds, and marshes. It is not found in forested areas or in salt water.





### Conservation

Gadwall populations have increased since the mid-1960's. Although the Gadwall is one of the most hunted duck species in North America, Gadwall populations continue to grow. The species has a large range and faces no known serious threats.

- The Gadwall has also been called the Gray Duck and the Gray Mallard.
- Dabbling ducks are also called "surface-feeding" or "puddle" ducks. This group of ducks includes teals, pintails, shovelers, wigeons, and the Mallard.
- The Gadwall was first described by Carl Linnaeus in 1758.
- The species word, *strepera*, is Latin and means "noisy". The origin of the word, Gadwall, is unknown, but it has been used since 1666.

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# American Wigeon (Mareca americana)

The American Wigeon is one 16 species of about of dabbling ducks. They feed by dabbling their bills in the water. not diving. The American Wigeon is medium sized, about 20 inches head to tail. with а 32-inch wingspan and weighing about 1.5 pounds. A breeding male has a broad white crown or



American Wigeon male (Ken Durbin)

stripe from its bill across the top of its head and a wide curve of deep green from its eye to the back of its head. A female is warm brown with a brownish gray head and a dark smudge around its eye, with no white or green.



Eurasian Wigeon male (Don Holland)

American Wigeon female (Ken Durbin)

#### Diet and feeding behavior

American Wigeons eat plants they find in or under the water. They also eat insects, flies, and crustaceans, especially in the breeding season. American Wigeons also forage on land like geese, eating grass shoots.

Swans, Geese and Ducks

#### Reproduction

American Wigeons breed in the northern Rockies and plains of the Western US, Canada, and Alaska. The female makes a small depression on dry ground, up to a half mile from water, and lines it with grasses, reeds, cattails, and down. The nest is about 8 inches across and hidden by taller plants. The female lays 3 to 13 eggs (usually 8 to 11) and incubates them (keeps warm) 22 to 28 days. The male usually leaves before the eggs hatch. Right after hatching, the young can swim and feed themselves, following their mother. The young can fly 7 or 8 weeks later.

#### **Distribution and Habitat**

At the refuge, Wigeons are usually seen only in winter, typically on or near the ponds. They usually appear in flocks, with sometimes their close relatives, Eurasian Wigeons. A male Eurasian Wigeon looks like an American, except its crown is creamy or golden, and the rest of its head is rusty brown. The Eurasians are not known to reproduce in the US, but it is possible that some do. American Wigeons spend winters along the Pacific Coast from Alaska to Central America and across the southern US and all of Mexico. They spend summers in the



https://www.allaboutbirds.org/guide/American\_Wigeon/ maps-range

northern half of the US and most of Canada and Alaska.

## Conservation

American Wigeons are common and of low concern. The population is stable or slightly declining. The estimated population of breeding birds is about 1.4 million. The US Fish and Wildlife Service allows limited hunting, with numbers adjusted according to population trends.

- American Wigeons eat more plants than other ducks do. Their short, strong bills help them pull grasses.
- American Wigeons sometimes steal food from coots or diving ducks.
- After breeding, males go to isolated ponds and change out all their feathers (molt). This takes about 35 days, during which time they cannot fly. Females and juveniles molt gradually.
- A few Eurasian Wigeons show up in flocks on the east and west coasts of the US, and some American Wigeons show up in flocks of Eurasians in Europe. The Eurasians in Oregon probably come from Siberia.
- The oldest known American Wigeon was 21 years and 4 months old.

# Wood Duck (*Aix sponsa*)

The beautiful Wood Duck is a small-to-medium-size duck (19-21 inches) with а wingspan of 26-29 inches. The male Wood Duck is one of the most colorful birds found on the Tualatin River National Wildlife Refuge and cannot be mistaken for any other duck. The male's plumage is so vivid, you might think this bird is a painted



Wood Duck (Ken Durbin)

wood carving, using as many colors as possible. He has a brown back, maroon (purple-brown) breast with white flecks, and buffy yellow flanks. Each wing has a deep blue patch called a speculum. Male Wood Ducks also have glossy, iridescent green heads with purple patches. Their long, back-swept crown feathers (called a mane or a "drooping crest") has thin white stripes, and makes the head look oversized. The male Wood Duck has a white throat with two prominent white "extensions" below the bright red eyes and partly around the neck. Male Wood Ducks have small but colorful bills with black, white, and red patterning.

The female Wood Duck is much duller, with a gray-brown head, neck, and breast. There are purplish-blue areas on the wings of the female Wood Duck. Her eyes are dark and are surrounded by large, white "teardrops". The bill of the female Wood Duck is blue-gray. She has a smaller mane or "crest" than the male. Juvenile Wood Ducks resemble adult females but are grayer. They have white eyebrows and dark eyelines.

During part of the year, the male Wood Duck resembles the female, but he has a distinct white throat, colorful bill and red eyes, which the female lacks. This seasonal change in plumage takes place after breeding and lasts for only a few months—-from midsummer to fall. During this time, the male replaces its feathers and is temporarily flightless. This less distinct appearance is called "eclipse plumage" and it helps the males avoid predation.

Wood Ducks have sharp claws for perching in trees, unlike most other ducks.

Female Wood Ducks emit a loud, sweaky *wooo-eeek* sound. The males make a much softer, high-pitched *jeeeeep* or *ter-weee* sound.

## **Diet and Feeding Behavior**

Wood Ducks forage (find food) in water bodies, taking prey items from the water surface. They may stick their heads and necks in the water, but do not dive. Wood Ducks are therefore considered "dabbling" ducks", or surface-feeding ducks.

Wood Ducks eat mostly seeds and insects that have fallen from trees and shrubs. They also eat aquatic plants, tadpoles, salamanders, and crustaceans (such as shrimp). Where available, Wood Ducks eat acorns and may "visit" farm fields to feed on grain that remains on the ground after a harvest. Young Wood Ducks feed mainly on insects and other invertebrates (animals without a spine) but switch to mostly plant food as they get older.

## Reproduction

Wood Ducks begin nesting as early as February, and most pairs have nested by the end of April. When courting male Wood Ducks pose to show off their colorful plumage. During courtship, the male and female preen one another, nibbling at the head and neck of their mate. They mate in the water.

After mating shortly after daybreak, the male Wood Duck follows the female in search of a nest site. The pair flies to wooded areas adjacent to water, where they may spend several hours looking for and entering potential nest cavities. Wood Ducks select nest sites that are in large

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tree cavities near water, as high as 65 feet above ground. They line the cavity with feather down and other soft material. This species uses abandoned nests of other species, such as the Pileated Woodpecker, as well as artificial nest boxes.

Wood Duck females lay 9-14 eggs (but the range is 6-15). The eggs are dull white to pale buff in color. Females often lay their eggs in other Wood Duck nests (a behavior called "egg-dumping"), so it is not uncommon for a nest to have more than 15 eggs. The female incubates (keeps warm) the eggs for 24-37 days. The hatchlings stay in the nest until the morning after hatching. Then they cling to the entrance to the cavity with their claws and jump to the ground or water below. After fledging, the mother tends the young. Male Wood Ducks do not care for the young. Two or more broods of Wood Duck young may combine to form a large family. The females tend young Wood Ducks for 5-6 weeks. The young can fly at about 8-9 weeks.

The Wood Duck is a regular breeder in Oregon's Willamette Valley and elsewhere in the state, including the Refuge. Male Wood Ducks stay

with one female for one breeding season, but mate with a different female the following year.

## **Distribution and Habitat**

The Wood Duck has a large range and lives throughout North America, Cuba, and some smaller Caribbean islands. Wood Ducks breed across most of central and eastern U.S. and southeastern Canada, as well as along the Pacific Coast from California to British Columbia. They are yearround residents along the West



Wood Duck Range Map.

https://www.allaboutbirds.org/guide/Wood\_Duck/maps -range

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Coast and scattered locations in the Western U.S.

The Wood Duck lives in woodland ponds, swamps, and slow-moving creeks and rivers that are surrounded by deciduous or mixed woodland trees that hang over the water. The overhanging trees create shady conditions, which Wood Ducks prefer. On the Refuge, look for Wood Ducks in the wooded creek areas along the trail to the overlook. During the late spring you can see the mother and young swimming in the ponds. Look for a mother duck with the tear-drop shaped white eye ring.

### Conservation

Wood Duck populations declined to near extinction during the late 19th and early 20th centuries because of hunting and loss of nesting sites. However, due to conservation efforts (including habitat recovery, widespread use of nest boxes, and reduction of hunting), the species' numbers are now healthy.

- The Wood Duck is a distinctively North American species. Fossil remains have been found in only a few locations in the eastern part of the continent.
- Wood Ducks are seldom in large flocks, and most often are seen alone, in pairs, or small groups.
- Linnaeus named the Wood Duck in 1758.
- The Wood Duck has also been called the Carolina Duck, the Summer Duck, the Acorn Duck, the Swamp Duck, and the Squealer. But most often, its nickname is "Woodie".
- A group of ducks is known as a "brace," a "flush", a "paddling", a "raft", and a "team".

# Blue-winged Teal (Spatula discors)

The Blue-winged Teal is a duck. small Despite its name the Blue-winged Teal is not best identified by its wing color. Several other duck species commonly seen at the Refuge show a similar blue wing patch in flight. Further, the Bluewinged Teal's blue wing patch is not visible when the Blue-winged Teal is on the ground or the water. The best identification mark is a white comma shape between the eye and the bill, prominent on the dark head of adult males. This white comma is more muted on an adult female and reduced to a white spot on juveniles. An adult male also has a visible white patch on its side in front of



Blue-wnged Teal (U.S. Fish and Wildlife Service, Robert Wilson)



Blue-winged Teal pair (Don Holland)

its tail. An adult female is hard to distinguish from several other ducks. A typical Blue-winged Teal is 15 inches head to tail, with a 23-inch wingspan and a weight of a half-pound to a pound.

## **Diet and Feeding Behavior**

The Blue-winged Teal is a dabbling duck that rarely dives. It paddles along scooping up food from the water surface. The Blue-winged Teal also tips its head down to get food a little deeper in the water. The Bluewinged Teal eats submerged plants, aquatic insects and larvae, clams, snails, and crustaceans (such as shrimp). In winter, it eats mostly seeds and grains from shallow water or fields (wet or dry).

## Reproduction

The female picks a nesting spot, usually a foot or more above water level and within 100 feet from the water. She makes a round depression and lines it with dry grasses, down, and feathers. The nest is about 8 inches across, with plants overhead to hide it. She usually lays 9 to 13 eggs and incubates (warms) them 23 or 24 days. The young leave the nest within 24 hours of hatching. The young follow the mother but eat and

swim on their own. The male may leave during incubation. The female may leave before the young can fly, about 40 days after hatching.

## **Distribution and Habitat**

Blue-winged Teals have a long migration, with little overlap between summer and winter ranges. It breeds and summers from northern Texas north to Alaska, much of Canada, and as far east as the Atlantic coast. The Blue-winged Teal winters from Southern California and North Carolina south through Mexico, Central America, the Caribbean, and as far as Peru



Blue-winged Teal Range Map. https://www.allaboutbirds.org/guide/Bluewinged\_Teal/maps-range and Argentina. It uses marshes and shallow ponds for breeding. The Blue-winged Teal's migration and wintering habitat also includes mangrove swamps, brackish wetlands, and fields. Some migrate over open ocean, miles from shore. At the Refuge, look for Blue-winged Teal on the ponds by the Visitor Center in late spring and summer.

## Conservation

The Blue-winged Teal is the second most abundant duck in North America, after the Mallard. Numbers fluctuate year to year between 2.8 and 7.4 million. The biggest threat is drought. Other threats are loss of habitat on migration routes and wintering areas. Pesticides are also a threat. People still use DDT in some of the countries where Blue-winged Teals winter.

- Long-distance migration means the Blue-winged Teal is one of the first ducks to head south in fall and one of the last to return in spring.
- A Blue-winged Teal molts (loses) its flight feathers at the same time, leaving it flightless for a few weeks.
- Blue-winged Teals have been seen on the Galapagos Islands, 560 miles from mainland South America.
- In one form of courting display, the male tips his head and shoulders under the water, butt in the air, and wiggles his feet.
- The oldest known Blue-winged Teal was 23 years 3 months old, banded in Saskatchewan and found in Cuba.

# Lesser Scaup (Aythya affinis)

As one might guess from its common name, the Lesser Scaup (plural: also, scaup) is the smaller of two nearly identical species. Both are diving ducks. Size and location are the only ways to tell them apart. A male Lesser Scaup's head, chest, and tail are black. He has a finely marked gray back and



Lesser Scaup Male (Ken Durbin)

a white side. A female is chocolate brown overall, lighter on the side but not white like the male. The female has a white patch at the base of her bill. Males have bright yellow eyes; females have brown eyes. Lesser Scaup are usually 15 to 18 inches long, with a wingspan of 25 to 30 inches and a weight of 1 to 3 pounds. Males are a little larger than females.

#### **Diet and Feeding Behavior**

Lesser Scaup dive in shallow water to find food, which they usually eat underwater. Their primary foods are clams, snails, insects, and crustaceans (shrimp for example). They also eat aquatic plant seeds, stems, and leaves, adapting to what is available. Lesser Scaup feed most actively during the day but may also eat at night.

#### Reproduction

Lesser Scaup migrate and breed later than most ducks, usually laying eggs in June. A male and female pick new mates each year. They start a scrape on the ground, usually in a dry grassy area near water under taller plants. The female lines the scrape with grass and feathers. She starts laying eggs while still building the nest. She lays 6 to 14 eggs (usually 8 to 10) and incubates them (keeps warm) 21 to 27 days. The male usually leaves before the eggs hatch. The young can eat and swim

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the day they hatch, but the mother takes them to food and watches over them. The ducklings can dive at about 2 weeks old and become independent at 2 to 5 weeks, at which time the mother often leaves. The young can fly at 7 to 9 weeks and are ready to breed the following spring. The most dangerous time for the young is before they can fly, but if they survive that, they may live up to 18 years.

## **Distribution and Habitat**

Lesser Scaup rely on wetlands year-round. They breed in Alaska, Canada, the Dakotas, Montana, and Wyoming. Lesser Scaup winter along the coasts, the Southern US. across Mexico, Central America, the Caribbean, and west to Hawaii. There also year-round are populations in Eastern Washington and in the Klamath Southern Basin in Oregon. Lesser Scaup prefer shallow wetlands, ponds, lakes, bays, and rivers. In winter, they may be in flocks of thousands, mixed with other ducks. At the Refuge, look for Lesser Scaup in the



ponds near the Visitor Center in winter and spring. Greater Scaup prefer saltwater and do not come to the Refuge.

#### Conservation

Lesser Scaup face a gauntlet of predators, with eggs and ducklings the most vulnerable. Mink, raccoons, foxes, crows, and gulls eat eggs and ducklings. Coots, loons, Great Horned Owls, and Night Herons also eat the ducklings. Skunks, coyotes, Red-tailed Hawks, Peregrine Falcons,

and Bald Eagles eat adults. Overall, Lesser Scaup are a species of low concern due their large geographic range and estimated population of 3.8 million breeding birds. Climate change could shift their breeding range north to Alaska and Northern Canada.

- Lesser Scaup are usually quiet, but they may whistle during breeding displays and issue a variety of soft calls and even purrs.
- A Lesser Scaup has a tiny "peaked hat" near the back of its head, not always visible.
- A Lesser Scaup duckling can swim up to 60 feet underwater at 5 to 7 weeks old.
- Lesser Scaup sleep on the water, often with the bill tucked under some back feathers.

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# Snow Goose (Anser caerulescens)

The Snow Goose is а medium-sized qoose that may be white, blue-black or anything in between (color morphs). The white morph has all-white feathers except for its black wingtips, visible mostly when flying. The dark morph, sometimes called "blue goose," is mostly blueblack with some white on its underwings and head. Both have some buff coloring on the face, and orange bills and legs. The bill has a "grin patch," a black area where the top and bottom parts



Snow Goose. (Judy Gallagher), 02/19/2020 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-ncnd/4.0/

meet, making it look like the bird is smiling. The Snow Goose measures 28 inches beak to tail, with a 53-inch wingspan and a weight of about 5 pounds. Ross's Goose is similar but smaller, with a very short bill and no grin patch.

#### **Diet and Feeding Behavior**

Snow Geese are vegetarians. In summer, they eat grasses and similar plants like sedges and rushes. They sometimes the entire plant. During migration and in winter, Snow Geese also eat corn, grains, and berries. They eat on land and while walking in shallow water.

#### Reproduction

Snow Geese nest on the Arctic tundra, mostly in far northern Alaska and Canada, with some in Siberia and Greenland. The female chooses a site near water but on dry ground, usually in a colony with other Snow Geese. She makes a scrape in the ground, lays her first egg, then adds

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grasses, seaweed, twigs and down from her own body as more eggs arrive. The finished nest can be up to 6 feet across. The female usually lays 3 to 5 eggs and warms them (incubates) for 24 days while the male defends the territory. The young leave the nest within a day after hatching, able to walk, swim, and eat under the adults' protection. The family may walk several miles from the nest as they forage. The young can fly after 42 to 50 days.

### **Distribution and Habitat**

Snow Geese migrate south in 4 flyways. Those nesting farthest west go down the West Coast to Western Mexico. but some spend the winter in Oregon or the San Francisco Bay Area. More eastern nesters migrate to the southeast Atlantic Coast, the Gulf Coast, and Eastern Mexico. The western birds occasionally visit the ponds at the Refuge but are more common at Sauvie Island, the Klamath lakes, and Malheur National Wildlife Refuge. Snow Geese travel in flocks of up to several hundred thousand. They may sleep sitting, standing on one leg, or floating.



https://www.allaboutbirds.org/guide/Snow\_Goose/maps -range

#### Conservation

Snow Geese declined for many years but greatly increased during the past several decades and are now abundant. Hunting is allowed but controlled, with about 400,000 a year taken in the US and Canada. Lead poisoning from eating lead shot is a threat. There are many predators

for eggs and hatchlings, from foxes, wolves, bears, and caribou to gulls, jaegers, and snowy owls. Eagles, foxes, wolves, and bears hunt adults. Snow Geese may be the victim of their own success. The impact (tearing up plants) of their increased numbers may be damaging their nesting habitat.

- A single gene controls the color. The gene for dark coloration is partially dominant, which makes for diverse coloration. If 2 white birds mate, their young will be white. If one white and one dark bird mate, most of their young will be dark, but some will have white bellies. If 2 dark birds mate, their young will generally be dark, but some may be white. While the dark gene is dominant, most snow geese are white.
- When chicks hatch, the color of their down already shows their adult color.
- Migrating and wintering flocks post lookouts to watch for eagles and other predators.
- On the breeding grounds, the female prepares for nesting by foraging for up to 18 hours a day. Once she starts laying eggs, she eats very little until the eggs hatch.
- The oldest known Snow Goose was 27 years 6 months old when shot in Texas.

Swans, Geese and Ducks

# Tundra Swan (Cygnus columbianus)

The Tundra Swan is by far the largest water bird you are likely to see at the Refuge. All its feathers are white. It has a yellow spot at the base of its black bill with, and black legs and feet. The Tundra Swan is 52 inches bill to tail. including a very long neck. Its wingspan is 66 inches, about a foot less than an average Bald Eagle. The



Tundra Swan. (Robert Pruner), 04/20/2013 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

Tundra Swan weighs about 14 pounds, several pounds more than an average Bald Eagle. When flying, a Tundra Swan stretches its neck and legs out straight, with its head in front and legs trailing.

A Trumpeter Swan looks similar to a Tundra Swan. The Trumpeter is bigger and has a longer bill with a thin orange stripe and no yellow spot. Trumpeter Swans live year-round in in the southeast corner of Oregon. Some Trumpeter Swans winter in northwest Oregon, but it is less common here than the Tundra Swan.

#### **Diet and Feeding Behavior**

Tundra Swans eat mostly plants, including water and land grasses, sedges (looks like grass but has a triangular stem), corn, soybeans, rice, and winter grains like wheat. Some also eat clams.

#### Reproduction

Tundra Swans nest on low ridges or islands near lakes, ponds, or pools. Their breeding ground is Arctic tundra, as their name suggests. The male and female build a nest of grasses, sedges, lichens, and moss that they collect from up to 10 feet around the nest. They build a low mound

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up to 2 feet across, then scoop out a bowl that is 10 to 20 inches across. The female usually lays 3 to 5 eggs. She does most of the 32-day incubation, but the male helps. The downy chicks can walk, swim, and eat on their own within 24 hours of hatching. The adults protect about a half-acre against intruders, including ducks, geese, and other swans. The young can fly about 65 days after hatching.

## **Distribution and Habitat**

There are 3 populations of Tundra Swan: western North America. eastern North America, and Eurasian. All nest on arctic tundra. Western birds nest in Alaska and migrate south near the coast to winter in Washington, Oregon and California. Eastern birds nest in eastern Alaska and Canada and Maryland winter from to Georgia, most prominently on the Chesapeake Bay. Small numbers may show up in central Eurasian birds. states. а subspecies called Bewick's



breasted Nuthatch/maps-range

Swan, breeds in Siberia and winters in Europe. In winter, swans in the US live in rivers, marshes, shallow ponds, and open fields. Though Tundra Swans gather in large flocks on migration and in winter, sightings at the Refuge tend to be just a few birds at a time, often a single pair. Look for them in fall and winter on the ponds farthest from the Visitor Center. You may also see them in the fields and seasonal ponds east of 99W.

#### Conservation

Tundra Swans are common and of low concern. The population tends to go up and down in cycles but is stable overall, with an estimated 173,000 in North America. Predators of nests and young include foxes, wolves, bears, gulls, jaegers (closely related to gulls), ravens, and eagles. Hunting by humans is allowed in North Carolina, Virginia, Montana, and North and South Dakota, but not on the West Coast. Threats include lead shot and sinkers the birds eat, mine waste, oil and gas drilling in the arctic, and loss of swamp habitat on migration and wintering grounds.

- Lewis and Clark provided the first written description of North American Tundra Swans, which they called "whistling swans."
- The Eurasian population, called Bewick's Swan, has a larger yellow patch at the base of its bill.
- Tundra Swans sleep mostly on land in summer (in the arctic) and mostly on water in winter (in the south).
- Tundra Swans wintering on the Chesapeake Bay eat a lot of clams, which gulls try to steal from the swans' bills.
- Tundra Swans form long-term bonds. A pair stays together yearround. First year young may migrate with their parents.
- The oldest known Tundra Swan was 27 years 7 months old when found in Ohio.

# Cinnamon Teal (Spatula cyanoptera)

The striking male Cinnamon Teal is a small dabbling duck with red eyes and a long bill. A dabbling duck feeds from the surface instead of diving. The male's bright cinnamon flanks and head are distinctive in summer, though it takes on more muted coloring in winter. The female is similar in size and shape but a warm muted brown all over, with black eyes.

#### **Diet and Feeding Behavior**

While swimming in ponds and marshes Cinnamon Teals feed by opening and closing their beaks in the water. They eat insects, plankton, seeds of grasses, and other materials.



Cinnamon Teal male (Brian Smucker)



Cinnamon Teal Male and female (Ken Durbin)

#### Reproduction

Several males may court a female Cinnamon Teal. She selects one. She builds a nest in tall grasses near the water by scraping a shallow depression. She then adds some grasses and a lining of down. Sometimes the nest is open above, and sometimes it's covered by surrounding grasses.

The female lays 4 to 16 eggs and incubates them (keeps warm) for 21 to 25 days. Meanwhile, the male defends the nest and a small surrounding territory. The young emerge, follow the female to water, and feed on their own. They can fly after about 7 weeks.
### **Distribution and Habitat**

There are two separate populations of Cinnamon Teal. The northern population is common across the Western US in summer and lives year-round in coastal California. Much of the northern population winters in Mexico. The southern population spends its entire year in South America. Cinnamon Teals arrive at the Refuge in April or May. They feed and breed at the ponds until migrating south in the fall.

#### Conservation

The Cinnamon Teal population is declining but is of low concern overall, with an estimated 380,000 breeding birds in North America. The causes of the decline include habitat loss, climate change, and pollution.



Cinnamon Teal Range Map. https://www.allaboutbirds.org/guide/Ci nnamon\_Teal/maps-range

### **Fun Facts**

- Bird names are constantly changing, as some species and even genera split and others are combined. All ducks used to be in the genus Anas. Now they are split, with the genus Spatula (think of a big bill like a kitchen spatula) including various teals and shovelers and a European/Asian species known as a garganey.
- The South American population is separate from the North American population.
- The oldest known Cinnamon Teal was 10 years and 6 months old when recaptured and released at a California banding station.

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# Northern Shoveler (Spatula clypeata)

Northern Shoveler is The а medium-sized dabbling duck (feeds from the water surface) about 19 inches head to tail, with a 30-inch wingspan, and weighing about 1.3 pounds. It has a very long, shovel-shaped bill. Α breeding male has a green head, yellow eyes, a white breast, and a big rust-colored patch on its side. A female is buffy brown all over with a powder blue shoulder patch that may be visible. The male's bill is black; the female's orangeblack.

#### **Diet and Feeding Behavior**

A Northern Shoveler gathers its swimming food by slowly, sometimes swishing its bill side to side, with the bill and sometimes the head in the water. A Northern Shoveler filters its diet of seeds and crustaceans (shrimp for example) from the water and mud through comb-like projections along the edges of its bill. Sometimes a group of Northern Shovelers swims in a circle to stir up the water and food. They rarely tip head down, dive, or eat on land.



Northern Shoveler male (Ken Durbin)



Northern Shoveler female (Ken Durbin)



Northern Shoveler male feeding (Ken Durbin)

### Reproduction

The female makes a small depression in the ground, usually in short grasses within 150 feet of the water. Her nest is about 8 inches across. She lines the nest with feathers. The female lays 8 to 12 eggs and keeps the eggs warm (incubates) for 22 to 25 days. She may lead her ducklings to water the day they hatch. The ducklings can already swim and feed themselves. The young ducks can fly when about 7.5 weeks old.

#### **Distribution and Habitat**

Northern Shovelers spend their summers from southern Oregon east to Kansas and north to Alaska. In winter, they range along the coasts from Oregon Massachusetts south. and across the southern US and throughout Mexico. At the Northern Refuge, look for Shovelers on the ponds or at pond edges, particularly in the winter. There is also a Northern Shoveler population that breeds in Europe and winters in Europe, Africa, and India.





#### Conservation

Northern Shovelers are common, stable, and of low concern, with an estimated population of about 4.5 million. However, in 2020, a major outbreak of avian botulism hit Shovelers and other ducks at the Klamath Basin refuges in southern Oregon and northern California, killing an estimated 40,000 birds. The US Fish and Wildlife Service allows limited hunting, with numbers adjusted according to population trends.

## Fun facts

- A Northern Shoveler's bill is about 2.5 inches long and looks like a shovel.
- Northern Shovelers are monogamous.
- If a surprised female flies from her nest, she often poops on her eggs, apparently to hide them from predators.
- The oldest known Northern Shoveler was 16 years 7 months old when found in Nevada.

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# Northern Pintail (Anas acuta)

Northern Pintails are dabbling ducks that feed in water by tipping forward and extending their neck for food, with the tail up in the air. The genus name, *Anas,* is Latin for "duck" and is derived from *natare* meaning "swim." The species name, *acuta,* is Latin for "pointed" referring to the long pointed tail feathers.

Like all dabbling ducks, the feathers (i.e., plumage) of Northern Pintails are different between males and females during the winter and the breeding season. After the breeding season and into early autumn, male dabbling ducks lose their bright colors and their plumage looks more like the females. This change to drab eclipse feathers is called plumage.

When Pintails are present at the Refuge, they are primarily in breeding plumage. Males have a dark brown head and white chest, with white lines



Figure 1: Male and female Northern Pintails (Ken Durbin) Below: Male Northen Pintail (Ken Durbin)





Figure 2: Male Northern Pintails tipping up to feed (Dan Dzurisin).

extending up both sides of the long slender neck (Figure 1). The body largely appears to be gray, though the feathers are actually finely

striated with black and white stripes (called vermiculation). The shoulder feathers on the back are black, with white or tan edges giving the appearance coarse striping. The rump and long tail are black. The eyes are dark. The beak is black, with pale blue on the sides. Females are mostly brown with a complex feather pattern of brown, black, rufous, tan, and buff. Females have dark eyes and beaks. Pintails are about 21 to 25 inches long (54 to 64 cm) and weigh about 1.8 pounds (800 grams), with a wingspan of 34 inches (86 cm).

## **Diet and Feeding Behavior**

Pintails primarily eat seeds and aquatic vegetation, but will also take aquatic insects, snails, and worms. They feed in shallow wetlands and flooded fields by tipping up to reach foods in the water column or on the underlying soils (Figure 2). Pintails also feed on wet soil surfaces. For the first few days ducklings feed primarily on aquatic invertebrates such as insect larvae and crustaceans. The ducklings gradually add seeds and aquatic plants to their diet, as they grow.

## Reproduction

Northern Pintails form pairs in the fall and early winter. The spring migration to breeding areas starts in February and is influenced by weather and the condition of available wetlands. Pintails are one of the earliest nesting ducks in North America, starting shortly after ice breaks up in northern nesting areas. They respond to wetland availability. If wetland conditions in the southern part of the breeding range are not suitable (e.g., too dry), they proceed northward.

Most Pintails nest in April and May. They attempt to raise one brood of ducklings each year. Pintails scrape nests in the ground in short grasses or other short vegetation. They line the nest with grasses and downy feathers from the female's breast area. Pintails often nest away from water, but within 2 kilometers (1.6 miles). The female lays one egg each morning until reaching a typical clutch size of 6 to 9 eggs. The female starts egg incubation (warming) near the end of egg laying. Only the female attends the nest after beginning incubation. The incubation

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period is 22 to 24 days, with all eggs hatching within about a 24 hours. Pintails are precocial meaning ducklings are mobile and able to leave the nest within 24 hours. The hen and ducklings move to water (e.g., ponds, marshes) to find food and protection from predators. Ducklings can find their own food. The hen attends the duckling brood for 4 to 6 weeks until the ducklings can fly.

Nesting success for Pintails is highly variable depending on factors such as weather and predators, but overall the majority of nest attempts fail each year.

## **Distribution and Habitat**

Northern Pintails live throughout northern the hemisphere (i.e., North America, Europe, and Asia). In North America they breed on wetlands throughout Alaska, Canada, and the northern prairie states. Pintails winter at wetlands along the Pacific coast states, the southern U.S., and Mexico. At the Refuge, Pintails start to arrive in September, reach their greatest numbers in November through January, and are largely gone from June through August.



North American Range Map for Northern Pintails.

Pintails prefer large, shallow wetlands with little emergent (above the water surface) vegetation so they can see predators and other disturbances. Pintails also feed in flooded agricultural fields and harvested grain fields.

### Conservation

Northern pintails are common, but from 1966 to 2015 their population declined 70%. Population fluctuates, increasing during wet years and declining during droughts. The loss or degradation of wetlands continues as one of the greatest problems for Pintails.

## **Fun Facts**

- Pintails migrate at night and fly at an average speed of 48 miles per hour (77 km per hour) but can go faster with a tail wind.
- Some Pintails that nest in Alaska migrate across the Pacific Ocean to California for the winter. The longest nonstop migratory flight recorded was about 1800 miles (2900 km).
- The oldest recorded Northern Pintail was 22 years and 3 months old.

# Green-winged Teal (Anas crecca)

The Green-winged Teal is a small duck seen on the National Tualatin River Wildlife Refuge during the winter. It is 12-16 inches long, which is a lot smaller than the commonly 23-inch seen Mallard. Ducks fall into two groups based on their feeding habits-diving ducks and dabbling ducks. Diving ducks dive completely under whereas dabbling water. ducks tip forward and stick only their heads under water. The Green-winged Teal is the smallest dabbling duck in North America.

Besides its small size, a key distinguishing feature for a male Green-winged Teal



Green-winged Teal male. (Ken Durbin)



Green-winged Teal female. (Ken Durbin)

floating on water is a vertical white stripe from the waterline to its shoulder. In good light look for a wide bright green stripe that extends from the male's eye to the back of its otherwise chestnut-brown head. A bright green wing patch, pale gray sides, buffy breast, and a yellowish patch under its tail area complete the male's attractive ensemble. Females are mottled brown and resemble the larger female Mallard. A female Green-winged Teal has a green wing patch called a speculum (more visible in flight) and a dark brown eyeline. Both males and females have dark gray bills.

During courtship male Green-winged Teals use a short, clear, highpitched whistle that is not duck-like. Females quack.

### **Diet and Feeding Behavior**

The Green-winged Teal, as a dabbling duck, feeds in shallow water where it can reach aquatic vegetation such as grasses and sedges. (Sedges appear grass-like, but with triangular stems.) Green-winged Teals also eat aquatic insects, mollusks (like snails), and crustaceans (like shrimp). Occasionally, this species will venture onto flooded meadows and mud flats to search for seeds, moist soil plants, insects, and mollusks. Ducklings feed on insects for the first 6 weeks of their lives.

### Reproduction

Green-winged Teals nest in dense stands of grass, weeds, and brush. Females choose the nest sites. Their nests are shallow depressions filled with grasses, twigs, and leaves, then lined with downy feathers. Usually, Green-winged Teals nest on islands in a lake, but sometimes on shorelines with tall grasses. Nests hidden by tall grasses can be up to 200 feet from water.

Green-winged Teals are monogamous, meaning the males and females form pairs and do not breed with others during the breeding season. However, they will select new mates every year. Pairing begins in the fall, and breeding starts in April. The female incubates (keeps warm) 6-11 eggs for 20-24 days. When incubation starts, the males (called drakes) leave. Females (called hens) raise the young. Hens lead dayold ducklings to nearby marshes and ponds. The young have the fastest growth rate of all ducks and are independent about 23 days after hatching.

# **Distribution and Habitat**

The Green-winged Teal is a migratory duck and is mainly a fall and winter visitor in Oregon. In North America, the species breeds in the Arctic areas of northern Alaska and Canada. They also breed as far east as Colorado, Nebraska, and New York.

The Green-winged Teal is a bird of inland ponds, shallow lakes, and freshwater and brackish marshes. It avoids areas without trees or brush.

### Conservation

The Green-winged Teal has a large world-wide range,

Green-winged Teal Range Map. https://www.allaboutbirds.org/guide/Greenwinged\_Teal/maps-range

including North America, Europe, Asia, and Africa. Populations do not show signs of decline and may be increasing.

### **Fun Facts**

- The Green-winged Teal is one of the fastest-flying ducks. In flight, they dart about like shorebirds, changing direction quickly and frequently.
- Dabbling ducks are also called surface-feeding or puddle ducks. This group of ducks includes teals, pintails, shovelers, wigeons, and the Mallard.
- Although the Green-winged Teal is a dabbling duck, it can dive under water to avoid a predator such as a skunk, crow, or raccoon.



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# Ring-necked Duck (Aythya collaris)

If you look for a duck with a ring around its neck at the Refuge, you will likely find some male Mallards. Each will have a nice white ring around its neck just below its glossy green head. By looking for a duck with a neck ring you won't find a Ring-necked Duck, even if present. When most species were first described and named, it was common to shoot a few, then examine the bodies up close. A male Ring-necked Duck does have а cinnamon-colored ring around its neck, but it is so subtle that a birder will rarely see it at a normal viewing distance, even with spotting binoculars or а



Ring-necked Ducks. Male above & female below. (Ken Durbin)



scope. Instead, look for a small duck with a white ring around its bill behind the bill's black tip. Above the white ring the bill is blue-gray. The male's bill is also outlined in white. The male has a black back, gray sides, and a white comma just behind its black chest. The female is mostly brown. A typical Ring-necked Duck is about 17 inches bill to tail, with a 25-inch wingspan and a weight of 1.5 to 2.5 pounds.

# **Diet and Feeding Behavior**

Ring-necked Ducks usually dive for their food. They eat submerged plants, including leaves, stems, seeds, and tubers. (Potatoes are tubers grown by the potato plant. Many aquatic plants, such as pond lilies grow tubers below the bed of a pond or other water body.) Ring-necked Ducks also eat insects, flies, snails, earthworms, leeches, and mollusks (like clams).

#### Reproduction

The male and female look together for a nesting site. Ring-necked Ducks nest in or near marshes with sedges. (Sedges look like grass but have a solid triangle shaped stem.) The female starts laying eggs, then builds a cup nest about 11 inches across, with a ramp. She uses sedges and whatever other plants are close. She usually lays 8 to 10 eggs and incubates (keeps warm) them for 25 to 29 days. The male usually leaves while she is incubating, and she raises the young herself. The ducklings usually leave the nest a day or 2 after hatching. The young feed and

swim on their own under the care of the female. The young fly 49 to 55 days after hatching.

## **Distribution and Habitat**

Ring-necked Ducks breed in Eastern Oregon, Eastern Washington, Alaska, and across Canada. They winter along the entire Pacific and Atlantic Coasts, much of the Southern US, all of Mexico, and parts of Central America the and During migration. Caribbean. see Ring-necked you may Ducks throughout the US or Mexico. Ring-necked Ducks like



Ring-necked Duck Range Map. https://www.allaboutbirds.org/guide/Ringnecked\_Duck/maps-range

water but prefer ponds and flooded fields over large lakes, bays, or oceans. At the Refuge, look for Ring-necked Ducks in the pond by the Visitor Center in fall, winter, and spring. They often mix with other ducks.

### Conservation

Ring-necked Duck population varies widely from year to year. The main factor causing this variation is the condition of the wetlands in the breeding area. However, Ring-necked Ducks are plentiful and their average population over time has increased. The US Fish and Wildlife Service monitors hunting, with about 450,000 killed per year. Threats include loss of habitat in breeding, migration, and wintering areas.

# **Fun Facts**

- Ring-necked Ducks are most often seen in pairs in breeding season, but they may form huge flocks for migration. Flocks of several hundred thousand have been seen in Minnesota eating wild rice.
- Some ornithologists proposed changing the name from Ringnecked Duck to "ringbill" or "ringbilled duck," since the ring on the bill is much more easily seen than the faint ring on its neck.
- Loons and grebes may attack Ring-necked Ducks on their breeding grounds.
- The oldest known Ring-necked Duck was 20 years 5 months old. It was banded in Louisiana and shot in Minnesota.

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# Bufflehead (Bucephala albeola)

If you see a small duck with a lot of white on its body, and a large white bonnet on the back of its large round head. chances are it's a male Bufflehead. Females and young males are brownish gray with white patches behind the eye. This is the smallest diving duck in North America, weighing only about a pound, with a length only a little over a foot.



Bufflehead male (right) and female (Don Holland)

### **Diet and Feeding Behavior**

If you see this species dive beneath the water, it is seeking insect larvae, mollusks and crustaceans. They are known to eat water boatmen, snails and seeds of smartweed.

#### Reproduction

Because of its small size, a Bufflehead can nest in tree cavities, including abandoned holes made by Northern Flickers (which are woodpeckers) near rivers and lakes. Nesting begins in late April and early May. The female Bufflehead usually lays about 9 eggs and incubates them 28-35 days. Young Buffleheads can fly about 55 days after they hatch and leave their nests in early August.

# **Distribution and Habitat**

Buffleheads migrate, with the height of migration into Oregon for the winter beginning in late September and peaking in late October or early November. Spring migration out of Oregon to their breeding grounds occurs from mid-March through late April.

Buffleheads breed from central Alaska south through western Canada and into the northern Rocky Mountains. They also breed as far east as lowa and Wisconsin, and as far south as northern California. There a re





only isolated breeding populations of Bufflehead in Oregon in the central and southern Cascades lakes region. Buffleheads winter throughout much of Oregon, as well as from Alaska through the western states into Mexico. They also winter from the Great Lakes through the Ohio and Mississippi Valleys and parts of eastern Canada. You can often see Buffleheads diving for food in the Refuge Visitor Center pond from the late fall to early spring.

Breeding

Breeding (scarce) Migration

Breeding habitat of this species is along deep mountain lakes surrounded by forests and woodlands that have snags (dead trees that haven't fallen down). In the winter, they use lowland lakes, bays and estuaries.

### Conservation

In Oregon, there is concern about shortage of natural tree cavities caused by timber activities. Another concern is high recreational activity around Cascade Mountain lakes where they breed, including snag

removal for safety and firewood, and disturbance by humans. Because the species will use nest boxes, breeding populations may benefit from efforts to place some near water.

### Fun Facts

- Buffleheads were originally called buffalo-heads due to the fact that their heads seemed large compared to their small bodies. They also have been called butterballs because they are buoyant in water and are fairly plump.
- Unlike most ducks, Buffleheads may stick with the same mate for several years.
- This species is usually silent. However, sometimes females give a low prrk prrk sound, and the males kind of squeal or growl.

# Ruddy Duck (Oxyura jamaicensis)

The Ruddy Duck is a small, compact diving duck with a spiky tail. The breeding male has a chestnut body, black cap, white cheek, and sky-blue bill. The female has a gray-brown body, dark cap, black bill, and white cheeks with one dark stripe through each cheek. Often, the tail sticks up at a sharp angle. Ducklings look like miniature adult females. A typical adult is about 15 inches head to tail and weighs a little over a pound.

## Reproduction

The male creates a noisy display to attract a mate, using two methods: 1) he strikes his bill against his neck to make a popping sound; and 2) he runs across the water, slapping his feet and wingtips against the water. The female selects a nest area a



Ruddy Duck male and two ducklings (Brian Smucker)



Ruddy Duck female with ducklings (Brian Smucker)

few inches above the water among grasses, rushes or cattails. She builds a well-hidden cup nest of grasses and a little mud. The female incubates (keeps warm) 4 to 12 eggs for 20 to 26 days. The ducklings follow her into the water as soon as the day they hatch. The ducklings can already swim and dive well. They dive to avoid predators like Red-tailed Hawks. The ducklings can fly when they are about 6 weeks old.

# **Distribution and Habitat**

Ruddy Ducks are common throughout the US and parts of Mexico, Central America, and the Caribbean. Most breed in the prairie pothole region of the plains in the Northern US and Southern Canada. Some Ruddy Ducks stay in the Caribbean year-round. Islands At the Refuge, Ruddy Ducks are in the winter only, present usually seen on the various ponds.

#### Conservation

The population is stable and ofleast concern, according to theInternationalUnionConservationofNature.The

Ruddy Duck Range Map. https://www.allaboutbirds.org/guide/Ruddy\_Duck/ maps-range

biggest threats are water pollution and loss of habitat in breeding areas.

#### Fun facts

- The scientific name, *Oxyura jamaicensis*, means sharp-tailed duck from Jamaica. The Spanish name, Pato Espinoso, means spiny duck, again referring to the tail.
- Ruddy Duck fossils found in Oregon are as old as 11,000 years.
- Ruddy Ducks are very aggressive to each other and to other species during breeding season, even chasing rabbits on shore.
- Grebes may attack Ruddy Ducks from under water.
- The oldest known Ruddy Duck was a male banded in British Columbia and found 13 years 7 months later in Oregon.



#### Swans, Geese and Ducks

# Mallard (*Anas platyrhynchos*)

The Mallard is a large and heavy duck, 23 inches beak to tail and about

2.5 pounds, but smaller than a goose. The male has a bright green head, a yellow bill, a white ring on its neck, and a pale gray body with a curly black tail. The female is mostly mottled brown, with a grayish head and an orange and black beak. Both have orange legs and feet. Both may show a blue wing feather on the flank. Ducklings are mottled yellow and black.



Male Mallard (Brian Smucker)

### **Diet and Feeding Behavior**

Mallards are dabbling ducks. Instead of diving to find food, they tip their heads down into the water, so all you see is their tail end and maybe their feet. They eat seeds and all kinds of water plants, as well as larval insects, freshwater shrimp, earthworms, grains, and handouts from humans. They also graze in fields.

#### Reproduction

Courting starts in fall. Males may raise up in the water and flap their wings. Females may respond by nodding their heads or swimming with their heads held low. It is not unusual to see several males chasing and mating with one female. The female picks the nest site, usually on land near the water, but sometimes in a box, on a stump, or on a floating mat of plants. She makes a shallow depression in the dirt, adds whatever she can reach from the nest, and then lines it with her own downy feathers. The female may pull tall plants over the top, forming a roof of sorts. The finished nest is 6 to 9 inches across. The female usually lays 7 to 10 eggs and incubates (warms) the eggs for 23 to 30 days. The

#### Swans, Geese and Ducks

young leave the nest within 24 hours of hatching and can swim and find their own food, while tended by the female. Young Mallards can fly after another 52 to 60 days.



Male and female Mallards (Rod Roberson)

#### **Distribution and Habitat**

The Mallard is the most common duck in the Northern Hemisphere. Mallards breed across Canada and the northern two-thirds of the US (as well as Eurasia). They winter throughout the US and into Northern Baja and Mexico. Mallards are almost always around fresh water, such as a lake, river, small stream, pond, or flooded field. You can find Mallards in cities if there is fresh water nearby. At the Refuge, look for Mallards on the ponds, as well as in the river and the small streams.



Mallard Range Map. https://www.allaboutbirds.org/guide/Mallard/maps -range

### Conservation

The Mallard population rises in wet years and declines in dry or drought years, ranging from about 5 million to about 12 million birds. Threats to Mallards include drought, pollution, and loss of habitat. Climate change is partly responsible for drought and loss of habitat. In contrast to declining songbird populations, the populations of several duck species, including Mallards, increased in recent years compared to the long-term average. This increase is likely due, in part, to habitat preservation and restoration.

## Fun facts

- Most domestic ducks and those raised for meat come from Mallards. Domestic ducks cannot fend for themselves in the wild, and many are too fat to fly. It is illegal to release pet ducks on public land or water.
- Some Mallards are wary of humans, while others are very tame and will even eat out of human hands. Please do not feed the ducks or other wildlife at the Refuge.
- Until recently the Mexican Duck was classified as a subspecies of Mallard. In 2020 the American Ornithological Society concluded that, while closely related, Mexican Ducks and Mallards are sufficiently different genetically to classify as different species. Both male and female Mexican Ducks look like a female Mallard.
- The Hawaiian Duck (Koloa Maoli) likely originated from wandering Mallards thousands of years ago, but evolved into a separate species. Mallards imported to Hawaii threaten the integrity of the Koloa Maoli by interbreeding (hybridization) with the Koloa Maoli. Efforts to maintain the genetic integrity of the Koloa Maoli are ongoing.
- Mallards can fly surprisingly fast, up to 55 miles per hour.
- If you hear a quack, it comes from a female. Males have a quieter, raspy call.

- Mallards shed all their flight feathers at once after the breeding season. They can't fly for 3 to 4 weeks while they grow new feathers. They do their best to hide during this time.
- The oldest known Mallard was 27 years 7 months when shot in Arkansas.

# Hooded Merganser (Lophodytes cucullatus)

There are two species of mergansers found on the Tualatin River National Wildlife Refuge—the Common Merganser and the Hooded Merganser. Despite its name, however. the Common Merganser is rarely seen the Refuge. The on



Hooded Merganser male and female (Rod Roberson)

Hooded Merganser is uncommon on the Refuge but can be found in all seasons.

The Hooded Merganser is a medium-size duck, measuring 16-19 inches long with a wingspan of 24 inches. Adult males are very distinctive. Most notable is the black head with a large white crest. Male Hooded Mergansers can lower and inflate (fan out) their white crests. When the crest is raised, it takes up much of the head and gives the head a round shape. When the crest is lowered, the head shape is oblong. Males have chestnut sides, white breasts with two black bars, and black backs. Male Hooded Mergansers have yellow eyes, and the females' are red.

While much plainer than the male, females and immature "Hoodies" (as they are sometimes called) have a distinctive bushy back-swept crest. The crest is reddish-brown. Otherwise, the female is a dull gray-brown.

A male Bufflehead (seen commonly on the Refuge) with a large white patch on its black head looks somewhat like the male Hooded Merganser. However, the white patch of the Bufflehead is not a crest and is positioned at the back of the head. Hooded Mergansers have skinny, pointy bills, whereas Bufflehead bills are short and stubby.

Hooded Mergansers make hoarse grunts and chattering sounds. When the male is courting a female, he raises his crest, shakes his head

(sometimes throwing it back so that it touches his back), while giving a frog-like crrroooo. Females bob their heads in courtship, and give out soft, hoarse wrrep croaks.

### **Diet and Feeding Behavior**

Hooded Mergansers eat mostly aquatic insects (such as caddisfly larvae and dragonfly nymphs), crustaceans (especially crabs and crayfish), and small fish. They also feed on snails, frogs, aquatic plants, and seeds. Hooded Merganser ducklings initially eat mostly insects.

Hooded Mergansers look for food visually, and typically feed in water that is clear and less than five feet deep. Their underwater vision is excellent, and they forage underwater. Hooded Mergansers have a third, clear eyelid called a nictitating membrane. It functions somewhat like a pair of swimming goggles, protecting their eyes when under water, but allowing them to see. Hooded Mergansers will make several dives, coming to the surface for brief pauses, before they capture their prey with their thin, hooked, and serrated (like the edge of a saw) bills.

#### Reproduction

Male and female Hooded Mergansers pair up from November through January and start breeding in late February. Hooded Mergansers breed throughout the Willamette Valley, including the Refuge. During the breeding season, Hooded Mergansers are very secretive.

Hooded Mergansers are cavity-nesting ducks. They use hollow trees, snags, or other natural cavities for nesting, as well as abandoned woodpecker holes in live trees. Hooded Mergansers readily take to artificial boxes provided for Wood Ducks. The female selects the nest site, usually near water and 10-50 feet above the ground. Hooded Mergansers sometimes compete with other Hooded Mergansers for nest sites and often lay their eggs in each other's nest cavities.

Female Hooded Mergansers line their cavities with their own down and lay 5-15 white eggs. Incubation (keeping the eggs warm) by the female

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Swans, Geese and Ducks
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starts after she lays the last egg and takes 26-41 days. Once the female begins to incubate, her mate abandons her.

Because incubation begins only after the last egg has been laid, all hatchlings in a brood hatch at about the same time. Hooded Merganser ducklings leave their nest cavities within 24 hours of hatching, jumping out of the cavity to the ground upon hearing their mother call them from below. The ducklings may walk half a mile (or more), following their mother to the nearest water body. The ducklings can dive for food right away (at one day of age), but their dives are short and shallow at first. Young Hooded Mergansers fly at about 10 weeks of age.

Hooded Mergansers reach reproductive maturity two years after hatching. They are monogamous, meaning they have only one mate.

# **Distribution and Habitat**

Hooded Mergansers breed in wooded wetlands from southern Alaska and northern British Columbia south through Oregon, Idaho, and western Montana. They also breed in central and eastern Canada. Bay from Hudson's south through New England, the Great Lakes. and the Ohio River Valley.

Hooded Mergansers are yearround residents or shortdistance migrants. They winter along the Pacific coast from southern Alaska to Baja California and along the Gulf



Hooded Merganser Range Map. https://www.allaboutbirds.org/guide/Hooded\_Merganse r/maps-range

Swans, Geese and Ducks

coast, where ponds, lakes, and rivers are ice-free. The species winters throughout Oregon on open water, most commonly in western Oregon.

The Hooded Merganser likes quiet, sheltered backwaters, woodland ponds and lakes, and wooded wetlands. Although they prefer fresh water, they can be found on brackish (slightly salty) water.

### Conservation

The Hooded Merganser has a large range and is not showing signs of decline. It is important that trees with cavities are available for nesting, however. In some states (including Oregon), Hooded Mergansers use artificial nest boxes erected for Wood Ducks. Because Hooded Mergansers rely on aquatic prey, they are very susceptible to harm from pollution that accumulates in the food chain.

# Fun Facts

- The Hooded Merganser is the smallest of the three species of mergansers found in North America.
- Hooded Mergansers are swift and quiet when in flight. Their rapid wingbeats make high, cricket-like trills.
- Hooded Mergansers are very agile swimmers and divers, but they are awkward on land because their legs are set far back on their bodies. They run across the water when taking flight.
- Hooded Merganser eggshells are thicker than those of most other duck species.
- The genus name, Lophodytes, is from the Greek words, *lophos* (meaning crest) and *dytes* (meaning diver).
- A group of ducks has many names, including a brace, flush, paddling, raft, and team.

# Rails

# American Coot (Fulica americana)

The American Coot is а plump black bird about the size and shape of a chicken. At first glance you might mistake the American Coot for а small duck. The American Coot lives on and near water. However, the American Coot is not closely related to ducks or chickens. Rather, its family includes gallinules and rails, birds that typically live in the water or nearby dense vegetation. The American Coot's white bill extends up onto its forehead to create a shield. Its eyes are red. The bird's long, yellow-green legs and long toes are suited to walking on mud and debris around pond edges. Though its feet are not webbed like a duck's, fleshy lobes on the American Coot's toes allow it to easily swim. Its wings and tail are stubby.



American Coot (Ken Durbin)



A Caribbean Coot (subspecies of American Coot) adult and chicks on an artificial platform in the Dominican Republic. (Brian Smucker)

### **Diet and Feeding Behavior**

American Coots eat aquatic plants that they reach by dabbling (tipping up) or diving. They also eat grasses and tree shoots on land. Favorite foods include algae, grasses, wild rice, waterlilies, and cattails. American Coots also eat insects, snails, tadpoles, salamanders, and whatever they can steal from ducks.

#### Reproduction

Coots build nests on floating platforms. Coots make these platforms from aquatic plants, such as rushes and cattails. They may also use artificial materials placed by humans, or branches and debris. The nest itself is a shallow basket made of plants, about a foot across. The female lays 6 to 11 eggs. Both parents incubate the eggs (keep warm) for 23 to 25 days. The emerging young have black down, with some orange down around the head and neck, and red bills and skin, making them look like little devils. They can swim well within 6 hours of hatching, though it takes them 7 to 8 weeks to fly.

#### **Distribution and Habitat**

Coots live in or near water, usually ponds or wetlands. They like to be among plants along shorelines or by standing water. Some Coots breed in Canada and the northern US from Idaho to Michigan; these birds migrate in winter, as far south Central America. Other as populations cover the rest of the US — including Oregon — and Mexico and may migrate shorter distances or not at all. At the Refuge, look for Coots in the main ponds by the Visitor Center in winter and spring.



American Coot Range Map. https://www.allaboutbirds.org/guide/American\_C oot/maps-range

#### Rails

#### Rails

### Conservation

The population is widespread and stable, somewhere in the millions. Coots are generally of low concern and not threatened. However, the Caribbean subspecies is threatened. That subspecies has a distinct facial shield that extends to nearly the top of its head.

#### Fun facts

- Coots look for safety in numbers, congregating in flocks from a few dozen to thousands. Great Horned Owls and Bald Eagles hunt and eat Coots.
- Coots can fly, but their takeoff is awkward. They run on the water, flapping like mad, to get airborne.
- The oldest known American Coot was 22 years 4 months old.



American Coot (Ken Durbin)

# Virginia Rail (Rallus limicola)

Virginia Rails are in the bird family (the Rallidae) that includes coots, gallinules, and other rails. The Virginia Rail is about 9-11 inches long, or between a robin and a crow in size. The Virginia Rail is larger than the Sora the other rail found on the Tualatin River National Wildlife Refuge. The Virginia Rail and Sora are often found together, but they belong to different genuses.



Virginia Rail (Don Holland)

There are other ways of telling the Virginia Rail apart from the Sora besides size. Virginia Rails have brown and black mottling on their backs, rusty cinnamon breasts and black-and-white barred bellies. They have black crowns, gray faces, and white eyebrows and throats. Most noticeably, Virginia Rails have long, pointy reddish-brown bills. Virginia Rails have short tails that are white underneath and dark on top. They hold their tails up when they walk. Virginia Rails have long orange-brown legs and very long toes with claws. Male and female Virginia Rails look alike. Juveniles are darker. Soras have much shorter yellow bills, yellow legs, and gray breasts. Young Virginia Rails are cute black fuzz balls.

The secretive Virginia Rail is rarely seen, preferring to hide in thick marshy vegetation. But the calls of this species—usually heard at dawn, dusk, and at night—are distinctive. They include pig-like grunts, squeaks, and kid-ick, kid-ick, kid-ick sounds. Soras emit a long, high-pitched, descending whinny sound. Virginia Rails are most vocal in the spring.

## **Diet and Feeding Behavior**

Virginia Rails probe the ground or shallow water mud bottoms in search of their primary diet of insects and other invertebrates such as beetles, flies, dragonflies, crayfish, snails, slugs, and earthworms. They also hunt frogs, fish, and small snakes by sight. Although Virginia Rails mostly eat animals, they also eat aquatic plant seeds and duckweed, especially in the fall and winter. Because they have long toes, Virginia Rails can walk on floating vegetation while foraging. Sometimes Virginia Rails briefly forage in the open, but they will hurry back to thick nearby cover.

### Reproduction

Virginia Rails begin their courtship in April and May. The male raises his wings and runs back and forth next to a female. Both sexes bow, and then the male will feed the female. He will then approach the female and begin grunting before mating.

Virginia Rail females lay 4-13 white or buff-colored eggs with gray or brown spots on piles of matted reeds, aquatic vegetation, and grass. Usually, the nests—which are built by both the male and female—are at the base of emergent vegetation with vegetative canopies above. Often, Virginia Rails build dummy nests nearby but will not lay eggs in them. Both parents incubate (keep warm) the eggs for 18-22 days and add nesting material during incubation to further conceal the nest. The male defends the territory. Virginia Rails fledge (leave their nest) by mid-August, soon after hatching. The young rails wander from the nest area but return at night. Both parents feed the young for two to three weeks. Virginia Rail chicks can fly about 25 days after hatching. The family remains on the breeding territory until the chicks are fully grown and independent. After that the parents leave and break their pair bond, while the young remain.

Virginia Rails are monogamous, meaning they have only one mate during a year.

#### Rails

# **Distribution and Habitat**

The Virginia Rail breeds across southern Canada and the northern US. In the western U.S. they also breed as far south as Arizona and New Mexico to Oklahoma.

Virginia Rails live in freshwater marshes with cattails, reeds, and dense grasses. They also marshes coastal inhabit in estuaries. The Virginia Rail requires shallow water (typically less than six inches deep) with plenty of plant cover. Look and listen for Virginia Rails in or near the thick vegetation by the seasonal trail as it passes



between the visitor center pond and the pond to the south of the trail. Virginia Rails are most vocal in the spring and most active in the morning and evening.

Some Virginia Rails migrate, flying long distances each year to the southern U.S., northern Mexico, and even as far as Guatemala. Other populations (in the Western U.S.) are believed to be permanent residents.

#### Conservation

The Virginia Rail has declined in many places as people destroy marshy habitats. Nevertheless, they are widespread and common. Other threats to the species include predation by raptors, egrets, cranes, mink, coyotes, and feral house cats.

#### Rails

# Fun Facts

- The Virginia Rail's body is narrow, and therefore it can slip easily through dense vegetation. They have a claw on each wing, which enables them to climb through marsh vegetation.
- Virginia Rails escape danger by running through marsh vegetation instead of flying away. However, if forced to fly, they go only a short distance.
- Rails—including the Virginia Rail—have the highest ratio of leg muscles to flight muscles of any bird. This may explain why they walk more often than fly.
- A group of Virginia Rails are known as a reel of rails.
- Virginia Rails can swim and dive, using their wings to propel themselves through water.

# Sora (Porzana carolina)

The Sora is in the bird family (the *Rallidae*) that includes coots, gallinules, and other rails. A diminutive bird, the Sora is about 8-10 inches long, which is about the size of a robin. The Sora is smaller than the Virginia Rail-the other rail found on the Tualatin **River National Wildlife Refuge** (Refuge). The Sora and Virginia Rail are often found together, but they belong to different genuses.

At first glance, it may be difficult to distinguish between a Sora or a Virginia Rail. However, there are ways of telling the Sora apart from the Virginia Rail besides size. Most noticeably, Soras have short, bright yellow bills whereas Virginia Rails have



Sora (Ken Durbin)



long, pointy reddish-brown bills. Soras have gray breasts and gray bellies with white bars; Virginia Rails have rusty-cinnamon breasts and black-and-white barred bellies. Soras have black throats and faces; Virginia Rails have rusty throats. Soras have yellow legs; Virginia Rails' legs are orange. Both species have brown and black mottling on their backs. Male and female Soras are similar.

The secretive, reclusive Sora is rarely seen, preferring to hide in dense, marshy vegetation and wet meadows. Soras can move through very

Rails

narrow spaces, without rustling vegetation, because their bodies are laterally compressed (flattened) and they can hold their feathers tight against their bodies.

Soras emit a long, high-pitched, rapidly-descending whinny sound. They also make "*kerwee, kerwee*" and "*keep, keep*" sounds.

## **Diet and Feeding Behavior**

Soras venture out of dense vegetation in the early morning or late evening to look for meals. They primarily eat seeds of marsh vegetation, as well as leaves and stems of those plants. Soras forage for food by "raking" floating vegetation with their feet or by pulling vegetation aside with their bills, and visually searching for food. Soras also eat invertebrates (animals without backbones) such as insects and snails. Soras rely more on plant material for their diet than do Virginia Rails. This may explain why the two species can share nesting territories.

### Reproduction

Soras begin breeding in late April or early May in Oregon. Both sexes perform courtship displays, such as 15-30-minute stare-downs followed by preening, bowing, and other movements.

The female builds the nest in shallow wetlands (less than 8 inches deep) in dense patches of cattails and sedges. (Sedges look like grasses, except sedges have a solid triangular stem, while grasses have a round hollow stem.) Males often bring the females vegetation for the nest. The female constructs a shallow basket nest by attaching cattails, dry leaves, grass, sedges, and reeds to stalks of dense vegetation. Often, female Soras bend vegetation over the top of the nest for protection.

Sora females lay 10-12 (and sometimes 18) buff-colored eggs with gray or brown spots. Soras aggressively defend a territory of  $\frac{1}{2}$  to one acre from other Soras by threatening displays and even chasing.

Because Soras lay many eggs, they sometimes arrange the eggs in two layers. Both parents incubate (keep warm) the eggs for 18-20 days. The
Rails

eggs do not hatch at the same time. One parent may care for hatchlings while the other continues to incubate the remaining eggs. Young Soras leave the nest shortly after hatching and are fed by both parents. Soras take their first flight 21-25 days after hatching.

Soras are monogamous, meaning they have only one mate during a season.

#### **Distribution and Habitat**

Soras breed in the southern half of Canada and the northern half of the United States. Even though they appear to be weak fly fliers. Soras can long distances. In the winter Soras migrate to the southern U.S., and as far south as the northern edge of South America. Some Soras winter in Oregon, mainly the coast and in the on southwestern part of the State.

Soras live in freshwater marshes that have cattails, sedges, rushes, and reeds. They are also found in flooded cultivated



https://www.allaboutbirds.org/guide/Sora/maps-range

fields, wet pastures, and ditches. Soras inhabit marshes in coastal estuaries. They require shallow water with plenty of vegetative cover. At the Refuge listen and look for Soras in heavily vegetated wetlands adjacent to the Visitor Center Pond and the adjoining pond to the south.

#### Conservation

The Sora is the most common and widely distributed rail in North America. However, the destruction of freshwater marshes, where they breed, has led to declines in many parts of their range. Other causes of Rails

mortality include hunting and ingestion of lead shot; capture in traps meant for fur-bearing mammals; collisions with cars, fencing material, and lighted towers; and predation by other marsh birds, raptors, feral cats, and small mammals. Soras have a high reproductive rate, resulting in stable populations where habitat is available.

# **Fun Facts**

- A group of Soras is known as an "ache", and "expression", and a "whinny" of Soras.
- Like the Virginia Rail, the Sora has a body that, when viewed headon, is very thin. This may be the origin of the phrase, "thin as a rail", though other "rail" candidates include fence rails and railroad rails.
- Soras are also called "meadow chickens" and "Carolina rails".

# *Plovers* Killdeer (*Charadrius vociferus*)

The Killdeer is a one of the birds to easiest identify of its distinctive because markings and calls. The species is a fairly large shorebird (10.5 inches long with a 24-inch wingspan). Most noticeable are the large and the two dark eyes necklace-like bands on the white chest Killdeer have long, pointed wings with white stripes that are visible when the bird is flying. Its orange rump is also visible in flight. Killdeer have brownish backs. Males and females look alike.

Calls are high-pitched, repetitive "kill deer" sounds (giving the species its name). Some people hear "kideeeeer kideeeeer" or "didideeer didideeerr".



Killdeer (Ken Durbin)



Killdeer nest with chicks and egg. (Ken Schneider), 05/27/2012 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

## **Diet and Feeding Behavior**

Killdeer eat a variety of terrestrial (land) invertebrates including earthworms, beetles, ants, dragonflies, and grasshoppers. Sometimes they eat aquatic (water) invertebrates and seeds. Killdeer do not kill and eat deer!

## Reproduction

Killdeer nest in open gravelly areas with little or no vegetation, including parking lots, road edges, and railroad tracks. The "nest" is just a little spot scraped bare, sometimes with some small pebbles around the edges. The nests are not far from shallow water, because that's where they find food.

Males and females often mate for life, and often use the same area for breeding year after year (this is called "site fidelity"). Usually, the female lays 4 eggs that blend in with the ground or gravel. Killdeer begin breeding activities earlier than most other Oregon birds. In the Willamette Valley, Killdeer lay eggs as early as mid-March, but Killdeer usually nest during late March or April. Once in a while, nesting extends into the summer. Both parents incubate (keep warm) the eggs for 23-29 days. The downy chicks leave the nest area soon after they hatch, but the adults tend them for a while.

One of the most interesting things about this species is what it does if disturbed or threatened. Unlike most other birds, Killdeer do not fly away from danger. If an adult is at its nest, it will give an alarm call and move

away from the nest, dragging one of its wings. This is called the "broken-wing act". Killdeer do this to fool a predator (or a birdwatcher) into thinking it's injured, and draw attention to it, rather than its babies.

## **Distribution and Habitat**

The Killdeer is a widespread species, common throughout much of North America. It breeds from the very southern





#### Plovers

#### Plovers

part of Alaska to the Gulf Coast states and central Mexico.

Although the Killdeer is a shorebird, it is not always found near water. It is most often seen in open habitats, including farm fields, meadows, ball parks, golf courses, and even gravel roads! On the Refuge, Killdeer are seen (and heard) in all but the forest and open water habitats. The species is abundant during the spring and summer, and common



Juvenile Killdeer (Ken Durbin)

during the fall months. The Killdeer is uncommon during the winter, but sometimes seen. Look for them as you walk on the trails that pass through open areas, and from the Wetland Observation Deck.

#### Conservation

The Killdeer is one of the most widespread shorebirds in North America. In Oregon, the species may be declining due to habitat loss, especially urban development that replaces agricultural land. Road grading also destroys nests along rural roads.

#### **Fun Facts**

- Killdeer young have only one neck band, but eventually they develop two.
- Killdeer sometimes raise two families a year.
- The species' family name, *Charadriidae*, is Latin and was used by Aristotle to refer to an inconspicuous water bird. The genus name, *Charadrius*, comes from a German word meaning some kind of a plover and the wet places it lives in. The species name, *vociferus*, is Latin and means "vociferous or vocal".

# Stilts

# Black-necked Stilt (*Himantopus mexicanus*)

Black-necked Stilts are wading birds with long pink legs, long necks, long and pointed black bills, and slender bodies. They have black heads and backs, with white underparts. Blacknecked Stilts are somewhat smaller than crows. They are often seen with American Avocets and are about the same size, but skinnier. Black-necked Stilts have a wingspan of 29 inches, are 14 inches head to tail, and weigh about 6 ounces.

#### **Diet and Feeding Behavior**

Stilts eat while wading in shallow water, not often while swimming. They look for aquatic invertebrates (such as mosquito larvae, small snails, various flies, crickets, and water bugs), small crustaceans (like shrimp), tiny fish, and tadpoles. They sometimes eat seeds.

#### Reproduction

Reproduction starts with a mating dance that may include



Black-necked Stilt - How many legs does this blacknecked stilt stand on? (\_Veit\_), 01/23/2020 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/bync-nd/4.0/



A row of Black-necked Stilts at the edge of a water treatment pond. (Brian Smucker)

preening, bill crossing, running, and splashing. The male and female build a nest together. The nest is usually a small scrape on the ground,

#### Pigeons and Doves

but may be made of grasses, small sticks, shells, bones, pebbles, or whatever else is readily available. The nest may be on solid ground, an island, floating vegetation, or in sand. The female lays 2 to 5 eggs, and both adults incubate (keep the eggs warm) for 24 to 29 days. Chicks can walk and swim within a few hours of hatching, and find their own food, while watched and guarded by the parents. Chicks can fly 4 or 5 weeks after hatching. Stilts often nest in loose colonies, joining together to defend their young.

## **Distribution and Habitat**

Black-necked Stilts are found in the Western US, across the Southern US coasts (Pacific, Gulf, and Atlantic), Mexico. Central America, the Caribbean, and south along the coasts to southern Argentina and Chile. A separate population lives in Hawaii. Stilts are always around shallow water with some open area. They adapt well to both salt and fresh water, treatment marshes. ponds, and flooded seasonally fields. Oregon is the northern limit of their population. Stilts are uncommon in Oregon. At the Refuge, look for Stilts in the shallow ponds in spring.



Black-necked Stilt Range Map. https://www.allaboutbirds.org/guide/Blacknecked\_Stilt/maps-range

#### Conservation

The Black-necked Stilt population is stable at around 900,000 birds, and it may be expanding. The Hawaiian subspecies is endangered. Stilts are susceptible to pollution and loss of wetland habitat.

# Fun Facts

- When Stilts have chicks, the parents turn into neighborhood terrorists. The adult Stilts scream and fly at anything from a tiny bird, to hawks, pelicans, and humans. When a flock comes screaming and flying directly at your face with their needle-like bills, it can be quite scary. One gets the clear message: Get out, now!
- Among birds, only much larger flamingos have longer legs than Stilts, compared to their body size.
- Stilts and American Avocets are of similar size and in the same family. They are often found together in ponds. Stilts and American Avocets can mate and produce hybrid young together, though this is rare.
- The oldest known Black-necked Stilt was 12 years 5 months. This bird was banded in Venezuela and found later in the Lesser Antilles.

# Sandpipers and Phalaropes Sandpipers and Phalaropes Greater Yellowlegs (*Tringa melanoleuca*)

The Greater Yellowlegs is a large shorebird in the sandpiper family. It is bigger than a robin, and smaller than a crow. The Greater Yellowlegs' body is speckled brownish black and white, its bill pointed and black, its legs long and yellow. The Greater Yellowlegs is about 13 inches beak to tail and weighs about 6 ounces. It walks along pond edges in water deeper than other sandpipers, often bobbing its head. A Greater Yellowlegs looks very much like a Lesser Yellowlegs, but the Greater Yellowlegs is about one third larger and has a much stronger voice.



Greater Yellowlegs (Ken Durbin)



#### **Diet and Feeding Behavior**

The Greater Yellowlegs likes water several inches deep. It walks along looking for insects and their larvae, snails, aquatic worms, small fish, and small frogs. The Greater Yellowlegs stabs its prey with its beak and swallows them whole. Greater Yellowlegs often run after their prey.

#### Reproduction

Breeding season starts with a long migration in early spring. Greater Yellowlegs breed in northern Canada and Alaska, often in bogs. The female makes a shallow depression in the peat or moss, sometimes lining it with leaves and lichen. The finished nest is about 6 inches across. She lays 3 or 4 eggs and incubates them about 23 days. The young walk and catch their own food within 24 hours of hatching, but

both adults watch and protect them by "yelling" at intruders. Alarmed adults may also bob their heads and bodies and flap their wings. The young fly about 19 days after hatching.

# **Distribution and Habitat**

The Greater Yellowlegs lives from Alas ka to the southern tip of South America. They breed in the north, then migrate south throughout the US. The Greater Yellowlegs winters along all US coasts, throughout Mexico, America, Central the Caribbean, and parts of South America, especially along the coasts. At the Refuge, look for Greater Yellowlegs near the edges of the ponds and wet areas in the fields, mostly in spring and summer. (Lesser Yellowlegs are not often seen Refuge.) the During at migration and in winter, the



Greater Yellowlegs Range Map.

https://www.allaboutbirds.org/guide/Greater\_Yellowlegs/m aps-range

Greater Yellowlegs likes just about any area with water: lakes and ponds, wet meadows, marshes, rice fields, mudflats, beaches, and shorelines.

## Conservation

Greater Yellowlegs are of low concern. Their population is stable at about 140,000 adult birds. However, they have not been studied much, especially in their breeding areas. The greatest known threat is loss of wetlands.

# Fun Facts

- Nicknames for Greater Yellowlegs include telltale, tattler, and yelper, due to their harsh, strong alarm calls.
- Greater Yellowlegs are usually seen at water's edge. But in their breeding territories, they may perch atop trees to watch for predators.
- The species name, *melanoleuca*, means black and white.
- Hunters shot many Greater Yellowlegs before passage of the Migratory Bird Treaty Act in 1918. The Act prohibits killing or harming any listed bird, but not all countries in Central and South America have not signed this treaty.

Sandpipers: Spotted (*Actitis macularius*), Western (*Calidris mauri*), & Least (*Calidris minutilla*)

Sandpipers small are shorebirds. About 18 US sandpiper species range from sparrow-sized to a little larger than a robin. Three species are common at the Refuge: Spotted Sandpiper, Western Sandpiper, Least Sandpiper. and The Spotted is the largest of the three, about 7.5 inches long, with a short neck, long tail, spotted chest, orange bill, and yellow legs. The Western is next, about 6.5 inches long, with a heavily spotted chest, rusty shoulders, a long black bill, and black legs; it is the most colorful of the three. The Least is smallest, about 6 inches long, with a brownish-gray chest, a short black bill, and yellow-green legs. These sandpipers all live along mud flats and pond edges, as well as ocean coasts.

# **Diet and Feeding Behavior**

All three eat snails and insects, including flies and beetles. Each



Spotted Sandpiper (Ken Durbin)

Least Sandpiper (Ken Durbin)



has a few other foods. The Western often wades in water up to 2 inches deep. The Spotted sticks to the water's edge. The Least usually forages

on drier ground than the others. At the coast, the Western runs up and down the beach as waves go in and out.

#### Reproduction

All three nest in small depressions in the ground that they make and line

with bits of grass and other plants. Each species lays 2 to 4 eggs and incubates (keeps warm) for around 20 days. The young start to fly about 15 to 20 days after hatching. The Spotted nests from Alaska across Canada and the northern half of the US, including Oregon. The Western nests only in northern Alaska. The Least nests in parts of Alaska and northern Canada. Spotted males do all the incubation and chick-raising. Both male and female Western and Least Sandpipers incubate the eggs and raise the chicks, though the females may leave before the young can fly.

#### **Distribution and Habitat**

Spotted Sandpipers are widespread across North, Central, and South America, including in the mountains. They usually appear in ones or twos, seldom in flocks, as they meander along water edges with a distinctive bobbing motion. The Spotted live in Oregon year-round. In the spring Westerns often form huge flocks numbering in the Spotted Sandpiper Range Map. https://www.allaboutbirds.org/guide/Spotted\_San dpiper/maps-range



ast Sandpiper/maps-range



Sandpipers and Phalaropes

Sandpipers and Phalaropes

hundreds of thousands, especially around San Francisco and the Copper River Delta in Alaska. Leasts tend to form small flocks of a few dozen. Westerns and Leasts live in Oregon only in winter.

## Conservation

All three are of low concern. Their biggest threats are climate change, loss of habitat, and pollution. The approximate breeding populations are: Spotted, 660,000; Western, 3.5 million; and Least, 700,000.

## Fun facts

Spotted

- A female may mate with up to 4 males, leaving each a brood of eggs to tend. She arrives first, picks nesting spots and the males, defends the nests, and then leaves.
- Its teetering motion while walking along the water has earned it many nicknames, including teeter-peep and tip-tail.
- The oldest known Spotted was 12 years old, when found in New York.

Western

- Males and females often winter together, but there are more females in southern wintering areas, and more males in the northern wintering areas.
- Many Westerns that winter in Central America spend their whole first year there, not migrating until the next year.
- The oldest known Western was 9 years 2 months when found in Kansas.

Least

- The Least Sandpiper is the smallest shorebird in the world.
- When eastern populations migrate, they probably fly nonstop from New England to South America, 1800 to 2500 miles. Western populations fly over land and stop along the way.
- The oldest known was a 15 year old female, when found in Nova Scotia.

# Dunlin (*Calidris alpina*)

The Dunlin is a medium-sized shorebird, 6.5 to 8.5 inches head to tail, with a 12.5 to 17.5 inch wingspan, weighing 1.6 to 2.3 ounces. Females are larger than males, but otherwise they appear identical. non-breeding In season, both have a graybrown head and back and whitish-gray underside. In breeding season, they have a lot of brick red on the back and a black patch on the Dunlins belly. have а medium-length black bill (tapered and slightly downturned at the tip), short black legs, and black feet. Its bill is longer than those of the other sandpipers seen at the Refuge but shorter than those of yellowlegs and dowitchers.

#### **Diet and Feeding Behavior**

Dunlins mostly eat small clams, worms, insect larvae,



Dunlin (Ken Durbin)



crustaceans (small shrimp for example), snails, and slugs. In summer, they may also eat grasses and small seeds. Dunlins forage on tidal flats using their senses of touch and smell. They can taste the difference between sand that contains worms and sand that does not. However,

Sandpipers and Phalaropes

Dunlins can't tell food from rocks, so they avoid rocky beaches. When feeding Dunlins poke their long beaks into wet sand several times a second in a stitching motion like a sewing machine. They also feed by grabbing food they see on the surface. Dunlins may feed by day or night. They usually walk while eating and fly in small, tight flocks.

# Reproduction

Dunlins usually arrive in the Arctic around the end of May, as the snow is melting. The male arrives first and picks a territory on the tundra, then attracts a mate as females arrive. He makes several scrapes in the ground and may add a few bits of grass. The female picks one, lines it with grass, and lays 3 or 4 eggs. Both parents incubate the eggs for 21 or 22 days. The young leave the nest within hours and start feeding. The parents don't feed the chicks, but they lead them to feeding spots. The female usually leaves after a few days, and the male tends the young until they can fly, about 20 days after hatching. In July the adults form flocks. The young form their own flocks. Dunlins often fly to the coast

then head south in August or September. Adults often molt (replace feathers) during or right after breeding, before migrating.

## **Distribution and Habitat**

Dunlins are migratory shorebirds that breed in the Arctic and subarctic. They migrate south and winter all over the Northern Hemisphere. Dunlins prefer coasts, but also inhabit edges of lakes, ponds, rivers, sewage ponds, and flooded fields. They like marshes with a mix of dry spots. At the Refuge, look along the edges of the main ponds by



https://www.allaboutbirds.org/guide/Dunlin/maps-range

the Visitor Center, where Dunlins may feed on the mud flats in small flocks. They don't swim and usually don't go in water deeper than 2 inches.

### Conservation

Dunlins are common and widespread. Though declining somewhat, the Dunlin is considered a species of least concern. The estimated Dunlin population is at 5.5 million birds worldwide, with 1.5 million in North America. Predators in the Arctic include foxes, polar bears, gulls, jaegers (similar to gulls), and ravens. In Oregon, common predators are harriers, falcons, and owls. Other threats are primarily habitat loss and climate change.

# Fun Facts

- The name dunlin means "little brown job."
- Adult Dunlins may make a purring sound when leading their chicks toward food.
- The oldest known Dunlin was 24 years old.

Sandpipers and Phalaropes

# Long-billed Dowitcher (Limnodromus scolopaceus)

The Long-billed Dowitcher is a plump, medium-sized shorebird with a long bill, short legs, and short tail. It is about 11.5 inches bill to tail, with about 2.75 inches of that in the bill. Females have longer bills than males but are otherwise identical. A typical bird has a 19-inch wingspan and weighs 4 ounces. Breeding adults are quite colorful, with a reddish neck, chest, and belly. Black, gold, red, and white scallop shapes cover the Long-billed Dowitcher's back and wings. Nonbreeding adults are more the color of mud: gray all over, lighter on the underside. All have a white eye stripe, a black bill, and yellow legs and feet. There is also a Short-billed which Dowitcher. migrates through Oregon only along the Oregon Coast.

## **Diet and Feeding Behavior**

The Long-billed Dowitcher forages by probing its long bill



Long-billed Dowitchers (Ken Durbin)





into mud, in or near the water up to 3 inches deep. Its head may disappear into the water when it probes with a steady up and down motion like a slow sewing machine. The Long-billed Dowitcher eats mostly insects, worms, snails, clams, and crustaceans (like shrimp). It also eats seeds. The Long-billed Dowitcher has sensitive receptors on the end of its bill, so it can feed by touch. It also has excellent night vision, so it can feed day or night.

#### Reproduction

Long-billed Dowitchers nest in sedge meadows in Siberia, Northern Alaska, and extreme northwest Canada. (Sedges look like grass but have solid triangular shaped stems.) Since these nesting areas are remote, this bird's nesting behavior is not well known. For example, it is not clear whether it's the male or female that builds the nest, which is a grass-lined cup about 4.5 inches across. The nest location is often a tussock or hump among grasses, near the water. The female lays 3 or 4 eggs, which both parents incubate (keep warm) for 21 to 22 days. The chicks can walk and feed on their own as soon as they hatch. Soon after the eggs hatch, the female leaves, and the male watches the young. It is not known how long it takes for them to fly.

## **Distribution and Habitat**

Once Long-billed Dowitchers leave their nesting areas, they make long migrations. Most winter in Florida, Mexico, or Central America, with some in the Caribbean. However, some winter along Oregon's Willamette River and a couple of rivers in the Central Valley of California. Long-billed Dowitchers like coastal areas where they prefer freshwater estuaries, ponds, marshes, and flooded fields. They venture inland to places like the Refuge and the Malheur National Wildlife Refuge in Eastern Oregon. Long-billed Dowitchers often move and forage in flocks. They are usually in their gray plumage when they are at the Refuge in winter and spring. Look for them along the edges of the main ponds near the Visitor Center.

#### Conservation

Not much is known about breeding success, predation, or other problems in the Long-Dowitcher's breeding billed The population areas. İS estimated at around 500,000 birds of breeding age, most of them in North America. This puts the low them in concern category, since the numbers are stable or possibly increasing. Threats are loss of wetlands, pollution, and climate change.

## Fun Facts

 A male Long-billed Dowitcher may sing while it hovers 15 feet in the air over its territory after breeding.



Long-billed Dowitcher Range Map. https://www.allaboutbirds.org/guide/Swainsons\_Thrush /maps-range

- Long-billed Dowitchers often call to each other while they are eating. Short-billed Dowitchers do not.
- Long-billed Dowitchers were considered their own species for many decades, then lumped in with Short-billed Dowitchers, then separated again in 1950.
- The name "dowitcher" may come from "Duitscher," which is Pennsylvania Dutch for "German." The genus name *Limnodromus* means "marsh racer."
- The oldest known Long-billed Dowitcher was banded in Kansas and found again in Kansas 8 years 4 months later.

# Mourning Dove (Zenaida macroura)

The Mourning Dove is one of the most abundant birds in North America. It is slender and gravish brown with a peachy belly and a distinct coo-OOO-coo-coo call. The Mourning Dove is about 12 inches beak to tail and weighs 4 ounces. This makes it somewhat smaller and half the weight of the common pigeon (Rock Dove). The increasingly common Eurasian Collared-Dove is larger, heavier, and has a



A Mourning Dove at the Refuge near the photo blind. A beaver likely cut a tree leaving the stump upon which the Mourning Dove sits. (Brian Smucker)

whiter body with a dark line on the back of its neck. When it flies, a Mourning Dove shows a pointed tail with white edges, and its flapping wings are quite noisy.

#### **Diet and Feeding Behavior**

Mourning Doves eat seeds — 99% of their diet — from grains, grasses, weeds, and herbs. They also eat peanuts and a few berries and snails. Mourning Doves often eat 12 to 20 percent of their body weight per day. They almost always eat on the ground and prefer open areas. When searching for food they move litter (leaves and other material on the ground) out of the way but not by scratching.

#### Reproduction

Mourning Doves nest in a variety of locations, including the ground, trees and shrubs, house gutters and eaves, and old equipment. A courting male may approach a female with his chest puffed out, bowing and

#### **Pigeons and Doves**

cooing. Male and female work together to build a flimsy nest of pine needles, twigs, and grass stems. The male brings the pieces, and the female places them. The finished nest is about 8 inches across. The female lays 2 eggs and incubates them (keeps warm) for 14 days. The young can fly 12 to 15 days after hatching. A pair may have up to 6 broods a year in warm areas, more than any other North American native bird.

#### **Distribution and Habitat**

Mourning Doves live year-round through most of the US and Mexico, with some breeding in far northern US and southern Canada, and some wintering in America. They Central are brushy in open, common habitats, grasslands, fields, roadsides. parks. and backyards. Mourning Doves eat on the ground but commonly perch on telephone wires and in trees. At the Refuge, look for them along the seasonal trail in spring and summer. You can find Mourning Doves on the ground, stumps and logs, and



Mourning Dove Range Map.

https://www.allaboutbirds.org/guide/Mourning\_Dove/maps-range

wires. Sometimes the best way to find a Mourning Dove is to follow its cooing calls.

#### Conservation

The Mourning Dove is one of the most abundant birds in North America, with estimates ranging from 120 million to 350 million adults, despite hunters killing 20 million a year. In hunting areas, lead poisoning is the

biggest threat, as the Doves eat lead shot. In towns, cats are the biggest threat.

## Fun facts

- Doves are a common symbol of love, hope and peace. Ironically, the Mourning Dove gets its name from its call, which some people say sounds sad. Another common name is turtle dove.
- Mourning Doves are sometimes seen flying 3 in a row in breeding season. The one in front is the mated male, the second one is a would-be-mate male, and the third is the female.
- Mourning Doves don't digest their food as they eat. They scarf down lots of seeds at once, collecting them in a part of the esophagus called the crop, along with some grit (like small stones). They digest the food later while perched in a safe spot, the grit helping with digestion.
- The oldest known Mourning Dove was 30 years 4 months old when shot in Florida.

# California Gull (*Larus californicus*) & Short-billed Gull (*Larus brachyrhynchus*)

There are about 27 gull species in North America and another 27 or so around the world. Most gulls are roughly the same size and have similar habits. They can be very hard to tell apart, and unlike most species of birds and animals, different gull species may mate and produce hybrid young. While gulls are not common at the Refuge, a few gull species may pay a visit. Among these are the Short-billed Gull and the California Gull.

The Short-billed Gull is about 16 inches long with a 43-inch wingspan. It weighs about a pound. The California Gull is clearly larger (40-50%). The Short-billed Gull's name includes its most distinguishing feature, a short yellow bill. In adult breeding



California Gull. (Ron Knight), 08/06/2015 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



Short-billed Gull. (Becky Matsubara), 06/24/2018 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

plumage, the Short-billed Gull has a white head, a gray back, black and white tail, black wingtips, and the rest white. You can sometimes identify the Short-billed Gull by its bobbing head as it walks.

The California Gull's plumage is similar. The California Gull's yellow bill is bigger and brighter, with a red spot on its lower bill. Both birds have yellowish legs and webbed feet. The young of both species are grayish

brown all over. Their coloration shifts to adult plumage over several years. Males and females look alike, though males are a little larger.

The Short-billed Gull was formerly considered part of the Mew Gull species, which is now entirely in Europe, Asia, and Africa. In 2021 ornithologists (bird scientists) split the Short-billed Gull into a separate species with new common and scientific names.

#### **Diet and Feeding Behavior**

Both gulls forage while flying, walking, and swimming. They prefer insects, fish, and crustaceans (shrimp for example). Gulls are notorious scavengers. They eat almost anything that fits in their mouth, including small birds and garbage. Some gulls steal food from other gulls, shorebirds, and humans. Watch for this at beach picnics and outdoor dining. Gulls generally stick close to water or along shorelines, both coastal and inland. They also feed in meadows, dumps, fields, orchards, pastures, dairies, and parks.

#### Reproduction

The California Gull breeds May to July in the inland Western US and Canada, including near the Snake River; in Malheur County, Oregon; and the Columbia River. It nests on the ground, usually on islands or levees surrounded by water. The Short-billed Gull nests in Alaska and Northwest Canada, usually on the ground, but sometimes in trees.

Both species usually lay 2 or 3 eggs. Both parents keep the eggs warm (incubate) for 23 to 27 days, switching off every few hours. The parents regurgitate (barf) to feed the young partly digested food. The young leave the nest after a few days. The adults feed the young until they can fly, which is about 7 weeks for the California Gull and 5 weeks for the Short-billed Gull.

# **Distribution and Habitat**

The California Gull lives yearround along the Snake River and in the San Francisco Bay area. It winters along the Pacific Coast from Southern Canada to Central Mexico. The Short-billed Gull winters along the coast from southern Alaska to southern California. Both species live around water, most commonly wintering along the coast, but making forays inland to rivers, lakes, and ponds. The best place to look for both at the Refuge is across 99W in the Onion Flats field when it floods in winter. These gulls may be flying, walking, standing on one leg (or both), or floating on the water.

## Conservation

Both species are common and of low concern. The estimated California Gull population is 410,000 breeding birds in North America, perhaps twice that worldwide. The number Short-billed Gull estimated population is 200,000 breeding birds. Common predators



https://www.allaboutbirds.org/guide/Shortbilled\_Gull/maps-rangerange



California Gull Range Map. https://www.allaboutbirds.org/guide/Shortbilled Gull/maps-rangerange

include eagles, Red-tailed Hawks, Great Horned Owls, Canada Geese,

skunks, coyotes, foxes, weasels, and humans. Other threats include plastic 6-pack rings, oil spills, fires, and climate change.

## Fun Facts

California Gull:

- In 1848, katydids (related to grasshoppers) invaded Utah, causing massive crop damage. When the California Gulls returned to breed, they ate the katydids. Utah named it the state bird and put up a gold California Gull statue in Salt Lake City.
- The California Gull has many calls, including separate ones for begging, breeding, alarms, calls to attack, and food delivery.
- The young practice their food-catching skills by flying and dropping sticks, then swooping to catch them.
- The oldest known California Gull was banded in 1985 and found in California in 2013, at 28 years 3 months old.

Short-billed Gull:

- The Short- billed Gull was formerly considered part of the Mew Gull species that is in Europe, Asia, and Africa. The old name comes from the Dutch "zee meeuw," which means "sea gull". It is generally better not to refer to gulls as "sea gulls". Not all gulls live by the sea. But if a picky birder corrects you when you call a Short-billed Gull a "sea gull" you can correct them by pointing out that its historic name is "sea gull" in Dutch.
- The oldest documented Short-billed Gull was 10 years 8 months old when found in British Columbia in 2007, but the species may reach 24 years old.

# Western Screech-Owl (Megascops kennicottii)

Despite its name, this owl doesn't often screech unless frightened. If you hear lovely trills, whistles, and what some people describe as a "bouncing ball" call in the evening, chances are you're hearing а Western Screech-Owl. The Western Screech-Owl is a small owl, between 7.5 and 11 inches (19-27.5 cm) tall, and weighing between 3.53 and 10.77 ounces (100-305 grams). Because of its streaky brownish-gray plumage, it resembles tree bark (except for its yellow eyes). Females are larger than males, but otherwise they look alike. The species has ear tufts. The chicks are covered in white down

#### **Diet and Feeding Behavior**

Mostly nocturnal, this secretive bird hunts at night and roosts during the day. It eats a wide variety of animals, including carpenter ants, beetles, crayfish, Pacific Treefrogs, spiders, worms, centipedes, small mammals and birds. It perches quietly and then pounces on prey that moves beneath their perches.



Western Screech-Owl. (Frank D. Lospalluto), 07/30/2018 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



Western Screech-Owl in cavity nest. (Aaron Maizlish), 03/04/2016 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

#### Owls

#### Reproduction

Western Screech-Owls are cavity-nesters but use human-made nest boxes, especially if natural tree cavities are in short supply. Male owls begin establishing territories as early as late January. A few weeks later, females respond to the male "bouncing ball" calls. Courtship intensifies over the next month or so, and then mating occurs.

The female selects the cavity for laying and incubating between 2 and 7 eggs. Baby owls begin hatching about 30 days later. Because the eggs are not laid on the same day, hatching occurs over several days. Meanwhile, the male spends the day roosting within about 20 feet of the nest, bringing his mate and owlets food at night.

After about 4 weeks, the female leaves the nest and joins the male in capturing prey and bringing it back to the youngsters. For several days before they leave the nest, young owlets spend a lot of time during the day looking out of the cavity. In early June, the young fly awkwardly out of the nest, and stay nearby for a couple of days. The family stays together for another month, with the adults feeding the owlets, while the

owlets work on their own hunting skills. Five weeks after leaving the nest, the young are pretty independent.

#### **Distribution and Habitat**

The Western Screech-Owl lives year-round at lower elevations (usually below 3,000 feet) from the coast of Alaska south south through Baja California and central Mexico, and as far east as Montana, New Mexico, Colorado and central Texas. It is a creature of woodlands, forests and river edges. It can be found in urban and



Western Screech-Owl Range Map. https://www.allaboutbirds.org/guide/Western\_Scree ch-Owl/maps-range

suburban neighborhoods and parks if there are large trees. The Western Screech-Owl generally avoids wide-open country and pure coniferous forests. These little owls prefer Bigleaf maple trees near water, so at the Tualatin River National Wildlife Refuge, they can be found using trees along the Tualatin River. The species is not migratory.

#### Conservation

Although it is a fairly common species, increasing urban development sometimes results in habitat loss and collisions with cars. Other threats include attacks by larger owls as well as hawks, raccoons, and house cats and dogs. Young owls are especially vulnerable to such attacks. Pesticides have been found in some animals that Western Screech-Owls eat and can cause eggshell thinning. However, the biggest threat to this species is loss of large, older trees with cavities.



Western Screech-Owl in a box nest (Ken Durbin)

## Fun Facts

- Although small, Western Screech-Owls kill animals larger than themselves, including rabbits and some ducks.
- Western Screech-Owls have ear tufts, but they are just long feathers, and have nothing to do with hearing. They do have ears, but they are on the side of their heads, hidden by feathers. They have very good hearing, and locate prey by sound as much as by sight.
- The species makes a several different sounds, including a sweet, monotonic trill (signaling cavity "ownership"), the descending "bouncing ball" (territorial mating call), a "bark" (when a predator is near a nest), a "whinny" (begging to be fed), and a "chirping" (announcing the arrival of an adult with food for young).

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# Great Horned Owl (Bubo virginianus)

About 2 feet tall and with a wingspan of 4 feet, the Great Horned Owl is the only large owl in the Northwest with "ear tufts". Adults weigh about 3 pounds. Colors are usually muted grays and browns, with West Coast populations generally the darkest. Despite the Great Horned Owl's name, its "horns" are really tufts of feathers. The Great Horned Owl's "ear tufts" are not related to its ears or excellent hearing. The tufts may



An adult in typical West Coast plumage with a vole. (Brian Smucker)

serve as camouflage in the forest or as a warning to other birds in the open.

Like many other owls, Great Horned Owls are mostly active at night. People often hear them hooting back and forth at night. The female is larger, but the male has a deeper voice.

When threatened, a Great Horned Owl snaps its beak together to make a clacking sound. It can also hiss. An owl that roosts where smaller birds are nesting is often harassed by birds like robins, jays, and crows, who raise a ruckus and even hit the owl until it leaves the area.

## **Diet and Feeding Behavior**

Great Horned Owls are predators that eat mostly mammals and a variety of birds, including coots, ducks, young hawks and even geese. They also eat lizards, frogs, insects and many other critters. Great Horned Owls have silent wings and very powerful legs and feet, with long, sharp talons. They hunt with both sharp eyes and excellent hearing.

Owls often swallow entire rodent and bird prey. They can't digest the feathers and larger bones, so they collect and compress them in the gizzard and spit up pellets. (A gizzard is part of the digestive system of

certain animals without teeth, particularly birds). One can find pellets beneath a nest or perch and pull them apart. Students can identify the prey species by looking at the bones and skulls inside the pellets.

#### Reproduction

Great Horned Owls don't like to make their own nests. Usually, a pair will take over a large tree cavity, or a stick nest built by Redtailed Hawks. Great Horned Owls in pole sometimes nest barns and abandoned buildings. Since Great Horned Owls usually nest earlier than Red-tailed Hawks, often starting in late January or February, the owls often take a nest simply by arriving and settling in first. The hawks usually build a new nest roughly a half mile away, but some build new nests as close as the same clump of trees. In at least one case, the hawks came back to attack the owls and try to get the nest back; the owls won.



A juvenile Great Horned Owl, still with a downy head. (Brian Smucker)

The female lays 1 to 4 eggs. Both parents may incubate (keep eggs warm) for 30 to 37 days. The parents feed the downy gray chicks by bringing prey to the nest, tearing off bits, and feeding them to the chicks. As the chicks grow and develop feathers and muscles, they start feeding themselves from the food delivered to the nest. Chicks are often awake and looking around during the day. With large, fuzzy heads, they can resemble teddy bears. Unlike hawks, young owls fledge (start flying) when their heads are still covered with down, about 42 days after hatching.

# **Distribution and Habitat**

The Great Horned Owl is the most widespread owl in the US. They live year-round from Alaska to Florida and California to Maine, plus most of Canada and Mexico. Great Horned Owls at the Refuge are most often seen in the forested area. between the hill and the river. Some years a pair nests in that area. Look for a large, dark blob on a sturdy branch or in a tree crotch, and big yellow eyes. The feathery tufts are distinctive and always upright.

## Conservation

Great Horned Owls are common throughout much of the country, though the population has dropped by 33% in the past 50 They adapt well years. to changes in habitat if there is a place to nest. aood Great Horned Owls are susceptible to poisoning (they take in when rodenticides thev eat rodents that have been poisoned).



Great Horned Owl Range Map.

https://www.allaboutbirds.org/guide/Great\_Horned\_Owl /maps-range



Adult Great Horned Owl. Note the large yellow eyes. (Brian Smucker)

There are an estimated 2.7

million breeding Great Horned Owls in the US. They are not threatened

or endangered. Still, they are protected. It is illegal to disturb nesting birds.

# Fun Facts

- In one case, a pair of Great Horned Owls took over a nest built by Red-tailed Hawks. The hawks built a new nest in the next tree in the same clump. Both pairs raised young successfully. The following year, the owls took the new nest, and the hawks went back to the old nest.
- Great Horned Owls can endure winter weather due to their soft feathers, which offer great insulation.
- Owls can't turn their eyes like humans do, so they swivel their heads more than 180 degrees. This means they can look over their back as well as their front.
- Owls, especially young ones, may bob their heads side to side while looking at you. This helps them see you better.
- The oldest known Great Horned Owl was 28 years old.

# Hummingbirds

# Anna's Hummingbird (Calypte anna)

Although it is small (only 3.5 to 4 inches long, and weighing less than a nickel), the Anna's Hummingbird is the largest hummingbird in the Pacific Northwest, and the only one that is regularly found in Oregon in the winter. Anna's Hummingbirds have emerald-green backs, dingy-gray bellies, and needle-like bills. The head and throat of males and females look quite different. Males have a dark



Female Anna's Hummingbird (Ken Durbin)

"hood" which looks deep purple or red, depending on the light. Males also have a "bib" called a "gorget". When flared out, the gorget is a beautiful iridescent rosy-pink. Female Anna's Hummingbirds have a green head, and a small reddish-purple patch on their throats. Anna's Hummingbirds are often heard before they are seen. Their song is a buzzy, squeaky "teesst-teesst-teesst", and they make a lot of chittery or "chip" calls. In flight, their wings produce a soft, buzzy rattling sound.



Male Anna's Hummingbird (Brian Smucker)



Female Anna's Hummingbird in nest (Ken Durbin)

## **Diet and Feeding Behavior**

Anna's Hummingbirds (like other hummingbird species) are drawn to feeders filled with sugar water. Native plants such as red-flowering current, penstemon, manzanita and columbine, as well as ornamental plants such as fuchsias, honeysuckles, and azaleas, attract this species. They can feed while hovering in the air, and extend their bill and long tongue deep into the center of flowers (or feeders). Anna's Hummingbirds catch insects in the air ("hawking") and pick insects off of leaves and spider webs ("gleaning"). They also eat pollen and sap. Anna's Hummingbirds will defend a favorite feeder by chasing other hummingbirds away.

#### Reproduction

Anna's Hummingbirds begin their nesting season as early as December. Both males and females set up territories that may be far apart from one another. Males set up territories where they will find many females; females set up territories that have good nesting sites. The sexes come together only to mate. Male Anna's Hummingbirds put on an amazing courtship display by flying upwards to over 100 feet and then diving down, making a J-shaped curve at the bottom of their dive. The males emit a loud, explosive popping sound at the end of the dive, which is made by their tail feathers. They often repeat this display, starting and ending in the same spot. A male tries to breed with any females that come into his territory to feed. Males defend their territories from intruders by making warning sounds. If the interloper doesn't leave, the male will give more and louder warnings and flash his gorget. If that still does not get rid of the intruder, the male might physically attack him.

Females build the nests. Nests are tiny and cup-shaped, made with plant materials, and held together with spider web silk. The inside of the nest is lined with dandelion or thistle down or even feathers. To hide the nest from predators, the female camouflages the outside with lichens or bits of tree bark. Nests are usually on branches of trees or shrubs, most often from 4 to 25 feet above the ground. Females lay between 1 and 3 white
## Hummingbirds

# Hummingbirds

eggs, and incubate them for 14-19 days. The female feeds the young, sticking her bill into their mouths and regurgitating (throwing up) food for them to eat. When the young hummingbirds are about 18-23 days old, they take their first flights. Anna's Hummingbirds rarely reuse nests. Instead, they use materials from old nests to build new ones.

# **Distribution and Habitat**

Anna's Hummingbirds occur on of the west coast North America, all the way from southern British Columbia to Baja California northern in Mexico. They breed west of the Cascades and Sierra Nevada mountains, and as far east as Arizona. Their wintering range is from British Columbia to Arizona.

Anna's Hummingbirds are found in a variety of habitats, but are a largely a creature of residential areas and parks where there are flowering plants and hummingbird



Anna's Hummingbird Range Map. https://www.allaboutbirds.org/guide/Annas\_Hummingbird/ maps-range

feeders. They are not as likely to be seen away from urban habitats. This species is present on the Tualatin River National Wildlife Refuge throughout the year.

# Conservation

Anna's Hummingbirds became well-established in Oregon in the 1960's and the species has expanded its range ever since. Its numbers have also increased during this time. Humans have had a lot to do with this. We have put hummingbird feeders in our backyards, providing a reliable Hummingbirds

food source in the winter. The species has also benefited from garden flowers.

Although the species is doing very well, individuals are vulnerable to attacks by cats (even though they can fly up to 60 miles per hour). Also, people who put too much sugar in their hummingbird feeder water may cause harm to these birds. The proper ratio is 1 part sugar to 4 parts water—no more! Feeders located too close to windows may cause injury or death by collision.

# Fun Facts

- The heart of an Anna's Hummingbird beats about 1,260 times per minute. On cold nights, however, they slow down their heart rate and metabolism to save energy.
- Like other hummingbird species, Anna's have tiny legs, and cannot walk or hop.
- Like other hummingbirds, Anna's can hover in place and even fly backwards.

# Belted Kingfisher (*Megaceryle alcyon*)

Of all the birds you can see on the Tualatin River National Wildlife Refuge, the Belted Kingfisher is one of the most recognizable. Often heard before seen, its loud, harsh, rattling call is unmistakable.

The Belted Kingfisher is a medium-sized bird—13 inches long with a 20-inch wingspan. The shaggy head crest gives Belted Kingfishers a "punk rock" appearance. It's crested head seems too large for its body; its thick, dark, pointy, daggershaped bill too big for its head; and it has almost no neck. Its



Belted Kingfisher female (Don Holland)

legs are so short, often you can hardly see them. Belted Kingfishers' bodies, wings, and crested heads are slaty-blue-gray. They have large white collars and breasts. Male Belted Kingfishers have a blue-gray breast-band. Females have a rusty red band across the chest that males lack.

# **Diet and Feeding Behavior**

Belted Kingfishers mostly eat fish, and therefore are never far from water. Because Belted Kingfishers hunt by sight, they require clear water to see their prey. Their eyes have specially adapted lenses that can focus both in and out of water. A Kingfisher typically perches on a snag (dead, standing tree), tree limb, or telephone wire; surveying a patch of water for a meal. When it spots something, the Kingfisher flies out from

Kingfishers

the perch, and hovers over its target. Suddenly, it plunges head-first into the water. If successful, the Kingfisher returns to its perch to eat. The Belted Kingfisher's diet is 90% small fish (3-4 inch). The Belted Kingfisher also eats small crustaceans (such as crayfish), aquatic insects, reptiles (such as lizards), amphibians (such as frogs and tadpoles) and small mammals (such as mice).

# Reproduction

The breeding season of the Belted Kingfisher begins in late April or early May. The species has an interesting courtship behavior. The male pursues a female in the air. The female lands, points her beak upward, quivers, and gives out a begging call. The male presents a fish to her, and then they mate.

Belted Kingfishers tunnel horizontally into dirt riverbanks to build nests. This process takes up to a week. Both male and female excavate the burrow. The opening is only two inches wide, but the burrow is 3-6 feet long. The nest chamber at the end of the tunnel is slightly enlarged. The female lays 5-8 white eggs on the dirt floor. Both sexes incubate (keep warm) the eggs, switching duties a few times a day. A female Belted Kingfisher generally sits on eggs at night, and switches with her mate in the early morning. Incubation lasts 22-24 days. Both parents feed the hatchlings – at first with partly-digested fish, and later with whole fish. The young Kingfishers leave the burrow 27-29 days after hatching. The parents feed the young for another 3 weeks. Belted Kingfishers teach their young to fish by dropping dead prey into the water.

Belted Kingfishers rarely raise more than one family a year.

# **Distribution and Habitat**

Belted Kingfishers live across most of North America, from Canada to northern South America. They breed from Alaska (south of the Arctic) eastward across southern Canada and south throughout most of the United States. The species lives throughout most of Oregon, except at high elevations and where open **Belted** absent. water is Kingfishers migrate may seasonally when water bodies freeze, and they can't fish.



Belted Kingfisher Range Map. https://www.allaboutbirds.org/guide/Belted\_Kingfisher/ maps-range

# Belted Kingfishers hunt from

shorelines. Their hunting waters include lakes, ponds, bays, freshwater marshes, rivers, streams, and estuaries (partially enclosed areas where freshwater rivers and saltwater meet). At the Refuge look and listen for Belted Kingfishers along the Tualatin River, especially the river overlook.

# Conservation

The Belted Kingfisher is common but may be in decline where there is habitat alteration and nest disturbance. However, the species has a large breeding range, and a substantial population.

# Fun Facts

 It is unusual in the "world of birds" that a female is more colorful than the male. The Belted Kingfisher is one of the exceptions. Female Belted Kingfishers have a rufous chest band and flanks that the males lack.

- The outer and middle toes of Belted Kingfishers' feet are partially joined. This characteristic is called "syndactyly". Their feet are weak and used only for perching. Belted Kingfishers catch prey with their bills.
- The Laughing Kookaburra of Australia is a relative of the Belted Kingfisher.
- An image of a Belted Kingfisher is found on the 1986 series Canadian \$5 note.
- A group of Belted Kingfishers is known as a "crown" or a "rattle" of kingfishers.

# Downy Woodpecker (*Picoides pubescens*)

The Downy Woodpecker is the smallest North American woodpecker. It is 5-7 inches long and weighs only .70-1.2 ounces, with a wing span of 12 inches. It is not much bigger than a nuthatch. Downy Woodpeckers are small versions of the classic woodpecker body. They have a straight chisel-like bill, blocky head, and wide shoulders. The Downy has a straight-backed posture, as it leans away from tree limbs and onto its tail feathers. The bill looks smaller for the bird's size than in other woodpeckers. The upper back, rump, and wings are black. The wings are spotted with white dots. There is a white strip down its back, and a white bar



Male Downy Woodpecker (Ken Durbin)

above and below each eye. The underside of the woodpecker is completely white. Adult males and females are similar, except males have a red patch at the back of the head. The Downy Woodpecker looks like the slightly larger Hairy Woodpecker, which also has a much longer beak.

Both Downy and Hairy Woodpeckers have pointed beaks effective for capturing insects. You are more likely to see a Downy because the Hairy is more secretive and resides in deeper coniferous forests.

Young Downy Woodpeckers look like the adults, with duller black markings and greyish white markings, often with fine streaking. Juvenile male Downy Woodpeckers typically have a pale reddish patch on the forehead, but not on the back of the head as in the adult.

Downy Woodpeckers don't sing. Both sexes drum loudly against pieces of wood or metal to attract mates or claim territories. The drumming consists of very rapid strikes given at a steady pace, almost fast enough to blend into a single uninterrupted sound. The drumming is not part of the birds' feeding habits. Feeding birds make little noise, even when they're digging vigorously into wood. A Downy call sounds like "pik".

# **Diet and Feeding Behavior**

The Downy Woodpecker's diet consists mainly of insects, particularly wood-boring beetle larvae. The Downy Woodpecker probes crevices or excavates under bark. The Downy eats pests, such as corn earworms and tent caterpillars. They also eat ants, caterpillars, spiders, and some plant material, including berries, nuts (acorns), grains, and seeds. Downy Woodpeckers commonly eat suet and black oil sunflower seeds from bird feeders, and occasionally drink from hummingbird feeders. The Downy may also hammer on galls to extract insect larvae. Galls are plant growths caused by insects laying eggs. You can see two types of wasp galls on the oak trees at the Refuge that look like green pingpong balls. One type grows on the leaves, the other on the branches.

Diet and foraging techniques vary with season and sex. In winter males tend to forage on smaller branches, females on larger branches and trunks of trees. Although mostly solitary in winter, Downy Woodpecker pairs often forage with mixed flocks of other bird species.

# Reproduction

The Downy Woodpecker begins to breed at about a year old. The Downy Woodpecker displays breeding behavior in late winter, laying claim to a nest site as early as January or February. Downy Woodpeckers are monogamous, which means the same pair stays and mates with each other for years. Both sexes perform a fluttering courtship display, flying between trees with slow, butterfly-like wing beats. The Downy lays eggs between April and May in southern areas, and between May and July further north.

#### Woodpeckers

The Downy Woodpecker usually nests in a dead tree or in a dead part of a deciduous living tree, particularly where a fungus softened the wood. The male and female spend up to three weeks excavating a nest hole. They typically place the nest hole on the underside of a small branch. Nest sites are usually 10 to 12 feet above the ground. The round entrance holes are 1-1.5 inches across. The nesting cavity inside the branch is 6-12 inches deep and widens toward the bottom to make room for eggs and the incubating (keeping the eggs warm) bird. The Downy lines the nest with wood chips

The female Downy Woodpecker lays 3-8 small white eggs. Both adults incubate the eggs for around 12 days. Hatchlings are clumsy, pink, and naked - with eyes closed and a sharp egg tooth (used to break out of the egg) at the tip of the bill.

The young Downy Woodpeckers leave the nest 18 to 23 days after hatching. The adults continue to care for the young for up to 3 more weeks. Usually, Downy Woodpeckers raise one brood a year, but some southern birds raise two. Snakes and squirrels will eat Downy eggs.

# **Distribution and Habitat**

Downy Woodpeckers live throughout the continental United States and the southern two-thirds of Canada. Downy Woodpeckers live mostly at low to moderate elevations in a variety of habitats. Habitats include deciduous and deciduous-coniferous mixed forests. woodlands, and along areas open The Downy Woodpecker's streams. small size allows it to exploit foraging (eating) niches and nesting sites that are for larger woodpeckers. unsuitable Thus, the Downy is less constrained by habitat than other woodpecker species



Downy Woodpecker Range Map. https://www.allaboutbirds.org/guide/ Downy\_Woodpecker/maps-range

and can be found in "created" habitats such as orchards, parks, and suburbs. The Downy Woodpecker is equally at home in urban woodlots or wilderness forests, and is readily attracted to backyard bird feeders. You may also find Downy Woodpeckers in open areas, where they can nest along fencerows and feed amid tall weeds.

Downy Woodpeckers can be seen year round at the Refuge. You may see them in the Black Cottonwoods by the small ponds near the beginning of the trail, in the Oak Savannah, or at the edges of the riparian forest.

# Conservation

Downy Woodpeckers are numerous (estimated 14 million) and their populations are stable, with 79% living in the U.S. and 21% in Canada. Downy Woodpeckers adapt to urban areas with shelter and food sources. Clearing and thinning forests has a positive effect, since Downy Woodpeckers do well in young forests. Foresters and orchard owners generally welcome Downy Woodpeckers because they eat tree damaging insect pests. Predators include birds of prey, as well as rats and cats in urban areas.

# Fun Facts

- Males keep females from foraging in the more productive feeding spots. Both males and females will eat suet at backyard feeders, but not at the same time.
- A Downy with an identification band lived at least 11 years in the wild.
- Like all woodpeckers, Downy Woodpeckers' structure (anatomy) is adapted to withstand the impact of hammering on trees, as follows:
  - Woodpeckers' skulls are more flexible because of the platelike bones.
  - Woodpeckers have a hyoid bone wrapped all the way around a woodpecker's skull. Every time the bird pecks, the hyoid

acts like a seat-belt for the bird's skull and the delicate brain it protects.

- A woodpecker's upper beak is longer than its lower beak, kind of like an overbite. The lower beak's stronger bone helps absorb impact.
- As a threat display during conflicts with other Downy Woodpeckers, a Downy fans its tail, raises its head feathers, and waves its beak from side to side.

# Northern Flicker (Colaptes auratus)

The Northern Flicker is not the largest woodpecker seen at the Tualatin River National Wildlife Refuge (that's the Pileated Woodpecker which is over 16 inches long), but it's bigger than the Downy Woodpecker which is less than 7 inches long. Northern Flickers are about 12.5 inches long on average. Their wingspan is about 20 inches.

If you look carefully at a Northern Flicker, you will appreciate how varied its plumage (feathering) is. The back is brown with black barring. The belly and chest are a light creamy color with black polkadots. There is a black patch on the upper chest that looks like a baby's bib. The head is a lovely shade of tan-brown. If it's a male, you'll see a bright red "mustache" on a gray face. When a Northern Flicker flies away from you, you can't help but notice a large white rump patch. You might also be lucky enough to



Male Northern Flicker. Note the red "mustache." (Ken Durbin)



Female Northern Flicker. Note absence of a red "mustache." (Ken Durbin)

see bright orange feathers under the tail and wings. Northern Flickers have long, sturdy bills that are slightly downturned. Males and females are nearly identical, but females lack a mustache.

Northern Flickers make loud, repeated "wicka-wicka-wicka" sounds as well as sharp "kleer" noises which can be heard from quite a distance.

# **Diet and Feeding Behavior**

Northern Flickers mostly eat ants. However, they will consume other insects (such as beetle larvae, crickets, termites, caterpillars, grasshoppers, and moths), berries, seeds, nuts, acorns, and fruits. Like many woodpecker species, Northern Flickers have four toes – two pointing forward and two pointing back. This enables them to climb trees and search for food. Often, however, they will be seen hopping on the ground searching for a meal. They also will come to suet feeders in residential neighborhoods.

# Reproduction

To attract a mate and "announce" a territory, Northern Flickers "drum" on many surfaces, including hollow tree trunks, wooden posts, house siding, and metal flues on chimneys. The sounds they make while excavating nest cavities or feeding are not as fast or loud as drumming.

Breeding season begins in April but may continue through early August. Northern Flickers (like all woodpeckers) are cavity nesters, and they create their own cavities in wood by chiseling out holes with their sharp, strong bills. Snags (dead, standing trees) are preferred, as are dead parts of live trees. Both sexes excavate nests. Holes are about 3 inches in diameter and the cavity is 13-16 inches deep. That takes a lot of work! They generally make new cavities every year. The species rarely reuses a cavity but may nest in one made the previous year.

Northern Flickers don't line their nest cavities with anything except some wood chips. The female lays between 3 and 12 white eggs through late June. Both parents incubate (warm) the eggs for 11-16 days. It is then 24-27 days before the young fledge (leave the nest cavity).

# **Distribution and Habitat**

The Northern Flicker is a resident species throughout much of the U.S. and parts of Mexico and Cuba (meaning they do not migrate but stay there year-round). They are not found above tree line, or in the Sonoran

Woodpeckers

Desert of Arizona and dry parts of southwest New Mexico and Texas. Flickers that breed in Alaska and much of Canada are migratory.

This species lives in open forests, woodlots, tree groves, grasslands, agricultural areas, towns and cities - really just about any habitat with large, dead trees. Northern Flickers can even be found in riparian habitats (along rivers) within deserts. They tend to avoid dense forests because thev need some open ground for foraging.



# Conservation

The Northern Flicker is abundant and widespread, but surveys indicate a 30 percent decline in population over much of its range since the 1960s. One factor seems to be the decline in numbers of large, dead trees and snags necessary for nesting. Non-native Starlings have taken over some of their nesting cavities, often just after they are excavated.

# **Fun Facts**

- Northern Flickers have stiff tails that they use to prop themselves up on vertical surfaces such as tree trunks. Their two strong feet and tail function like a "tripod".
- Flickers (and other woodpeckers) have long tongues with barbed tips. This enables them to probe ant nests and tunnels made by some insects in logs. The Northern Flicker has the longest tongue

of any woodpecker. It can extend almost 2 inches beyond the tip of its bill!

- All woodpecker eggs are white. It is thought that no camouflage is needed because they are safe within a nest cavity.
- Abandoned Northern Flicker cavities are used by many other animal species, including chickadees, bluebirds, kestrels, owls, and Douglas and flying squirrels.
- The red-shafted (Western U.S.) and yellow-shafted (Eastern U.S.) forms of the Northern Flicker were once thought to be different species. However, the two forms hybridize (breed with each other) where their ranges overlap. Now the two forms are considered the same species.

# Pileated Woodpecker (*Dryocopus pileatus*)

As far as woodpeckers go, the Woodpecker is Pileated unique. There is no confusing this crow-sized species with other woodpeckers found on the Tualatin River National Wildlife Refuge. With a 16.5-inch-long body and a 29-inch wingspan, this is the largest woodpecker in the U.S. The Pileated Woodpecker is much bigger than the Northern Flicker, the next-largest woodpecker on the Refuge.

Besides their large size, the bright red cap and crest are prominent Pileated Woodpecker features. These birds have black wings, backs, and tails. A large white stripe extends from the bill, down the neck to the shoulder and top of the breast. Males have red mustaches that extend back from the



Pileated Woodpecker (Ken Durbin)

long, straight, chisel-shaped gray bill. Females do not have this red mustache or red on their foreheads. Adult Pileated Woodpeckers have yellow eyes, but juveniles have dark eyes. In flight, Pileated Woodpeckers' wings are noticeably broad. The front of the wing underside is white.

Pileated Woodpeckers climb trees with an upright posture. They use two rear-facing toes to cling to vertical surfaces and stiff tail feathers for support. Pileated Woodpeckers climbs trees with a jerky movement. They hop with their feet, and prop up their body with their tail.

Pileated Woodpeckers make a variety of sounds. The most common is the territorial call—a series of loud "wok" or "cuk" calls. Pileated Woodpeckers sound like Northern Flickers, but the Pileated Woodpecker's call is louder and "wilder". A single "wok" call is their alarm call. Pileated Woodpeckers also use non-vocal sounds to communicate. These include drumming and tapping on snags, hollow branches, and tree trunks. The drumming is loud and slow, then speeds up while becoming quieter towards the end. Pileated Woodpeckers (like other woodpeckers) drum to declare a territory or to attract a mate. Both male and female woodpeckers drum.

# **Diet and Feeding Behavior**

With their powerful, sturdy bills, Pileated Woodpeckers forage for insects by chipping bark and wood off downed trees, snags (standing dead trees), and large diameter trees. They prefer the large dead conifer and hardwood trees and resulting logs. More insects normally inhabit large logs and trees. Look for large, rectangular holes in trees, snags, and stumps on the Refuge. Most of these holes are Pileated Woodpeckers' excavations in search of food. Pileated Woodpeckers mainly eat carpenter ants, but also eat wood-boring beetles, beetle larvae, and termites. These birds' long tongues have barbed tips that can probe deep into ant nests or tunnels of boring insects. Occasionally, Pileated Woodpeckers eat fruits, berries, and nuts. Pileated Woodpeckers sometimes feed in younger forests, especially if they contain some mature or old-growth trees. In the Pacific Northwest, old-growth trees are up to 260 feet tall and 10 feet in diameter.

# Reproduction

Pileated Woodpeckers begin courtship and territorial activity in February and March in Oregon. Both males and females excavate the nest cavity from late March to early May. Pileated Woodpeckers do not line the nest but may leave some wood chips in the cavity. Normally the female lays 4 (but between 3 and 8) white eggs in May and early June. Both parents incubate (kept warm) the eggs for 12-16 days. Nestlings hatch from late

#### Woodpeckers

May until early July. Both parents tend the nestlings. The young fledge (leave the nest) about a month after hatching. After Pileated Woodpeckers fledge, the adults make more cavities for the youngsters to explore and roost in.

Pileated Woodpeckers excavate a new nest cavity each year. They may partly construct several cavities before finishing the one they will use. Although Pileated Woodpeckers defend their cavities, they allow other cavity-nesting birds to nest in the same tree. Pileated Woodpeckers often reuse nest cavities for roosting, but not again for nesting. Pileated Woodpeckers mate for life and have just one family each year. If one adult partner dies, the surviving woodpecker defends the territory and tries to attract a new mate from a neighboring territory.

# **Distribution and Habitat**

Pileated Woodpeckers live and breed in forested areas from southern British Columbia, east across southern Canada, and south into the northern Rocky Mountains, the Pacific Northwest, and northern and central California. They also inhabit much of the eastern United States. Pileated Woodpeckers are nonmigratory, but during the nonbreeding season thev may wander over large areas.



The adults excavate cavities in

hollow trees or snags for roosting at night and during bad weather. If the excavated tree or snag is not hollow, Pileated Woodpeckers connect several holes for additional escape routes from predators.

Woodpeckers

Pileated Woodpeckers excavate rectangular holes that are about 8 inches long—twice the size of Northern Flicker holes. (Other woodpeckers excavate round holes.) Pileated Woodpeckers excavate deep cavities (10-24 inches) to accommodate their large size and their young. Many rather large birds and other animals nest and roost in Pileated Woodpecker cavities. These cavity beneficiaries include Northern Flying Squirrels and the following waterfowl - Common Mergansers, Hooded Mergansers, Wood Ducks, Common Goldeneyes, and Buffleheads.

Pileated Woodpeckers are the only woodpeckers in the western U.S. that excavate the heartwood (dense core) of trees. These excavations can lead to "heart rot" (a disease that weakens the heartwood of a tree). But these excavations also provide shelter and/or food habitat for weaker excavating woodpeckers, such as sapsuckers.

# Conservation

Pileated Woodpeckers are vulnerable to timber practices, such as clearcut logging, that remove large diameter live and dead trees, and downed woody material. Forest fragmentation makes this species more vulnerable to predation during flight between forest patches. By the early 1900s land clearing nearly eliminated Pileated Woodpeckers in the eastern United States. Fortunately, their eastern population increased as forests grew back. Although Pileated Woodpecker populations overall are stable, the species is a "species at risk" in Oregon and Washington.

# Fun Facts

- When a woodpecker makes a nesting cavity, it uses its entire body to pound into the wood. It protects it eyes by closing them just before its bill hits the wood. When drumming, a woodpecker uses just its head and neck muscles.
- Pileated Woodpeckers help improve forest health by breaking down wood into smaller pieces that decompose more easily.

- The word "Pileated" comes from the Latin word *pileatus*, which means "crested" or "capped".
- A group of Pileated Woodpeckers is known as a "crown" of woodpeckers.
- Old movies often used Pileated Woodpeckers' "wild" calls in jungle scenes. You can listen to Pileated Woodpecker calls at <u>https://www.allaboutbirds.org/guide/Pileated\_Woodpecker</u>.

#### Woodpeckers

# Red-breasted Sapsucker (Sphyrapicus ruber)

One of the most beautiful birds found on the Tualatin River National Wildlife Refuge is the Red-breasted Sapsucker. This medium-sized woodpecker is about 8.5 inches long (about robin-size), with a wingspan of 16 inches. Its bright red head and breast, and large vertical wing patches (visible white perching), when are distinguishing features. Redbreasted Sapsuckers have pale yellow bellies, and black and patterning white on their otherwise black backs. They have white rumps, and a small yellowish-white lore (the area from the front of their eyes to



Red-breasted Sapsucker. (Becky Matsubara), 11/01/2017 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

the base of their chisel-shaped bill). Males and females appear similar, but juveniles have red-brown heads and breasts.

Red-breasted Sapsuckers emit a catlike mewing keeah or whee-ur sound. They also make calls that sound a bit like a parrot. Their drumming (sound from pecking) is irregular, slow, and loud, and may be heard from a considerable distance. It may sound like someone tapping a pencil on the trunk of a tree. Red-breasted Sapsuckers drum most often in the early morning, especially at the beginning of the breeding season. They drum to establish a territory and to attract a mate. Redbreasted Sapsuckers also make tapping noises when drilling holes for feeding and when excavating nest cavities.

# **Diet and Feeding Behavior**

As their name implies, Red-breasted Sapsuckers eat sap. They drill horizontal rows of shallow holes (called "wells") in the bark of live trees to access sap that oozes out. Their tongues are shorter than other woodpeckers' and instead have a brushy tip for collecting sap. Redbreasted Sapsuckers also consume insects and arthropods (such as spiders) attracted to and trapped by the sap. The Red-breasted Sapsucker especially likes ants and will search tree trunks for them. In addition to sap and insects, the species eats bits of tree tissue, berries, and fruits when available. Red-breasted Sapsuckers also catch insects in flight over meadows and lakes.

Red-breasted Sapsuckers visit their sap wells frequently and vigorously defend them from other bird species (like warblers and hummingbirds) attracted to the sap wells. Rufous Hummingbirds associate closely with Red-breasted Sapsuckers. These hummingbirds sip the sugar-rich sap from Red-breasted Sapsuckers' sap wells before flower nectar is available. Rufous Hummingbirds may nest near Red-breasted Sapsucker sap wells. A Rufous Hummingbird may follow a Red-breasted Sapsucker during the day to find trees with sapsucker holes.

# Reproduction

Red-breasted Sapsuckers begin their courtship displays by pointing their bills up and swaying from side to side. The species begins nesting in April or May but may continue through July. A pair produces one brood (family) per breeding season.

Red-breasted Sapsuckers nest in cavities. Both male and female excavate nest cavities in a variety of tree species. The cavities are often 50 or 60 feet (or more) above the ground in large snags (standing dead trees) or live trees with decayed interiors. Red-breasted Sapsuckers do not prefer a particular tree species. They use what is common to the area, including a variety of conifers (such as the Douglas Fir) and deciduous trees (such as the Bigleaf Maple). Red-breasted Sapsuckers may nest in the same snag or tree year after year, but do not use the

#### Woodpeckers

same nest cavity. The used nest cavities made by Red-breasted Sapsuckers are important to cavity nesting birds who do not excavate their own nest holes.

The female Red-breasted Sapsucker lays 4 to 5 white eggs (but sometimes as few as 3 or as many as 7). Red-breasted Sapsuckers are attentive parents. Both female and male incubate the eggs for 12-14 days. After the eggs hatch, both parents feed the young with spiders, caterpillars, and flies, coming to the nest every few minutes. The young sapsuckers fledge (leave the nest) when they are between 23 and 28 days old. Both parents feed their offspring for about 10 days after they fledge. The parents also teach them the "sapsucking" behavior.

# **Distribution and Habitat**

The Red-breasted Sapsucker lives in forests in coastal states and provinces from southeast Alaska to southern California, plus western Nevada. The Redbreasted Sapsucker breeds in moist coniferous forests of the coast and mixed forests at elevations up to 9,500+ feet.

Red-breasted Sapsuckers winter throughout much of their breeding range, except interior British Columbia. It appears that northern birds migrate south in the winter, and individuals that higher breed inland and in elevations move to coastal during lowlands the winter



Red-breasted Sapsucker Range Map. https://www.allaboutbirds.org/guide/Redbreasted Sapsucker/maps-range

where the weather is milder. Their winter range extends all the way to Baja California, Mexico.

Woodpeckers

In Oregon, the Red-breasted Sapsucker commonly breeds west of the Cascades as far south as the southern Cascades. They winter In Oregon, but may move to lower elevations, depending on weather conditions.

Red-breasted Sapsuckers prefer old-growth habitat, if available, but also live in mixed deciduous-coniferous forests west of the Cascade crest. The species is known to visit fruit and nut orchards. At the Refuge look and listen for Red-breasted Sapsuckers in the wooded areas along the year-round trail.

# Conservation

The Red-breasted Sapsucker has a broad range and has not shown signs of decline. The greatest concern for Red-breasted Sapsuckers is the loss of large snags and old-growth and older-aged forests.

# Fun Facts

- Since 1983, ornithologists (bird scientists) classify the Redbreasted, Red-naped, and Yellow-bellied Sapsuckers as separate species. Previously, ornithologists classified these birds as regional variants of the same species. These sapsucker species are similar in size, plumage, and behavior. Where their ranges overlap they sometimes hybridize (breed with each other). However, hybrids have less success attracting mates.
- There are two Red-breasted Sapsucker subspecies in Oregon. The northern subspecies (the one found on the Refuge) is slightly larger with brighter and more extensive red ending sharply above the yellow belly.
- Fruit and nut growers thought the Red-breasted Sapsucker was a pest. They thought these birds damaged orchards by deforming and girdling trees. However, the Red-breasted Sapsuckers' sap wells usually cause little damage.
- The "wells" drilled by Red-breasted Sapsuckers leave distinctive scars on trees, which for many years is evidence of the species' presence.

- Male Red-breasted Sapsuckers are quite territorial, and may engage in physical combat when one enters anothers' territory. They sometimes latch onto each other's beak, holding on until one or both birds fall off a tree limb to the ground.
- A group of sapsuckers is known as a "slurp" of sapsuckers.

# *Crows, Jays and Magpies* American Crow (*Corvus brachyrhynchos*)

The American Crow is a large, stocky, thick-necked bird about twice the size of a jay. Crows are all black, even the legs and beak. They have a 3foot wingspan and weigh about a pound, with males a larger than females. little Crows are very social and often seen in groups, sometimes by the thousands. Their vocal "caw" is loud and distinctive. Crows fly with a steady, rowing motion, rarely gliding. Crows mob, chase, and yell at hawks and owls.

# **Diet and Feeding Behavior**

Crows eat almost anything: earthworms, insects, seeds, fruits, berries, nuts, clams, small fish, eggs and chicks of other species, garbage, and carrion (dead stuff). Their beaks are weak, but Crows adapt. Crows grab nuts and



The American Crow (Ken Durbin)



clams. They break open the shells by dropping these tasty morsels on pavement or rocks. Crows raid garbage cans and food containers. Crows may use twigs to "fish" for insects in holes. To eat a squirrel,

Crows, Jays and Magpies

Crows wait for the squirrel to rot or for another creature (or car) to open it up, since their beaks can't cut through the squirrel's skin.

# Reproduction

A pair of Crows works together to build a nest of sticks, often near the top of a conifer or other tree. The Crows line the nest with soft materials like grasses, pine needles, and animal fur. Nest size varies a good deal, from 6 to 19 inches across. The female usually lays 4 to 6 eggs, sometimes more, and incubates (keeps the eggs warm) for 16 to 18 days. The chicks can fly 4 to 5 weeks after hatching. Often an entire Crow family raises the nestlings, with young from the previous year or two helping. Crows can start their own families after 2 to 4 years.

# **Distribution and Habitat**

American Crows are highly adaptable and are found in every state except Alaska and Hawaii. They are common along shores, on farms, in towns and cities, in parks and forest campgrounds, and many other areas. Crows avoid dense forests and deserts. Crows are curious and intelligent, sometimes work together in groups, and solve problems. Some breed in Canada and migrate only as far as the US. At the Refuge, look for Crows flying and cawing, or perched atop trees or snags in the open areas or the edge of the forest.





The Northwestern Crow is similar, but smaller, with a deeper voice. Some ornithologists (bird scientists) believe the Northwestern Crow is a

Crows, Jays and Magpies

separate species from the American Crow. Other ornithologists believe the Northwestern Crow is a subspecies of the American Crow because they breed with each other where their ranges overlap around Puget Sound. The Northwestern Crow lives only in the coastal portions of Washington, British Columbia, and Alaska.

The American Crow is part of a family called Corvidae that includes other crows, ravens, and jays. Ravens look like Crows but are bigger and heavier, with thicker beaks.

# Conservation

The American Crow population is widespread and stable, estimated at about 27 million adults. They are protected by law, but people sometimes tried to exterminate them with everything from shotguns to dynamite. The greatest threat to Crows is West Nile virus, which often kills them. When Crows are dying, scientists look for other species that may have the virus.

# Fun Facts

- American Crows have been seen in communal roosts of up to 2 million. Many Crows roost in downtown Portland, but not that many.
- Crows sometimes follow other birds to eat their chicks or steal their food.
- Some crows use tools.
- The oldest known wild American Crow was 16 years 4 months when captured by banders. One American Crow in captivity reached 59 years.
- *Brachyrhynchos*, the species name, means short-beaked.

Crows, Jays and Magpies

# Steller's Jay (Cyanocitta stelleri)

There are 2 jay species common in the Willamette Valley: Steller's Jay and California Scrub-Jay. They are about the same size. larger than a robin, and present year-round. The Steller's Jay has a black head with a distinctive black crest. The Steller's Jay's lower body is dark blue with a blackish chest and upper back. The California Scrub-Jay has The no crest. Scrub-Jay California is largely medium blue except for a white belly and throat and a gray patch on its back. The Steller's Jay's call is midway between the shriek of the Scrub-Jay and the hoarse caw of the crow.

#### **Diet and Feeding Behavior**

Steller's Jays are opportunists. They eat a variety of foods, including nuts, suet, seeds, insects, berries, eggs, unguarded picnic items, and sometimes



Steller's Jay (Ken Durbin)



Adult California Scrub-Jay (Ken Durbin)

small birds. If there is a good food supply, especially large nuts, they hide it to eat later. Steller's Jays also steal from other birds.

# Reproduction

A Steller's Jay pair builds a cup nest of stems, leaves, moss, and sticks, all held together with mud. The nest is usually in a conifer. The nest can look ragged and is up to 17 inches across. The female lays 2 to 6 eggs (usually 4) and incubates them (keeps warm) for 16 days. After hatching the young start to fly after another 16 days.

# **Distribution and Habitat**

Steller's Jays are common across western North America, from Alaska to Central America. prefer evergreen They and forests. mixed often near streams. At the Refuge, Steller's Jays are most common in the forest along the year-round trail. They are social, often moving and calling in groups. Steller's Jays mob other birds, call loudly, and even hit perched owls and hawks in their territories, especially in nesting season.

# Vear-round Steller's Jay Range Map. https://www.allaboutbirds.org/guide/ Stellers Jay/maps-range

# Conservation

The population is stable and of

low concern, with an estimated 2.8 million breeding birds, 70% of them in the US at least part of the year.

# Fun facts

- Arizona birds have 4 white marks on their faces.
- People often call Steller's Jays "Blue Jays," which are a different species that is common east of the Rockies, but rare in Oregon.
- Steller's Jays are named after Georg Steller, not their stellar colors.

- Steller's Jays imitate other sounds, including hawk calls and even mechanical noises.
- The oldest known Steller's Jay was 16 years and 1 month old when captured and released at a banding station in southern Alaska.



Steller's Jay showing distinctive black creat. (Ken Durbin)

# Crows, Jays and Magpies Crows, Jays and Magpies Crows, Jays and Magpies

The California Scrub-Jay is a songbird, and a member of the Family Corvidae, which includes crows, jays and The California magpies. Scrub-Jay was known as the Western Scrub-Jay until 2016, when it was split off the similar from Woodhouse's Scrub-Jay that lives in the intermountain



Adult California Scrub-Jay (Ken Durbin).

western states. The genus *Aphelocoma* is Greek for "smooth hair" and refers to the lack of a crest that is distinctive of other jays, such as the Steller's Jay or Blue Jay. The species *californica* refers to the Latin form for "of California" where the species is most common. "Scrub" refers to the preferred habitat for the species.

California Scrub-Jays are about the size of a robin – 11 to 12 inches long and weighing about 2.5 to 3.5 ounces. Adults are dull blue on the upper body and tail with a brownish-gray patch on the shoulders, and dull whitish on the underside with a blue necklace-like stripe (Figure 1). Their head is blue with a white eyebrow stripe. Beak, legs and feet are black. Eyes are brown. Males and females are similar. Juveniles lack the blue head and necklace and instead have a brownish-gray head without the white eyebrow.

# **Diet and Feeding Behavior**

California Scrub-Jays are opportunistic, and will eat a wide variety of food types. During spring and summer, they feed mostly on invertebrates and fruit, but in the fall and winter their diet is mostly fruits of forest trees such as acorns, pine seeds, and other nuts. They also occasionally eat eggs, nestling birds and other small vertebrates.

Scrub-Jays usually find food by hopping on the ground or on tree and shrub branches. To open acorns and other nuts, they hold the nut between the inner toes of both feet and hammer with their lower jaw until they can extract the meat of the nut.

# Reproduction

California Scrub-Jays can start breeding when they are just one year old – if they can find a mate. Many do not breed, however, until they are two or three years old. Once pairs are established, they both construct a nest that is usually 6 to12 feet high in a shrub or tree, but may be as high as 50 feet in a pine or oak tree. Nests usually are very well hidden. It takes an average of 13 days for the pair to complete a cup-shaped nest made of sticks and lined with plant fibers, fine rootlets and hair. One egg is laid each day until reaching an average clutch size of 4 eggs. Incubation begins with the last or next-to-last egg, and only the female incubates the eggs.

Incubation lasts about 18 days, with hatching usually occurring in the same order the eggs were laid, though it may occur over several days if incubation starts before the last egg is laid. Chicks hatch featherless, with eyes closed, and weighing less than 0.2 ounces. The female warms the chicks until they are feathered. Both parents feed the chicks mostly invertebrates (insects), but older chicks may get acorn fragments. The chicks fledge (leave the nest) when they're about 20 days old, but they cannot fly yet, so they spend their days climbing in the vegetation near the nest and begging for food. The parents continue to feed the fledglings for about one month after they leave the nest, at which point the youngsters are able to fly and feed themselves.

California Scrub-Jays usually produce only one successful brood per season, though if a first nest attempt fails, they usually try again. Studies have shown that first nests of the year produce an average of 0.91 fledglings per nest. Second nesting attempts usually have a lower success rate. Also, older pairs are considerably more successful than first year pairs.

# **Distribution and Habitat**

California Scrub-Jays live mostly in oak savannahs and shrubby forest-edge habitats in Washington, Oregon, California, and the Baja peninsula. Their beaks are well adapted for the types of foods they find (i.e., acorns vs piñon pine seeds preferred bv Woodhouse's Scrub-Jay). At the Refuge, California Scrub-Jays are often found in the oak woodlands and habitat edges along Rock Creek and Tualatin River.

The highest densities of California Scrub-Jays are found in California and western





Range of California Scrub-Jay (from All About Birds, Cornell Lab of Ornithology, https://www.allaboutbirds.org/guide/California\_Scrub-Jay/maps-range).

Oregon. Based on long-term trends reported by the Breeding Bird Survey, populations of Scrub-Jays are declining slightly in the more-arid, desert areas. However, populations are generally increasing in Oregon and southwestern Washington. In fact, the range of Scrub-Jays has expanded in recent decades in western Oregon and Washington as residential development in low-elevation corridors has opened forest canopies and created more shrubby edge habitats.

# Conservation

California Scrub-Jays are listed as a Species of Least Concern by the International Union for the Conservation of Nature. They are generally tolerant (some would say bold) around humans, and in many locations in western Oregon they actually benefit from humans changing the

Crows, Jays and Magpies

landscape. Since a favorite food is acorns, this rarely brings them into conflict with humans, but in local filbert farms they can be a nuisance.

Scrub-Jays may be indirectly affected by a fungal pathogen, Phytophthora ramorum, which causes Sudden Oak Death in acornproducing species in northern California and part of Curry County in southwestern Oregon. First discovered in 2003, the pathogen is now the focus of an active quarantine program. The white oaks in the Willamette Valley aren't much affected by the pathogen, but concerns remain that the pathogen could spread and kill other species of trees in forests in Oregon. A decrease in acorn availability won't hurt the Scrub-Jays that much, but could cause greater declines in other species, like Acorn Woodpeckers.

# Fun Facts

- Like their cousins the American Crow, Scrub-Jays are very vocal with a loud, distinctive and raucous call.
- California Scrub-Jays have what appears to be a funeral when they find a dead jay. They will make loud calls over the body, which attracts other jays, and will stay near the body for a day or two.
- California Scrub-Jays can be mischievous, and have been caught stealing acorns from Acorn Woodpeckers and other Scrub-Jays. They often look around for other jays before hiding their own acorns.
- Once a Scrub-Jay is established as a breeder, it spends almost all of its time throughout the year defending its territory.
- The oldest wild California Scrub-Jay ever recorded was 15 years and 9 months old (from banding records).

# Swallows

# Tree Swallow (*Tachycinata bicolor*) & Violet-green Swallow (*Tachycinata thalassina*)

The Tree Swallow and the Violet-green Swallow are related and hard to tell apart. t the Refuge these species are often together in mixed flocks. These swallows are the same size, the same shape, and have similar habits. Here are three ways to tell them apart, if you get a good look:

- 1. Tree Swallow breeding males have blue to blue-green backs and heads. Violetgreen Swallow breeding males have bright green backs and heads and violet rumps. These colors are visible only in good light.
- Violet-green Swallows have white on the sides of their rumps, which Tree Swallows lack.
- While both species have white on the lower part of their faces, the Violet-green Swallow's white extends a bit above the eyes. The Tree



Tree Swallow (Don Holland)



Violet-green Swallow. (Richard Toller), 06/01/2008 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

Swallow's facial white remains below its eyes.
Females and juveniles of both species are black and white and hard to distinguish from each other. Both species, whether young or mature, male or female, have white chests and bellies.

#### **Diet and Feeding Behavior**

Both species are fast, acrobatic flyers. While flying they catch and eat insects. These insects range in size from tiny to as large as butterflies and moths. Both species may skim the water. Tree Swallows usually fly less than 40 feet off the ground, while Violet-green Swallows may fly up to 100 feet off the ground. Tree Swallows glide a little more.

#### Reproduction

Both species nest in tree cavities, cliff crevices, and birdhouses. Tree Swallows often nest in colonies. Violet-green Swallows nest singly or in small groups. Both species may nest in bluebird boxes. Females of both species build cup nests mostly of grass and about 3 inches across, lined with feathers. Both lay 4 to 6 eggs, which hatch in about 14 or 15 days. The young of both species start to fly at roughly 23 days after hatching.

#### **Distribution and Habitat**

At the Refuge, both species are most often seen flying in flocks over the ponds and grassy areas along the



seasonal trails. Both species are common in Oregon from about February through midsummer. Tree Swallows live throughout North America. Violet-green Swallows live throughout North America west of the Rocky Mountains. Both species winter primarily in Mexico and Central America.

#### Conservation

Mammals and predatory birds (such as falcons, crows, and flickers) eat the young of both species. The same predatory birds catch and eat the adults of both species. These swallows mob predators to defend themselves. Both species are common, declining somewhat, but of low concern. Common threats are loss of nesting habitat and pesticides. Birdhouses substitute for some loss of tree cavities for nesting. The breeding populations are about 17 million Tree Swallows and about 7 million Violet-Green Swallows.

#### Fun facts: Tree Swallow

- To add calcium to their diet in breeding season, Tree Swallows eat bits of fish bones and eggshells. To replace insects in their diet in winter, they eat berries.
- Tree Swallows bathe by skimming the water while flying.
- A male Tree Swallow may attend to females in separate nest groups.
- Tree Swallows tend to collect and migrate together in groups that can number hundreds of thousands of birds.
- The oldest known Tree Swallow was 12 years 1 month old when recaptured at a banding station in Ontario.

#### Fun facts: Violet-green Swallow

- Violet-green Swallows have been timed flying at 28 miles per hour.
- One pair helped guard a bluebird nest. When the bluebird young left the nest, the Swallows used it for their own brood.
- A female Violet-green Swallow may sneak off to mate with several males other than her mate.

- In northwest Mexico, some Violet-green Swallows nest in giant cacti.
- The oldest known Violet-green Swallow was 9 years 1 month old when recaptured at a banding station in California.

# Northern Rough-winged Swallow (Stelgidopteryx serripennis)

Unlike the other swallows commonly at the seen Refuge, the Northern Rough-winged Swallow is all brown and gray, fading to a dull white on the belly. It has a small head and bill, dark eyes, and a squared-off tail. When perched, the Northern Rough-winged Swallow's wingtips line up with the end of its tail. Overall, it is 5 - 6 inches long, with a wingspan of 10.5 - 12 inches and a weight of a half-ounce. Other than the larger Purple



Northern Rough-winged Swallow. (Andy Reago & Chrissy McClarren), 07/19/2011 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

Martin, the Northern Rough-winged Swallow is similar in size to other swallows. Juveniles have cinnamon wing bars. The Northern Roughwinged Swallow often perches on wires or branches to preen.

#### **Diet and Feeding Behavior**

Northern Rough-winged Swallows forage by flying low over the water. They catch flying insects in the air, and off the surface of the water. The Northern Rough-winged Swallow's wing beats are slower than those of other swallows, and it also glides. The Northern Rough-winged Swallow drinks by skimming water in flight and swallowing on the wing.

#### Reproduction

The Northern Rough-winged Swallow nests in holes in banks. Sometimes it digs the burrow itself, but prefers to use one dug by a Bank Swallow, Kingfisher, or squirrel. The bank is usually on the side of a

pond or river, but sometimes it's a road cut. The Northern Rough-winged Swallow also nests in crevices, gutters, drainpipes, boxes, walls, and bridges. The burrow is usually 1 to 4 feet deep. The female makes a cup nest of grass, twigs, and other plant bits at the end of the burrow. She lays 4 to 8 eggs (usually 5 to 7) and incubates them (keeps warm) 16 or 17 days. The male guards the nest and eggs. Both parents feed the chicks until they fly at 17 to 22 days old. Unlike Bank Swallows, Northern Rough-winged Swallows prefer to nest alone, not in colonies.

#### **Distribution and Habitat**

Northern Rough-winged The Swallow breeds and summers throughout the US, southern Canada, parts of Mexico, and Central America. It winters along the Gulf Coast, parts of the Caribbean, and throughout Mexico and Central America. In breeding season, it is usually solitary. The rest of the year, the **Rough-winged** Northern Swallow may mix with others of its species, as well as flocks of swallow species. At the Refuge, look for it in summer near any of the large ponds, Chicken Creek, or the River Overlook.



Northern Rough-winged Swallow Range Map. https://www.allaboutbirds.org/guide/Northern\_Roughwinged\_Swallow/maps-range

#### Conservation

The Northern Rough-winged Swallow is declining somewhat but considered a bird of low concern. The estimated world breeding population is 18 million adult birds. Threats include fires, pollution, pesticides, and climate change.

#### Swallows

- The Northern Rough-winged Swallow gets its common name from tiny hooks on the leading edge of its primary wing feathers.
- The genus name "*Stelgidopteryx*" means "scraper wing," and the species name *serripennis* means "saw feather."
- The Northern Rough-winged Swallow molts (replaces) some of its feathers while flying.
- The oldest known Northern Rough-winged Swallow was a male 5 years 11 months old when caught and released in California.

# Barn Swallow (Hirundo rustica)

The Barn Swallow is one of swallow several species Refuge. at the common Swallows at the Refuge are about the length of a sparrow but with sleeker bodies and long, narrow wings. Two identify a ways to Barn Swallow are by its deeply forked tail and by its striking colors, most evident when



Barn Swallow (Ken Durbin)

perched. An adult male has a dark orange face and neck with a lighter orange chest and belly. An adult female has the same face and neck coloring, but with a creamy chest and belly. Juveniles look like adult females. All have long forked tails, pointed wings and blue-black backs. Barn Swallows are fast, acrobatic flyers and weigh less than one ounce.



Female Barn Swallow (left) and Male Barn Swallow (Right) at Tualatin River National Wildlife Refuge. (Brian Smucker)

Swallows

#### **Diet and Feeding Behavior**

Swallows at the Refuge fly above ponds and open grassy areas, catching and eating insects and bugs on the fly. They take butterflies and moths as well. Barn Swallows also pick flies off walls and sometimes eat bugs, beetles, and ants. Barn Swallows fly where the bugs are, up to 100 feet high to within a foot of the ground or water.

#### Reproduction

Barn Swallows are well adapted to human development, almost always building their nests under building eaves, in barns and stables, or under bridges. Males and females collect mud and build a cup nest up to 3 inches across, lined with grass, feathers, and hair. Nest colonies are common. At the refuge, look for Barn Swallow nests under the Visitor Center and shelter eaves, and above the bathroom entrances. The female lays 3 to 7 eggs and incubates them (keeps warm) for 12 to 17

days. Both the male and female bring food to the nestlings, often aided by a juvenile helper. Pairs may produce one or two broods (group of young from a single hatching) a year.

#### **Distribution and Habitat**

Barn Swallows are common in throughout summer North America. Europe, and Asia. US birds Most winter in Southern Mexico and Central America. Barn Swallows usually avoid forests and dry regions, since they need open areas to forage, mud to build nests, and structures to nest in.





#### Swallows

#### Conservation

Barn Swallows are the most abundant and widespread swallow in the world. They show some decline in the past 60 years but are not threatened. There are an estimated 120 million breeding Barn Swallows, with 24% in the US.

#### Fun facts

- The hat making trade's killing of Barn Swallows (as well as egrets) for their feathers prompted George Grinnell's 1886 editorial that led to the founding of the first Audubon Society.
- Barn Swallows are so well adapted to human structures that the only place in the US that they



Adult Barn Swallow in Flight (Ken Durbin)

still nest in caves is in the Channel Islands off the coast of Southern California.

- Barn Swallows may nest as a single pair or as part of a colony, which may include hundreds of nests. In colonies, the adults mob intruders that they see as threats to their young.
- The oldest known Barn Swallow was 10 years old when found at a banding site in Maryland.

# Purple Martin (Progne subis)

The Purple Martin is the largest member of the swallow family, Hirundinidae. 7-81/2 measuring inches. Adult males are entirely glossy dark blue-black-purple. Females and juveniles are brownishblue with gray collars and light gravish-white bellies. Purple Martins have long, angular, pointy wings and a forked tail. Despite their name, Purple Martins are not really purple. Their feathers have an iridescent sheen caused by the scattering of reflected light (refraction), giving them a dark blue or deep purple appearance. Both male and female Purple Martins have "delayed plumage maturation". This means it takes two years before they acquire their full adult plumage.



Purple Martin male (Ken Durbin)

Purple Martin female (Ken Durbin)



Purple Martins' bubbly, gurgling warble sounds like "chewr chewr chewr". They also make squeaky clicking sounds, low whistles, and complex chortles.

You won't find this species on the 2020 official checklist for the Tualatin River National Wildlife Refuge, but you may now find Purple Martins there. In 2021 Refuge staff installed several Purple Martin nest boxes on tall poles. By July 2021 Purple Martins arrived to check out the new nest boxes. Look for the Purple Martins and the nest boxes in the open wetland area visible from the Visitor Center and seasonal Refuge trail parallel to the Visitor Center.

#### **Diet and Feeding Behavior**

Purple Martins eat only insects, and need large air spaces free of obstructions for hunting. Purple Martins soar at altitudes higher than other swallows, often between 150-500 feet above the ground. Purple Martins make large swooping circles in the air and maneuver quickly. Although Purple Martin bills look small, they can expand, enabling them to catch insects in flight. They eat flies, flying ants, dragonflies, damselflies, grasshoppers, beetles, crickets, butterflies, moths, bees, wasps, and mayflies. Purple Martins drink in flight, skimming the surface of lakes and ponds to scoop up water with their lower bills. Purple Martins land only for nesting material, an occasional spider or insect, and to pick up grit (like sand grains). The grit helps the Purple Martin digest the hard exterior (exoskeletons) of insects.

#### Reproduction

Purple Martins nest in cavities made by others. They use abandoned woodpecker holes in snags (standing dead trees), as well as man-made nest boxes. Purple Martins prefer clusters of cavities near open foraging areas. Purple Martins in the eastern U.S. now almost always use man-made birdhouses. Purple Martins in the western U.S. mostly use natural cavities.

Both sexes check out several cavities before choosing a final nesting site. Purple Martins construct nests from grass, twigs, plant stems, and mud. The female lays 3-6 white eggs and keeps the eggs warm (incubates) for 15-18 days. After hatching, both parents feed the nestlings. The young fledge (leave the nest) about 26-31 days after they hatch. In western Oregon, most young fledge in July and early August. By mid-September, Purple Martins leave for their wintering grounds.

Male Purple Martins defend their small nesting territories from other males, and females defend these territories from other females. Purple Martins fight if one bird enters another bird's nest cavity.

Purple Martins may have more than one brood (family of young) a year.

#### **Distribution and Habitat**

Purple Martins breed in the western U.S. and most Canadian provinces from eastern British Columbia all the way to the Atlantic Coast. The species also occurs in eastern coastal states and non-desert parts of Mexico. Purple Martins are mostly absent in the arid West.

Purple Martins migrate for the winter to agricultural areas and savannas in the Amazon Basin and elsewhere in South America, as far south as southeastern Brazil. They return





to their breeding areas in February in the eastern U.S., and in April and May in the western U.S. Purple Martins tend to return to the same site to nest year after year.

Purple Martins live along the Oregon Coast near estuaries (where the ocean and a river meet), and along the Columbia River from Astoria east through the Columbia River Gorge. They are also uncommon summer residents in parts of the Coast Range and Willamette Valley.

Purple Martins require holes in trees or nest boxes near open areas. This combination of nesting and foraging habitat is found near shores of lakes or rivers, near large meadows, and in burned forests where snags remain.

#### Conservation

Purple Martin population declined due to scarcity of clusters of nesting cavities near open forage areas. Often, this scarcity was due to snag

removal. Snag removal may be appropriate for safety (potential to fall on a roadway) or in some cases to reduce fire danger. However, snag retention is desirable to provide habitat for a variety of creatures, such as the Purple Martin. Competition for nest cavities with other species (especially non-native European Starlings and House Sparrows) is also a major factor in the species' decline. Starlings and House Sparrows can take over Purple Martin cavities and destroy eggs and even injure or kill young Martins. Artificial nest boxes that are suspended so that they swing may deter predation by Starlings. Purple Martins may starve during cold weather because they cannot find enough insects to eat.

Since people have been erecting more artificial nest boxes at suitable locations, the species population may be increasing. However, because of their dependance on artificial nesting structures, Purple Martins have developed an association with humans. Years of human association has turned the Purple Martin into a species that no longer nests in the wild in the eastern U.S.

- The Purple Martin can fly up to 45 miles per hour when catching insects.
- The Purple Martin is the only North American swallow species in which the adult sexes look very different from one another.
- Native Americans hung hollowed-out gourds for Purple Martins before Europeans arrived.
- A group of Purple Martins is called a "colony" of martins.
- Swedish botanist, doctor and zoologist, Carl Linnaeus, first described the Purple Martin in 1758.
- The genus word, *Progne*, is the name of a mythological girl who was turned into a swallow. The species word, *subis*, is Latin and means a type of bird that breaks eagles' eggs. The Purple Martin may have earned this name by aggressively protecting its nests from birds of prey.

# *Titmice and Chickadees* Black-capped Chickadee (*Poecile atricapillus*)

The Black-capped Chickadee is a songbird and member of the *Paridae* family. That family also includes titmice. The species name, *atricapillus*, means "black head of hair."

Black-capped Chickadees are about 5.5 inches long (12-15 cm) and weigh about



Black-capped Chickadee (Ken Durbin)

0.4 ounces (10-14 g). By comparison, a letter weighing twice as much requires a single stamp. They have a black cap and bib with white cheeks, greenish gray back, dark gray wings and tail, and white underparts with buffy flanks (sides). Feet are bluish gray, and beaks are short and black. Their black eyes are hidden in their black caps. To the human eye, the sexes look the same, and juveniles are very similar to adults. The Chestnut-backed Chickadee also is common in this region, but is smaller with chestnut-colored back and flanks. The Mountain Chickadee is the closest relative genetically to the Black-capped Chickadee, but they are rarely seen in the metro area.

#### **Diet and Feeding Behavior**

Black-capped Chickadees feed largely on invertebrates in the summer (e.g., 80-90%, mostly caterpillars) with the rest of the diet consisting of seeds and fruit. In winter about half the diet consists of insects and spiders, while the other half consists of seeds and fruits. They pick food from bark, twigs, and leaves, often while hanging from branches. Chickadees also capture flying insects in the air. When eating larger seeds, chickadees often take the seeds to dense cover before cracking

Titmice and Chickadees

the hull – people with bird feeders are familiar with chickadees quickly grabbing one seed and flying off to cover to eat it.

In winter, chickadees often join other species of insect-eating species in mixed foraging flocks. Because chickadees are quite vocal in these winter flocks, finding chickadees along the winter trails at Tualatin River National Wildlife Refuge can be a good way to find nuthatches, kinglets, wrens, brown creepers, and bushtits.

#### Reproduction

Black-capped Chickadees breed in their first year after hatching. Chickadees nest in tree cavities created by other species or that they make themselves if the wood is soft or rotten. The pair can excavate a nest chamber in 2 days to 2 weeks (usually 4 to 5 days) depending on softness of the wood. Chickadees also use nest boxes. Chickadees line the nest with soft material such as moss or animal fur.

Egg laying usually starts in mid-April in Oregon. Eggs are white with brown speckles mostly on the round end. Chickadees lay one egg each morning until the clutch of eggs is complete. Most clutches contain 6, 7 or 8 eggs though clutches can range from 1 to 13 eggs. Egg incubation starts with the next to last (i.e., penultimate) egg, and hatching occurs after 12 to 13 days. When hatched, nestlings are mostly naked, blind, and weigh about 0.05 ounce (1 gram). In the first few days the female

broods (keeps warm) the nestlings while the male brings most of the food to the nest. As the nestlings grow, both parents will bring food to the nest. Nestlings fledge (i.e., leave the nest) at about 16 days old, but continue to be fed by the parents for 2 to 4 additional weeks. A week after fledging it is hard to tell the fledglings apart from the parents.

Chickadees rarely have more than one successful nest per year, but will re-nest if their



Black-capped Chickadee eggs. www.allaboutbirds.org/guide/Blackcaped\_Chickadee/lifehistory

first nest attempt fails. Chickadees rarely reuse a nest cavity, preferring instead to renest in a new location. Approximately two thirds of nests successfully produce fledglings.

#### **Distribution and Habitat**

Black-capped Chickadees are widespread through most of the forested areas of Canada and the northern half of the U.S. (Figure 3). They are familiar to anyone in the Portland metro area with a backyard bird feeder. They are resident (i.e., non-





migratory) throughout their range, though some juveniles may disperse long distances.

Black-capped Chickadees use a variety of habitat types, including deciduous and mixed forests, open woods, parks, willow thickets, and cottonwood groves. At Tualatin River National Wildlife Refuge look for Black-capped Chickadees in or near the Riparian Forest and along habitat edges at the seasonal ponds, Rock Creek, and Tualatin River.

#### Conservation

The highest densities of breeding Black-capped Chickadees are found in New England, the upper Midwest, and the upper Willamette Valley (Figure 4). Black-capped Chickadee populations are stable or increasing in the eastern portion of their range, but are declining in parts of their western range, including the upper Willamette Valley and lower Columbia River (Figure 5). The reasons for the western range declines may be related to the loss of habitat (e.g., loss of forested edges with dead snags through forest management practices or city expansion).

**Titmice and Chickadees** 



- There is a pecking order within flocks. Some birds are "winter floaters" that spend time with more than one flock—these individuals may have a different rank within each flock.
- Black-capped Chickadees cache or hide seeds and other food items to eat later – each hidden in a different spot. They can remember thousands of hiding places. Chickadees and their relatives have a larger hippocampus (i.e., brain region associated with spatial memory) than species that do not cache seeds. Each fall they also recruit new brain neurons for remembering new details, such as cache sites and changes in social flocks.
- Black-capped Chickadees have a very complex set of calls. Calls identify the rank of individual chickadees within a group; provide information about other species in their flocks; and serve as predator alarms. The more "dee" notes in a chickadee call, the higher the threat level. Most birds that associate with chickadee flocks respond to chickadee alarm calls, even when their own species doesn't have a similar alarm call.
- Chickadees may mob their predators (e.g., small hawks or owls) with long, rapids strings of "dee-de-dee" calls.
- The average chickadee life span is about 2.5 years, but the oldest known wild chickadee lived to be 12 years and 5 months old.

Titmice and Chickadees

# Chestnut-backed Chickadee (Poecile rufescens)

The Chestnut-backed Chickadee is very small and ball-shaped. It measures less than 5 inches beak to tail and weighs about a third of an ounce. The Chestnutbacked Chickadee is the smallest chickadee. It looks and acts like the more common Black-capped Chickadee, except its upper back and sides have a rich chestnut brown color. Both chickadees have black caps and chins, and white cheeks. They make similar "chickadee-dee-dee" calls, with more "dees" when alarmed.

#### **Diet and Feeding Behavior**

About 65% of the Chestnutbacked Chickadee's diet is insects, spiders, caterpillars, aphids, and wasps. The rest is a mix of berries, fruit, and seeds. In the Willamette Valley, Chestnutbacked Chickadees hop and flit



A Chestnut-backed Chickadee on the ground in the forest at the Refuge. (Brian Smucker)



Chestnut-backed Chickadee (Ken Durbin)

about while foraging on moss- and lichen-covered tree branches. Sometimes they hang upside down, and sometimes they hover to catch insects.

#### Reproduction

The female picks the nest site within her mate's territory. Chestnutbacked Chickadees usually nest in a hole in a dead tree. They may make the hole themselves or use one already there, perhaps made by a woodpecker. Chestnut-backed Chickadees also readily use nest

#### Titmice and Chickadees

boxes and holes in poles and stumps, preferably within about 12 feet of the ground. The female builds the nest of moss, bark, and fur. The nest fits the space of the hollow. The female usually lays 6 or 7 eggs and incubates them 12 to 18 days. The young can fly about 18 to 21 days after hatching.

#### **Distribution and Habitat**

Chestnut-backed Chickadees live in a narrow band along the Pacific Coast from Alaska to Northern California, plus a strip Northern Washington across into Northern Idaho. They are most common in moist conifer Chestnut-backed forests. Chickadees may move to higher elevations in late summer and fall, so they are easier to find at the Refuge in winter, spring, and early summer. Look for them along the year-round trail in the forest and along the scrubby edges of more open areas. Chickadees are social and congregate in flocks, often with



backed\_Chickadee/maps-range

other birds of similar size, such as wrens, nuthatches, kinglets, and bushtits. Chikadees may be at any height from the ground to treetops. They also eat at backyard feeders.

#### Conservation

Chestnut-backed Chickadees are common but declining, with an estimated 9.7 million breeding adults. They prefer to nest in dead trees, so dead tree removal is a threat. In spring, heavy rain and high

temperatures threaten the young. Predators include squirrels, mice, snakes, bears, and small hawks.

- Chestnut-backed Chickadees use lots of fur in their nests. Rabbit, coyote, and deer fur are most common, but they'll use whatever they can find, from cat to skunk to cow.
- They make a flap of hair in the nest, which they use to cover the eggs when they leave for short periods.
- The oldest known Chestnut-backed Chickadee was 9 years 6 months when captured and released by banders in California.

# **Bushtits**

# Bushtit (Psaltriparus minimus)

The Bushtit is one of the smallest birds on the Tualatin River National Wildlife Refuge. It is only about 4 inches long weighs less than and .2 ounces. That's about the size of a hummingbird! But there is no confusing them. Bushtits look like a little ball of gray fluff with a long tail and tiny bill. They are rather plain, having no wing bars or other obvious markings. Males have dark eyes, and adult females have pale eyes. Interestingly, all juveniles have dark eyes, but females' eyes turn light after they fledge (leave the nest).

Bushtits make thin, highpitched *tseeez, tsip* or "spitting" sounds mixed with clear chirps.

# A Second and a sec

Bushtit (Ken Durbin)



#### **Diet and Feeding Behavior**

Bushtits are very active. They are often seen in flocks of 10-40 looking for small insects and spiders in trees and shrubs (rarely on the ground). Bushtits especially like to eat leafhoppers, aphids, caterpillars and beetles. They also eat wasps, ants, and the eggs and pupae (transition phase between immature and adult stages) of many insects. They constantly "call" when they are foraging, ensuring contact with one another.

#### **Bushtits**

#### Reproduction

A pair of Bushtits will begin setting up a territory and building a nest in January and February. It may take the pair a month to complete their elaborate nest. Bushtits make a pouch-like nest up to 12 inches long that hangs like a pendulum from branches and twigs. Some people think it looks like a dirty sock hanging from a tree. The Bushtits construct the nest of moss and lichen, and hold it together with spider silk. An entrance hole near the top of the nest leads to the nest chamber at the bottom. The Bushtits line the chamber with feathers, animal hair and plant "down" (fuzzy seeds, such as dandelions, or fuzzy leaves).



Bushtit nest (Rod Roberson)

In Oregon Bushtits begin egg-laying in April. Both sexes incubate (warm) between 5 and 7 white eggs for 12 days. Both parents feed and tend the young. Bushtit parents often have "helpers" at their nest. These birds (mostly males) also feed nestlings. Young Bushtits leave the nest 14-15 days after they hatch.

After their youngsters fledge, the family stays together and joins other families to form a flock. That flock will stay together until the next nesting season, when pairs leave to start their new families.

Bushtits generally raise two broods per year.

#### **Bushtits**

#### **Distribution and Habitat**

Bushtits are year-round residents of extreme southwest British Columbia, the western United States and highland areas of Mexico, and Central America. The species occurs throughout Oregon except the northeast and southeast parts of the state, and high elevation mountain ranges. Bushtits do not migrate.

Bushtits live in many kinds of wooded or brushy habitats, but they prefer coastal forests, alder thickets, riparian (by a stream) woodlands, and edges of



https://www.allaboutbirds.org/guide/Bushtit/ maps-range

coniferous forests where there are maple, dogwood, and birch trees. Bushtits regularly live in residential neighborhoods and frequently visit backyard suet feeders.

#### Conservation

Bushtits are widespread and common. Their populations are not in decline.

- All members of a family of Bushtits sleep together in the nest during the breeding season, but sleep on branches after the young fledge.
- Bushtits' specialized leg muscles let them feed while hanging upside down. This makes them adept at accessing food items at the ends of twigs and other hard-to-get-at places.

### Red-breasted Nuthatch (Sitta canadensis)

You probably hear a Redbreasted Nuthatch before you see it. That's because it's a tiny bird (only  $4\frac{1}{2}$  inches) that moves quickly among trees. But its nasal "yank yank" song is distinctive and carries over quite a distance. Red-breasted Nuthatches—as their name rusty-red implies—have а breast. Their backs are bluishgray, and they have a black cap and a black line running from their rather long, pointy bill through their eyes. Above the eyeliner is a white stripe, and below it is a white patch. Red-breasted **Nuthatches** have black legs and feet with long toes and claws. These help them climb up and down trees. Females and juveniles are a bit duller in color than ales, but otherwise, they are alike

The "hatch" part of this bird's



Red-breasted Nuthatch (Ken Durbin)



name probably came from the Old English word "hack". This describes the nuthatch's behavior of taking a seed, flying to a tree, jamming it into a crevice in the bark and then hacking the seed open with its bill.

#### Nuthatches

#### **Diet and Feeding Behavior**

Red-breasted Nuthatches search for insects and other food items in the bark of tree trunks. These include beetles, craneflies, moths, caterpillars, wasps, spiders, and insect eggs. However, during the winter, when insects are scarce, they mainly eat seeds of coniferous such Douglas trees fir. as Ponderosa pine and spruce. Although nuthatches usually forage



Red-breasted Nuthatch (Ken Durbin)

facing downward on tree trunks, they also go upwards, and forage among tree branches. They also eat nuts, thus the first part of their name.

During the non-breeding season, Red-breasted Nuthatches frequently form mixed flocks with other bird species, including chickadees, creepers and kinglets.

#### Reproduction

Red-breasted Nuthatches are cavity nesters, which means they use existing holes or make their own. Sometimes they use holes made by woodpeckers. The nest cavities of this species are generally in dead trees or in dead branches of live trees. Red-breasted Nuthatches usually nest in coniferous or mixed coniferous-deciduous forests in trees that are at least 12 inches in diameter.

The breeding season begins in late April. The female usually lays 5 or 6 eggs in a nest lined with vegetation (and sometimes with feathers and fur). She incubates the eggs for about 12 days until the young hatch. The young leave the nest 3 weeks later, but stick around their parents until they are almost 2 months old.

#### **Distribution and Habitat**

In North America, the species breeds in the south coastal areas of Alaska and all across Canada. The species breeds in New England, the Great Lakes states and in the Appalachian Mountains as far south as North Carolina. In the western U.S., Red-breasted Nuthatches breed in forested areas all the way down to southern California and east to Colorado. They spend the winter in wooded areas from lowland valleys to timberline in mountains. They generally avoid oak habitats, unlike their relative, the White-breasted Nuthatch.



Red-breasted Nuthatch Range Map. https://www.allaboutbirds.org/guide/Redbreasted\_Nuthatch/maps-range

#### Conservation

Because Red-breasted Nuthatches nest in larger, older trees, forest management that reduces the number of larger trees and snags (dead trees that are still standing) can adversely affect the species.

- The Red-breasted Nuthatch sings all year, not just during the breeding season.
- The species smears pitch or resin (a sticky substance from trees) around the entrance and inside of their nest. Males apply the outside layer; females apply it to the inside of the nest. It is thought that this deters predators.
- Red-breasted Nuthatches are feisty and territorial all year long! A pair may defend a territory that is 5-10 acres. That's pretty impressive for such a little bird!

#### Nuthatches

# White-breasted Nuthatch (Sitta carolinensis)

The White-breasted Nuthatch resembles its close relative, the Red-breasted Nuthatch, in many ways. It has a bluish-gray back, a black cap, fairly long pointy bill, and black legs and feet. But White-breasted Nuthatches are larger ( $5^{3}/_{4}$  vs. 4  $1/_{2}$  inches), a little "chunkier," and they have a white face and breast. Females are a little duller in color than males, but otherwise, they are alike.



White-breasted Nuthatch (Ken Durbin)

White-breasted Nuthatches have an interesting song, which is a series of rapid nasal "laughing" sounds.

The "hatch" part of this bird's name probably came from the Old English word "hack". This describes the nuthatch's behavior of taking a seed, flying to a tree, jamming the seed into a crevice in the bark and then hacking the seed open with its bill.

#### **Diet and Feeding Behavior**

In the non-breeding season, the White-breasted Nuthatch eats nuts (thus their name), and seeds of various sizes, including acorns. In the spring and summer, the species eats mainly insects (beetles, caterpillars, ants, moth and beetle larvae) and spiders. They forage mainly on large tree limbs and tree trunks by poking in crevices and picking food items from the bark.

#### Reproduction

White-breasted Nuthatches are cavity nesters, which means they use natural holes in live or dead trees, or holes made by other species, such

#### Nuthatches

as woodpeckers. Unlike Red-breasted Nuthatches, this species does not make its own cavities.

The breeding season begins in April. The female usually lays between 5 and 10 (usually 8) eggs in a nest lined with vegetation (and sometimes with strips of bark and fur). She incubates for about 12 days until they hatch. During incubation, the male brings food to the female. The young leave the nest 2 weeks after they hatch, but stick around their parents for another  $_{2 \text{ weeks.}}$ 



Feeding Time. (Rick Cameron), 06/12/2011 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



White-breasted Nuthatch feeding youngster. (Carla Kishinami), 08/24/2018 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

#### **Distribution and Habitat**

The White-breasted Nuthatch is found across much of North America from southern Canada to the mountains in Mexico. In Oregon, it is a bird of the oaks and pines. In the Willamette and Umpqua river valleys and eastern slope of the Coast Range, it is nearly always found in Oregon white oak trees. East of the Cascades, it's found in ponderosa pines. The White-breasted Nuthatch is absent in high-elevation coniferous forests. Look (and listen) for White-breasted Nuthatches on the Tualatin River National Wildlife Refuge wherever there are large oaks. Good places include the River Overlook and the Wetland Observation Deck.

#### Conservation

White-breasted Nuthatch populations in western Oregon and Washington may be declining, most likely because of loss of large oak trees.

#### **Fun Facts**

- White-breasted Nuthatch parents stay together on their territories even during the non-breeding season.
- The species has a territory that can be as little as a few acres to almost 100 acres.
- Nuthatches climb trees using only their feet. Other birds, like creepers and woodpeckers, also use their tails as "props".



 White-breasted Nuthatches are known to "sweep" bad-smelling insects around their nest holes, probably to help keep predators away.

# Creepers

#### Brown Creeper (Certhia americana)

The Brown Creeper is not a bird you always see on the Tualatin River National Wildlife Refuge, although they are present year-round. If you know where to look and are very patient, you may be rewarded.

The Brown Creeper is small (5 inches long), and its speckled brown back and head make of the it one bestcamouflaged birds of the forest. Once you see this species, it is easy to identify since there is no other it can be confused with. Brown Creepers have long, slender, downward-curved bills and white chins and breasts. They have a slight white line over the eye. A Brown Creeper has a long, stiff, pointed tail which supports the bird when climbing up tree trunks and branches. Brown Creepers' legs are short, but their toes (especially the back one) are long with curved claws. Their feet and toes help them cling to tree bark. The name, "Brown Creeper" describes this bird well. Males and females look alike.

The Brown Creeper has a high-pitched, thin, "tinkling" call—tsee tsee tseet. Unless you are very close to a Brown



Brown Creeper (Ken Durbin)



Brown Creeper "creeping." Note the long curved back claw. (Ken Durbin)

#### Creepers

Creeper (and have good hearing), you may not hear this bird because its call is so faint.

#### **Diet and Feeding Behavior**

During its characteristic feeding behavior, the Brown Creeper spirals upward from the base of a tree trunk searching for insects, insect eggs, caterpillars, cocoons, and spiders. It then flies to the base of another tree and ascends again. The Brown Creeper's bill is perfectly shaped to probe for insects in the furrows (cracks and crevices) of tree bark. During the winter, Brown Creepers may eat seeds and nuts. Sometimes, you may see another species—the Red-breasted Nuthatch—also searching for food on tree trunks and branches. However, the nuthatch usually does this in the opposite direction (starts at the top and works downward).

#### Reproduction

Brown Creepers nest under loose slabs of bark of large-diameter dead

or dying trees. The nest (made by the female and defended by the male by singing) is a mass of spider cocoons, thin strips of tree bark, moss, and feathers of other birds. Nest-building takes place from early May to mid-June. The female usually lays 5 or 6 eggs, but the clutch (group of eggs) may range from 4 to 8. Incubation (when the female sits on eggs to keep them warm) lasts for 14-17 days. During incubation, the male may feed his mate. Once Brown Creepers hatch, both parents bring food





#### Creepers

for their nestlings. The young leave the nest (fledge) about two weeks later.

#### **Distribution and Habitat**

Brown Creepers breed from Alaska's south coast east through southern Canada to Newfoundland, and south to the western and northern U.S. along the Rocky Mountains into southern Mexico. They breed in forested areas throughout Oregon, including on the Refuge.

Brown Creepers prefer old conifer forests and oak woodlands. However, they can be found in urban areas that have large trees (such as maples, giant sequoias, and oaks) with deeply furrowed bark. They avoid the juniper woodlands of eastern Oregon. On the Refuge, you can most often see Brown Creepers along the forested portion of the year-round trail before the junction with the Ridgetop Overlook trail.

#### Conservation

The Brown Creeper has a large geographic range and uses a variety of forest types. Nonetheless, it is sensitive to forest-management practices such as clearcutting, and reduction in large-diameter trees and snags.

- The Brown Creeper is the only songbird that molts (loses) and regrows its tail.
- The Brown Creeper is the only North American member of the family *Certhiidae*. Other members of this family are found in Europe and Asia.
- Brown Creepers will "freeze" when threatened and may remain motionless for several minutes. Coupled with their plumage, this behavior allows them to avoid detection by predators.
- A group of B rown Creepers is known as a "spiral".

# Wrens

# Bewick's Wren (Thryomanes bewickii)

You may hear a Bewick's Wren before you see it. That's because this 5<sup>1</sup>/<sub>4</sub>-inch brown bird prefers brushy habitats and forest thickets instead of open fields. If you are lucky to see a Bewick's Wren, you will notice its distinctive bright white "eyebrow". The three other wren species found on the Refuge (House Wren, Pacific Wren, and Marsh Wren) have "eyebrows" but they are not bright white.

The Bewick's Wren is larger and slimmer than the other Refuge wren species, and its barred tail is longer. But like the other wren species, it holds its tail up and has a rather long, slender. downward-curved pointy bill. Bewick's Wrens have whitish-gray bellies. The males and females look alike.



Bewick's Wren (Ken Durbin)



Bewick's Wren nest. (Rich Mooney), 06/19/2007 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

The Bewick's Wren has quite a variety of songs that are often buzzy, harsh, and chattering rather than melodic.

Wrens

Bewick's Wrens are in the family, *Troglodytidae*, which includes over 75 species worldwide. Of these, 9 are found in North America.

#### **Diet and Feeding Behavior**

Bewick's Wrens eat mainly insects (from eggs to adults). The Bewick's Wren's long bill is the perfect "tool" for picking insects off of leaves and bark. The Bewick's Wren's insect menu includes a variety of bugs, leaf-hoppers, beetles, ants, wasps, caterpillars, and grasshoppers. Spiders are also part of their diet. During the winter, the Bewick's Wren may eat some seeds and berries. Males may feed females during courtship.

#### Reproduction

On the Refuge, Bewick's Wrens establish territories as early as February. Territories average about 5 acres. Both male and females build nests in cavities, brush piles, or on ledges within 6  $\frac{1}{2}$  feet from the ground, starting in early to mid March. The nests are cup-shaped and

made from twigs, leaves, moss, spider webs, feathers, and animal hair. The female lays between 3-6 eggs starting in early April and through late May. The female incubates the eggs for 14-16 days. Young wrens fledge (leave the nest) after another 14-16 days between mid-to-late May through late July. Both male and female parents feed fledglings for about 2-3 weeks.

#### **Distribution and Habitat**

Bewick's Wrens live along the west coast of North America (from southern British Columbia all the way to Baja, California).



Bewick's Wren Range Map. https://www.allaboutbirds.org/guide/ Bewicks\_Wren/maps-range

Wrens

They also occur throughout the south-central U.S. and down into the Mexican highlands. Bewick's Wrens are much less common in the eastern U.S.

In Oregon, Bewick's Wrens live year-round west of the Cascade Mountains, in the Klamath and Warner basins, and along the Columbia River. Bewick's Wrens do not migrate, so it is possible to see them on the Refuge any time of the year.

Bewick's Wrens favor brushy habitats, riparian woodlands (by streams) and forest thickets, but occur in open country with brushy areas. They also like the edges of these habitats. Bewick's Wrens adapt to urban areas with adequate cover. On the Refuge, look for them along dense patches of blackberries and in areas with Douglas firs, Oregon white oak, and ash trees that have a lot of brush beneath them. If you see a wren in the marshes of the Refuge, it's probably a Marsh Wren, not a Bewick's.

#### Conservation

Although Bewick's Wren populations have decreased east of the Mississippi River (possibly due to competition with the more aggressive House Wren), the species is doing well in Oregon, and it may be increasing its range into the foothills of the Cascade Mountains and into the Columbia River lowlands.

- The famous bird artist, John James Audubon, named the Bewick's Wren in honor of Thomas Bewick, who was an English naturalist.
- Insects and spiders comprise 97% of the Bewick's Wren's diet. Seeds comprise the other 3%.
- If you want to attract Bewick's Wrens to your yard, make a brush pile and don't do too much tidying-up.

# Pacific Wren (*Troglodytes pacificus*)

The Pacific Wren is a tiny bird—only about four inches long and weighing less than half an ounce. The Pacific Wren is smaller than a chickadee and larger than a hummingbird.

The Pacific Wren is a brown bird with barring on its upperparts, belly, and wings. Pacific Wrens have very short, barred tails. They hold



Pacific Wren (Don Holland)

their tails in a cocked position, especially when singing. Male and female Pacific Wrens are similar in appearance.

The Pacific Wren and the three other wren species found on the Refuge (House Wren, Marsh Wren, and Bewick's Wren) look similar. However, there are ways to tell them apart. The Marsh Wren lives in wetland habitats, whereas the Pacific Wren is a creature of forests. The Bewick's Wren has a bold white eyeline. The Pacific Wren has a buffy-beige eyeline. House Wrens do not have eyelines.

What the Pacific Wren lacks in size, it makes up for in its remarkable song which carries long distances through the forest. Its song is a lengthy, continuous, and complex series of high-pitched trills and buzzes. Males sing year-round, often from stumps or other forest perches. In the spring, they sing vigorously to establish territories and attract mates. When a female enters a male's territory, he continues to sing, while fluttering his wings and moving his stubby tail from side to side. When agitated, Pacific Wrens make a series of rapid and very high, chip-chip notes.
# **Diet and Feeding Behavior**

Pacific Wrens feed on and near the forest floor, hopping over and under logs, ferns, shrubs and fallen branches. Pacific Wrens eat spiders, ants, millipedes, snails, beetles, caterpillars, flies, and a variety of other insects. This behavior sometimes looks "mouselike".

# Reproduction

Pacific Wrens are "nook and cranny" nesters. Males usually make nests in cavities or holes among dead wood and vegetation. The male constructs a cup-shaped nest from small grasses, bark, and twigs. In its territory a male sometimes has several nests with different mates in one nesting season. During courtship, a male leads a female around to each of his nests. The female chooses the nest. The female lines the nest with moss, feathers, and animal hair. The Pacific Wren female lays 1 to 9 (but often 5 or 6) white or slightly speckled eggs. The female incubates (warms) the eggs from 12-17 days until the young hatch. The young leave the nest (fledge) about 16-18 days after hatching.

# **Distribution and Habitat**

Pacific Wrens breed along the Pacific coast of North America from southern Alaska to California, and inland as far as Montana and the Black Hills of South Dakota. Most Pacific Wrens are year-round residents. Others migrate short distances through and across the western U.S. and Canada in early spring and late fall.

Pacific Wrens live mostly in mature coniferous forests with dense thicketed understories. They prefer fir and spruce forests, but sometimes use dense, "tangly" streambank vegetation.

### Conservation

Pacific Wrens are common and widespread where their habitats are intact. The species could decline with loss of mature and old-growth forests and the removal of downed logs and other understory components.

# Fun Facts

 In 2010, the American Ornithologists' Union divided the Winter Wren into two separate species. The species found in eastern North America is still called the Winter Wren. The Pacific Wren is the species found in the West.



Pacific Wren Range Map. https://www.allaboutbirds.org/guide/Pacific\_Wren/maps -range

- The scientific name of the Pacific Wren is from the Greek word "troglodytes" (trogle=a hole; dyein=to creep) and refers to the species' behavior of disappearing into cavities or crevices while hunting or roosting.
- Pacific Wrens sometimes roost in large groups during cold weather.
- A group of wrens is called a "chime," a "flight," a "flock," and a "herd" of wrens.

# Marsh Wren (Cistothorus palustris)

On a spring or summer day at the Tualatin River National Wildlife Refuge, you may hear a Marsh Wren, but not see it. That's not because you not observant. are lt is because this small (4 to 5long) brown inch bird is secretive. Even when males singing their territorial are song, they remain well hidden



Marsh Wren (Don Holland)

in their wetland habitat. They may climb onto a cattail or a reed for just a few seconds. Typically, when a Marsh Wren is visible, it stands with its barred tail cocked, and its legs splayed out, each foot wrapped around a different stalk. A glimpse of a female may be less frequent and may only happen when she is chasing an intruder or searching for food for her nestlings.

The Marsh Wren is light rusty brown with a brown crown and forehead. It has a pale eyebrow that is not as bold as the Bewick's Wren's. The Marsh Wren's back is brown with black and white streaks. Its throat and chest are "dirty white". Marsh Wrens have a slender, slightly downwardcurved pointy bill. Male and female Marsh Wrens look alike.

The Marsh Wren and the three other wren species found on the Refuge (House Wren, Pacific Wren, and Bewick's Wren) look similar. If you see a wren in the Refuge wetlands, most likely it is a Marsh Wren. The other wrens live in other habitats, such as the forest.

During the breeding season, Marsh Wrens are very vocal, especially in the early morning and at dusk. Their rapid gurgling, buzzy, and rattling trill sounds are loud and distinctive—and not very musical. Some of these songs sound like mechanical lawn sprinklers. Males may have

more than 100 songs that are used to hold a territory or attract females. A male will sing one song, then another, going through his entire "repertoire" in a fairly predictable order. A neighboring male often engages in "counter-singing" whereby he sings the same songs right after his rival.

# **Diet and Feeding Behavior**

Marsh Wrens eat mainly insects which they glean (pick off) from aquatic vegetation, the water's surface, and the damp ground of a wetland. They also eat spiders, snails, the larvae of dragonflies and craneflies, and sometimes seeds.

# Reproduction

At lower elevations in Oregon (including the Refuge), Marsh Wrens begin breeding in late April. In the mountains, they breed later. Their territories are small—only about a tenth to half acre. Males defend these territories, but females defend individual nests within the territory.

Male Marsh Wrens build as many as 20 oval nests over shallow water, using plant materials (such as cattails, sedges, or grasses). (Sedges look like grass but have a solid triangular stem.) The nests are well-hidden and woven onto reeds or other vegetation. The male usually constructs the outer part of the nest. The female constructs the nest inner lining from strips of vegetation, feathers, and cattail "down". Unused nests are called "dummy" nests and lack lining. Males commonly mate with more than one female and will build at least 6 dummy nests for every female mate. It is not known for certain why Marsh Wrens build dummy nests. They may distract predators, or they might give females a sense of a male's abilities.

The female Marsh Wren lays 4-5 brown eggs which she incubates (keeps warm) for 12-16 days. Both parents feed the young, but it is mainly the female who performs this task. The young wrens fledge (leave the nest) in about 2 weeks. The male may feed the young if a female is taking care of a second clutch (batch of young).

#### Wrens

Like some other wren species, Marsh Wrens often destroy the eggs of other Marsh Wrens and other bird species by puncturing them. This behavior may be due to competition for nesting sites or food.

# **Distribution and Habitat**

Marsh Wrens are well-named. They live in thick stands of aquatic vegetation along the edges of marshes, wetlands, rivers, ponds, and coastal estuaries. Most often Marsh Wrens live in cattails, bulrushes, or sedges. The species nests throughout Oregon where there is this kind of habitat, including on the Refuge.

Marsh Wrens occur throughout much of North America, from British Columbia south to central Mexico, but are absent from forests and deserts.



Marsh Wren Range Map. https://www.allaboutbirds.org/guide/Marsh\_Wren/mapsrange

# Conservation

Marsh Wrens do well where their habitats are intact, but the species could decline with loss of freshwater wetlands. Nonetheless, the Marsh Wren is widespread and common.

# **Fun Facts**

- The Marsh Wren was once called the Long-billed Marsh Wren.
- Because Marsh Wrens live in dense marshes with tough, stiff vegetation, their feathers suffer more wear and tear than other birds. Therefore, Marsh Wrens replace their feathers more frequently by molting and then regrowing feathers.

- Adult Marsh Wrens sometimes sleep in dummy nests during nonnesting seasons.
- A group of wrens is called a "chime," a "flight," a "flock," and a "herd" of wrens.

# Kinglets

# Ruby-crowned Kinglet (*Regulus calendula*) & Golden-crowned Kinglet (*Regulus satrapa*)

There are 5 to 7 species of kinglets, depending on who you ask. Ruby-crowned and Golden-crowned are the two that live in North America. including the Refuge. They are tiny birds, about the size and shape of bushtits, smaller than sparrows or chickadees, with stubby tails and short pointy bills. Both species are about 4 inches beak to tail and weigh a little under 1/4 ounce; the Ruby-crowned is slightly larger than the Golden-crowned. Males of both species have brightly colored strips of feathers on the crowns of their heads, which they flash when excited or trying to attract mates. They flit about quickly, making them fun to watch and hard to photograph. The Rubycrowned is yellowish gray, with a white ring around its eye. The



Ruby-crowned Kinglet (Ken Durbin)



Golden-crowned Kinglet (Ken Durbin)

Golden-crowned is grayer, with a black stripe through its eye, white above and below that stripe, then black and yellow on top. The Ruby-

crowned flicks its wings almost constantly. The Golden-crowned shows its crown colors more.

# **Diet and Feeding Behavior**

Both kinglets eat mostly insects, plus spiders and sometimes seeds or small berries. Mostly they pluck their prey from twigs and branches. The Ruby-crowned is more likely to hover when catching flies.

# Reproduction

Both kinglets tend to nest in trees, 40 or 50 feet off the ground. Goldencrowned Kinglets usually nest at the tops of conifers; Ruby-crowned Kinglets use more varied trees and like some protection from above. Both species hatch chicks that are about the size of bumblebees.

A Ruby-crowned female chooses the site and builds her nest of grasses, feathers, moss, spider webs, and cocoon silk. The nest is globe-shaped, 4 inches across and 5 or 6 inches high. She lays 5 to 12 eggs and keeps the eggs warm (incubates) for 12 to 14 days, while the male brings her food. Both adults tend the young, which fledge (fly) about 16 to 18 days after hatching. There is 1 brood per year.

Golden-crowned males and females work together to build a nest from materials similar to what Ruby-crowned Kinglets use. The Goldencrowned suspends cup nests like a hammock. The nests are about 3 inches high and 3 inches across. The female lays 3 to 11 eggs and incubates them for 15 days. The young fledge 16 to 19 days after hatching. A Golden-crowned female usually has a second brood right away, incubating those eggs while the male brings food to her and tends to the fledged young from the first brood.

# **Distribution and Habitat**

Most Ruby-crowned Kinglets breed in Alaska, Canada, and the Cascades, then winter from Washington and Oregon into the southern US, Mexico, and Central America. Some Rubycrowned Kinglets live in the Rockies year-round. Rubycrowned prefer conifers, mixed woodlands, meadows, and shrub thickets.

Some Golden-crowned Kinglets breed in Canada and spread across the US in winter. Others live year-round on the West Coast from Alaska to Northern California or in New England. They breed mostly in conifers up to 11,000 feet, but also in mixed forests. In winter, Goldencrowned Kinglets are common in yards, swamps, riversides, and suburbs.

At the Refuge, in fall, winter, and spring, look for both species in the brambles and low shrubs along the year-round trail, between the oak woodlands and the riparian forest.



Ruby-crowned Kinglet Range Map. https://www.allaboutbirds.org/guide/Goldencrowned\_Kinglet



Golden-crowned Kinglet Range Map. https://www.allaboutbirds.org/guide/Goldencrowned\_Kinglet/maps-range

# Conservation

Both kinglets are common and of low concern. Threats include jays, squirrels, sharp-shinned hawks, deforestation, and climate change. There are an estimated 90 million Ruby-crowned Kinglets and 100 million Golden-crowned Kinglets.

# Fun facts

- Kinglets are hard to classify with respect to other birds. Experts have disagreed on their species, genus, and even family.
- Kinglets have louder voices than one would expect from such tiny birds.
- Kinglet means little king. They are named for their size and their flashy crowns.
- Golden-crowned Kinglets can survive winter temperatures as low as -40 degrees Fahrenheit.
- The oldest known Golden-crowned was 6 years 4 months when trapped and released in Minnesota. The oldest known Ruby-crowned was 4 years 7 months when trapped and released in California.
- A Ruby-crowned female may lay a clutch of eggs that weigh as much in total as she does. To accomplish this seemingly impossible feat, she eats to compensate for her weight loss as she develops and lays the eggs at the rate of one per day.

# European Starling (Sturnus vulgaris)

The European Starling is a common, flocking bird a bit smaller than a Robin. It has a stubby tail and a sharp beak. Juveniles are gray. European Starlings molt (replace feathers) in the fall. With fresh feathers these birds are dark with white spots on the head and breast. As the whitespotted feather tips wear down with use, the European



European Starling (Ken Durbin)

Starling's appearance changes to an oily-looking black with tinges of green or purple. European Starlings are 8.5 inches head to tail and weigh about 3 ounces.

Shakespeare enthusiasts brought Starlings from Europe to Central Park in New York City in the 19<sup>th</sup> century. They multiply fast, are aggressive, and adapt to many climates, habitats, and foods. People love European Starlings for their dramatic flying displays and hate them for the damage they do.

#### **Diet and Feeding Behavior**

Starlings eat almost anything. They prefer insects but also eat snails, worms, fruit, seeds, livestock feed, and garbage. European Starlings move across a field, park, or feed lot, pecking rapidly. Every fall, when wine grapes are ripening, they mob vineyards and do millions of dollars of damage to crops.

# Reproduction

Starlings use nest cavities, anything from a woodpecker hole, a bluebird box, a crack in a building, to a niche in a streetlight. They are fierce competitors and sometimes drive another bird species from that species' nest. The male fills the cavity with grasses, pine needles, feathers, string, and trash, then calls for a female. She checks out the nest, tosses some of it, then settles in and lays 3 to 6 eggs. Both adults incubate the eggs (keep warm) for 12 days and feed nestlings another 21 days until they fly. Starlings chase off other birds that get close to the nest, from bluebirds to ducks. A pair produces 2 broods (families) a year.

# **Distribution and Habitat**

Starlings are found throughout the US, Canada, and Northern Mexico. They prefer areas with humans over forests or deserts. Flocks of thousands are common in towns, fields, and dairy farms. A large group can fly together as shape-shifting blob. European Starlings forage with a variety of other birds, from sparrows to crows. They can be aggressive with each other. fighting and pushing each other off perches.



https://www.allaboutbirds.org/guide/European\_Starling/ maps-range

# Conservation

The estimated European Starling population in North America increased from the 100 birds introduced in Central Park to a number estimated at well over 100 million breeding birds. However, their North American population decreased by more than 50% since the 1960s. The current

Starlings

estimated worldwide European Starling population is 150 million, with approximately 60 million in North America. Because the European Starling is an introduced species in the US, there are no laws against killing them. Hawks and falcons eat Starlings.

# **Fun Facts**

- Starlings can mimic a variety of other bird calls, including Killdeer, Robins, and Red-tailed Hawks.
- Starlings can fly up to 48 miles an hour.
- Sometimes a Starling will lay eggs in another Starling pair's nest, though she is usually driven away by the resident pair.
- Vineyards try many things to protect their ripening crops from Starlings in fall: netting, metallic streamers, plastic owls, noise cannons, hawk-shaped kites, and recordings of Starling alarm shrieks. Some even hire falconers to fly Peregrine Falcons over their vineyards. All of these methods do some good but not enough to prevent massive damage to the grapes.

# Western Bluebird (Sialia mexicana)

The Western Bluebird is a small (5.9 -7.1 inches) songbird in the *Turdidae* (thrush) family. This family also includes the American Robin and Varied Thrush, as well as the Swainson's and Hermit Thrushes. These species are all found on the Tualatin River National Wildlife Refuge. The two other North American bluebird species—the Mountain Bluebird and the Eastern Bluebird—are not found on the Refuge.

The male Western Bluebird has a bright blue head, wings, and tail. Those contrast with its rufous (rusty-red) chest and back and grayish-white belly. The female's wings and tail are a duller blue. Her head, throat, and back are gray. Juveniles look like females but are light gray-brown with speckled chests and underparts, and a white eye-ring. Western Bluebirds have small, pointed bills.

Another blue bird, with rufous markings, found on the Refuge in spring and summer is the Lazuli Bunting. You can



Western Bluebird (Ken Durbin)



Male Lazuli Bunting (Ken Durbin)

easily tell the males of these species apart by looking at their wings and bills. The Lazuli Bunting has white wing-bars and a chunky bill. The blue color of these species is also different; Lazuli Buntings are turquoise blue, whereas Western Bluebirds are "true" blue.

The song of the Western Bluebird is a sweet, soft series of warbles. Some people think the song sounds like "*kew*" or *"chur"*, repeated several times.

# **Diet and Feeding Behavior**

In addition to a variety of insects and berries, Western Bluebirds eat spiders, earthworms, and snails. The insects they eat include grasshoppers, ants, crickets, caterpillars, moths, butterflies, and beetles. In the Willamette Valley Western Bluebirds' summer diet includes cascara (buckthorn) berries. In the winter Western Bluebirds eat the fruits of elderberry, juniper, and mistletoe.

Unlike other thrushes, Western Bluebirds hover when catching insects, or plucking insects or berries from branches and leaves of trees and bushes. They also fly from a perch (such as a fencepost), land on the ground to catch an insect, and then return to the perch to eat. This foraging behavior is called "ground-sallying".

# Reproduction

Male Western Bluebirds arrive on their breeding grounds before females and sing their songs to let other males know where their territory is. Males court the arriving females by fluttering in front of them while singing.

The Western Bluebird nests in cavities. Cavities used include natural tree cavities, holes in snags (still standing dead trees), old woodpecker holes, and nest boxes. Preferred cavities are rarely more than 50 feet off the ground. In the Willamette Valley, females build cup-shaped grass nests and lay 3-8 pale blue eggs in late March and early April. The female incubates (sits on the eggs to keep them warm until the young hatch) for 13-14 days. Western Bluebirds have at least one clutch (set of eggs) each year, but sometimes two—and rarely three. If three, this may occur in late July. Both male and female adults feed their young, which fledge (leave the nest) 20-21 days after hatching.

# **Distribution and Habitat**

Western Bluebirds in western North America are found most often in open woodlands and edges of denser woods. In Eastern Oregon, they live in oak, pine, and juniper habitats. They avoid hot, dry places.

Western Bluebirds breed in southern British Columbia in Canada, all the way south to Baja, Mexico. They breed as far the mountains east as of Colorado, eastern New Mexico, and extreme west Texas. The northernmost populations (including Oregon's) migrate south for the winter. Western Bluebirds year-round are





residents in Mexico, California, Arizona, New Mexico, and the southern Rocky Mountains.

# Conservation

Western Bluebirds were once abundant, but the species suffered serious declines after 1940 due to habitat degradation and competition from other bird species. Specifically, widespread removal of snags eliminated critical nesting habitat. The House Sparrow (a nonnative species introduced in the mid-1880's) took over natural cavities, destroyed eggs, and killed adults and nestlings. European Starlings, another aggressive nonnative species, arrived in the 1940's and made the problem worse.

In addition to competition from other species, Western Bluebirds are subject to parasites, including blow-fly larvae, feather mites, and louse

Thrushes

flies. If that weren't challenging enough, during prolonged cold temperatures, Western Bluebirds may abandon their eggs and nestlings.

Dedicated volunteers and landowners in the Willamette Valley (and elsewhere) put up nest boxes, which has given a boost to the population of this species. Nevertheless, these human efforts have probably not fully replaced losses of natural nest sites.

# **Fun Facts**

- Older members of this species have brighter and larger amounts of blue and russet colors than younger birds.
- William John Swainson, the British naturalist, formally described the Western Bluebird, in 1832.
- Bluebirds have been featured in music, poetry, prose, and art. The bluebird is a symbol of happiness, joy, and hope in many cultures—a concept that may go back thousands of years.



Juvenile Western Bluebird (Ken Durbin)

# Swainson's Thrush (Catharus ustulatus)

The Swainson's Thrush is a medium-sized thrush (about 7 inches long), which is smaller than the American Robin. The Swainson's Thrush is dull oliveabove and brown pale underneath with brown spots on the chest. It has pale buffy-white eye rings that look like spectacles. Male and female Swainson's Thrushes are similar.

Because they have drab plumage and often sit very still in shady forests, Swainson's Thrushes are not often seen. You are more likely to hear the song of the Swainson's Thrush. Many people consider that song one of the loveliest of all bird



Swainson's Thrush (Don Holland)

songs. Soft, flute-like, and melodious, the rising notes can be heard wafting through dense forests. Swainson's Thrushes also have a call that is a quick "whit" sound that is made if a predator, such as a hawk or squirrel, is nearby.

The Swainson's Thrush is related to the three other thrush species found at the Tualatin River National Wildlife Refuge—the American Robin, the Varied Thrush, and the Western Bluebird. All are in the family, *Turididae*. However, these thrushes' appearances and habitats are very different.

# **Diet and Feeding Behavior**

Swainson's Thrushes forage for food on the forest floor and in trees. They eat insects, as well as spiders and other invertebrates (animals without backbones), such as snails and earthworms. Small fruits and berries (such as elderberry, blackberry, and salmonberry) make up over  $\frac{1}{3}$  of their summer diet. Swainson's Thrushes sometimes hover briefly to capture insects from foliage or to catch them in mid-air.

# Reproduction

Male Swainson's Thrushes arrive first on breeding grounds to establish territories, usually from early to mid-May. The peak of spring migration is in late May to early June in the Willamette Valley. Male Swainson's Thrushes defend their territories and attract mates by singing. If a female Swainson's Thrush chooses to remain in a male's territory and he accepts her as his mate, a pair bond is formed after about 3-4 days.

The peak of the nesting season is from mid-to-late June. The female builds a nest in about 4 days on a horizontal tree branch close to the trunk, usually 2-10 feet above ground. The female constructs a cup-shaped nest from twigs, strips of bark, moss, grass, and leaves. Bark fibers, lichens, animal hair, and other soft materials line the nest.

Female Swainson's Thrushes lay 3-5 pale blue eggs that are flecked with brown. Incubation (sitting on and keeping the eggs warm) by the female lasts 12-14 days. During this time, male Swainson's Thrushes bring food to their mates. Once the young hatch, both parents feed them. Young Swainson's Thrushes leave the nest about 10-13 days after hatching.

Swainson's Thrushes are monogamous, meaning they have only one mate. They typically raise just one clutch (batch of young) per year.

# **Distribution and Habitat**

The Swainson's Thrush lives in coniferous forests and riparian woodlands (woodlands near streams). The species is migratory, with an extensive breeding range. It breeds in coniferous woodlands with dense

undergrowth throughout Canada. Alaska. the and northern United States. The Swainson's Thrush lives in deciduous forests of the Pacific Coast of North America. The fall migration of the Swainson's Thrush in the Willamette Valley mid-September. occurs in months. winter During Swainson's Thrushes migrate to southern Mexico and Argentina, Panama, Costa Rica, and Bolivia.

Look and listen for Swainson's Thrushes in forested areas on the Refuge in the spring and summer. Western Bluebirds are



Swainson's Thrush Range Map. https://www.allaboutbirds.org/guide/Redbreasted\_Nuthatch/maps-range

also on the Refuge in the spring and summer, but they are found in open areas, and—as their name implies—are blue. Varied Thrushes are uncommon winter visitors on the Refuge. American Robins are common to abundant on the Refuge year-round in a variety of habitats.

# Conservation

Swainson's Thrush populations are thought to be stable, but the species is vulnerable to habitat loss, especially on its breeding grounds.

Swainson's Thrushes migrate at night, flying at low altitudes. This makes them vulnerable to collisions with structures. The Swainson's Thrush is among the most common migratory bird species killed in collisions with buildings and windows.

# Fun Facts

- The Swainson's Thrush is sometimes called the "Olive-backed Thrush or "Russet-backed Thrush". This is because different subspecies of Swainson's Thrushes' backs have slightly different colors.
- The genus name *Catharus* comes from the Ancient Greek *katharos*, which means "pure" or "clean". The species name, *ustuatus*, is Latin for "burnt".
- The Swainson's Thrush was named for William Swainson, an English ornithologist. Other species, such as the Swainson's Hawk, are also named after Mr. Swainson.
- A group of thrushes is known as a "hermitage" and a "mutation" of thrushes.

#### Thrushes

# American Robin (*Turdus migratorius*)

The American robin is a songbird and is a member of the thrush family. The genus name *Turdus* comes from the Latin word for thrush, while the species name *migratorius* refers to large seasonal migrations often observed in the Eastern and Midwestern U.S.



Male American Robin (Ken Durbin)

Robins are the largest, most widespread and abundant thrush in North America. They are easily recognizable and commonly seen in suburban yards, farmland, and forested area, often nesting in trees near human residences.

Robins are about 10 inches long (25 cm) and weigh about 2.7 ounces (77 grams). Males have deep grayish to dark brown upper parts with blackish heads, rufous (reddish orange) breast and belly, white crescents above and below each eye, white throats with black streaks, and yellow beaks. Females are similar, but paler overall, especially on the head and breast. Juveniles are somewhat similar to adults, but are distinguished by the black spotting on the breast and belly, pale spotting on the upper parts, and entirely white throat.

# **Diet and Feeding Behavior**

American robins eat primarily ground invertebrates (e.g., earthworms, insects) and fruit. The proportion of invertebrates and fruit in the diet fluctuates greatly with season and relative abundance. For example, robins consume mostly invertebrates in spring and summer, while consuming mostly fruit in fall and winter.

Robins consume fruit either hanging in trees and shrubs or on the ground, but primarily hunt invertebrates on the ground. They have a

#### Thrushes

characteristic hunting style of running or hopping a few steps, stopping and then jabbing with their beak to grab a worm or insect. When they stop, they often cock their head to one side. While they appear to be listening for prey, studies have shown that they are, in fact, hunting by sight and that they are turning the head so that one eye is looking directly at the ground.

### Reproduction

American robins breed in their first year after hatching and breed annually thereafter. On average they raise two broods of chicks per year, and in some places three. Robins make a cup-style nest in trees and shrubs made of dry grasses, small twigs, and mud from worm castings. First nests of the



Robin eggs in nest (Lasiovarga)

season usually take 5 to 7 days to construct, though it may take up to two weeks if it is too wet or too dry. Later nest attempts can happen very quickly to take advantage of prime nesting conditions, and a new nest can be built in as little as 2 to 3 days.

Egg laying typically begins in late April or May and may continue through July for subsequent broods. The typical clutch size is 3 or 4 eggs, rarely 5. One egg is laid each day until the clutch is complete. Eggs hatch about 13 days after last egg is laid. Nestlings hatch mostly naked with yellowish translucent skin and eyes closed. They are fed mostly small insect grubs and pieces of worms by both parents and beg with mouth wide open as parents approach the nest. Eyes open about day 4, and most feathers emerge by the time they fledge (leave the nest). Nestlings fledge when they are approximately 13 days old (range 9-16 days). For the first 10 to 15 days, fledglings are not strong flyers, so they stay in covered in ground vegetation while the parents follow them and provide food. At about 4 weeks of age, robin juveniles are able to live independently.

Thrushes

The rate of failure of nest attempts is high due to predation of eggs or nestlings or nest desertion due to disturbance or bad weather – in most places less than half of nests with eggs ultimately produce at least one fledgling.

# **Distribution and Habitat**

robins American found can be throughout most of North America (Figure 3). While most populations of robins are migratory, some live in a relatively small range (e.g., along the In the Willamette Pacific coast). valley, robins are observed year around however, some individuals winter in California or Mexico while others summer in Alaska and Canada.

Robins are well adapted to living in human-dominated landscapes (e.g., suburban lawns, gardens, farmland), but during breeding season use a wide variety of forest, woodland, and riparian ecosystems. They hunt for



American Robin Range Map

ground invertebrates in lawns, gardens, pastures, and open marshlands and mudflats. They use similar ecosystems in winter, though they congregate in areas rich in fruiting trees and shrubs. At Tualatin River National Wildlife Refuge, robins are most often found in the riparian zones along Rock Creek, Chicken Creek, the Tualatin River, and throughout the Riparian Forest area.

# Conservation

The highest densities of breeding robins are found in the Pacific Northwest, Great Lakes region, New England, and the Canadian Maritime Provinces (Figure 4). During the Christmas Bird Count (a nationwide bird count during the week of Christmas), the highest

densities of robins are found in Oregon, northern California and the southeastern U.S. Based on Breeding Bird Survey population trends, American robin populations are steady or increasing over most of their range, but populations in the Willamette valley have been slowly decreasing. The reasons are not clear. Because robins feed on ground invertebrates in lawns, gardens, and farmland, they can come in contact with pesticides used to control insects. There are many documented cases of sick and dead robins due to pesticide exposure. Pesticide exposure can also be a problem for robins in vineyards and orchards, where these birds can be a significant economic problem in fruit crops. Although deforestation, urbanization, and agricultural intensification can be major problems for many species, breeding habitat for robins is often created, rather than degraded, by these activities.

# **Fun Facts**

- The American robin is the state bird of Connecticut, Michigan, and Wisconsin.
- To raise one brood of robins to fledging, the parents need to bring a total of about 3.2 pounds (1.45 kilograms) of invertebrate food to the nestlings over the approximately two week period in the nest.
- The longest-living banded wild robin survived 13 years and 11 months.
- Each robin has about 2900 feathers.
- When robins consume large amounts of fermented berries, they can appear drunk and wobbly on their feet.

# Varied Thrush (Ixoreus naevius)

The Varied Thrush is the same shape as its relative, the American Robin. The Varied slightly smaller, Thrush is more secretive, and more strikingly marked. The male's coloration is dark gray and orange. Most striking is the alternating arrangement of these colors descending from the top of its head -1) dark gray cap; 2) orange stripe above the eyes; 3) dark gray stripe through the eyes; 4) orange on the lower part of its face and neck; and dark gray (black) breast band. Female Varied and immature



Varied Thrush (Don Holland)

Thrushes look similar, except the colors are less vibrant. The Varied Thrush measures 9.5 inches beak to tail, with a 16-inch wingspan and a weight of 3 ounces.

# **Diet and Feeding Behavior**

During the summer Varied Thrushes eat mostly insects, including caterpillars. They eat fruits, berries, seeds, and nuts in winter. Varied Thrushes forage by flicking leaf litter with their beaks or kicking it, looking for food underneath.

# Reproduction

The male selects a territory, usually in an old-growth conifer forest of at least 40 acres. He then sings to attract a female. She picks a spot in the understory, sometimes on top of an old nest or on a branch, usually about 10 feet off the ground. She gathers conifer twigs for the base, then

Thrushes

bits of rotten wood, moss, mud, and grass, to make a cup about 4 inches across. She lines the nest with soft leaves, grasses, and moss. The female usually lays 3 or 4 eggs and keeps the eggs warm (incubates) for 12 days, while the male defends the territory. Both adults tend the young until they fly about 13 to 15 days after hatching.

# **Distribution and Habitat**

The Varied Thrush summers in western Canada and Alaska and winters on the West Coast from Washington to northern Baja. Some live year-round in western Oregon, western Washington, and coastal British Columbia. Varied Thrushes nest in damp, shady old-growth forests and are common in Oregon in the Coast Range and the Cascades. They are less picky in winter, showing up in parks and yards and along lakes and rivers. At Refuge, look for the them foraging on the ground in the forest or among the brambles along the year-round trail.



Varied Thrush Range Map. https://www.allaboutbirds.org/guide/Varied\_Thrush/map s-range

#### Conservation

The Varied Thrush is common but declining significantly. The estimated population of breeding adults is 20 million. The greatest threat is logging of old-growth forests. Other threats come from cats, window strikes, and collisions with cars.

#### Thrushes

# **Fun Facts**

- The Varied Thrush has a song described as "perfectly the voice of the cool, dark peaceful solitude which the bird chooses for its home."
- Territory good for the Northern Spotted Owl is good for the Varied Thrush.
- Like many birds, Varied Thrushes like their own territory when nesting but are often found in flocks in winter. They may appear in mixed flocks with American Robins as they all look for earthworms in the grass.
- Varied Thrushes are often aggressive toward each other and toward smaller birds, such as sparrows, juncos, towhees, and blackbirds. Quail, flickers, jays, and American Robins dominate Varied Thrushes in the pecking order.
- The oldest known Varied Thrush was 4 years 9 months when captured and released in California.

# Waxwings

# Cedar Waxwing (*Bombycilla cedrorum*)

The Cedar Waxwing is a member of the waxwing family. A sleek bird with a large head, short neck, and short, wide bill, waxwings have a crest that often lies flat and droops over the back of head. The the Cedar Waxwing is a brown bird with black mask bordered а narrowly by white. It has vellow tips on the short square tail feathers, and red wax-like tips on secondary wing feathers. The purpose of the waxy red secretionswhich gives them the name "waxwing"-is unknown. The belly is a pale yellow; under tail coverts are white. The Cedar Waxwing is smaller browner than the and Bohemian Waxwing and



Cedar Waxwing (Ken Durbin)



Figure 2: Cedar Waxwing feeding on berries. (U.S. Fish and Wildlife Service, Dave Menke)

lacks the Bohemian's yellow wing spots. The Cedar Waxwing is usually seen in flocks, which sometimes number into the hundreds. Males and females generally look alike, with the exception of darker colored chins on the males. Cedar waxwings are 6 to 8 inches long with a 12-inch wingspan. Adults weigh about an ounce. Their flight is characteristically strong and undulating. Their long wings enable them to reach speeds up to 29 mph.

### **Diet and Feeding Behavior**

The Cedar Waxwing mostly eats fruit (frugivorous). Most of its diet consists of berries, especially in the winter. Berries play a large role in the Cedar Waxwing's breeding, social and migratory behavior. Cedar Waxwings pluck berries while perching, hanging upside down, or briefly hovering in midair. Cedar Waxwings sometimes pass berries to one another as they perch in a line on a tree branch. The Cedar Waxwing also eats sap, flowers and insects. In the summer Cedar Waxwings may wait for an insect to fly by and then take off after it and catch it in the air. In the northern part of their range, cedar berries are an important food source. While most fruit-eating birds regurgitate seeds, Cedar Waxwings digest the entire fruit, and eventually disperse seeds in their feces. Occasionally they consume too much over ripened fruit, which may lead to intoxication and even death. Cedar Waxwings are often tame enough to feed near the feet of people.

# Reproduction

Both males and females mature at 1 year and live up to 8 years in the wild. Nesting coincides with summer berry production, putting the Cedar Waxwing among the latest of North American birds to nest. Cedar Waxwings defend only a small territory, so birds may nest in small colonies. In courtship, two birds may perch close together, posturing, touching bills, and passing food items back and forth until the female eats the item. Afterward, the female takes the lead on choosing a nest site and constructing the nest. The nest is on a horizontal tree limb or in a fork, usually 6-20 feet high, but can be lower or much higher (up to 50 feet). While the female incubates the eggs, the male brings food to the female and guards against predators. The 3-5 pale blue or blue gray eggs (finely spotted with black or gray), rest in a rather loosely built open cup of grass, weeds, twigs, and plant fibers lined with finer materials such as moss, rootlets, fine grass, or hair. With one to two broods from June to August each year, the naked, blind, helpless, yet quiet hatchlings weigh a little more than one-tenth of an ounce. Incubation is

#### Waxwings

probably by female only, averaging about 12-13 days. Both parents feed the nestlings and the young leave the nest about 14-18 days after hatching, at which point they form flocks of their own.

# **Distribution and Habitat**

Cedar waxwings live year round in Cedar Waxwing the northern half of the United States (Figure 3). Non-breeding winter populations live in the Midwest and southern states south through Caribbean. Mexico. the Central America, and the northwestern of Columbia. reaches Summer breeding populations are found from British Columbia, across Canada to The Cedar Waxwing Maine. occupies a variety of habitats from open woodlands to orchards and residential areas, especially those with fruit-bearing trees and bushes. In summer Cedar Waxwings are rather inconspicuous. In winter they travel in flocks of 40 or more,



incessantly calling, turning and twisting in flight, and frequently alighting in the same tree. Cedar Waxwings use noises and physical displays to communicate with other flock members.

# **Conservation Status**

Cedar Waxwing numbers have been increasing for a number of years, partly due to the use of berry-producing trees in landscaping and the conversion of agricultural land to forest. There are currently no extraordinary conservation measures.

#### Waxwings

# Predation

Merlins (a falcon), hawks, and Common Grackles prey on adult Cedar Waxwings. Additionally, adults sometimes fall victim to bullfrogs when they drink from ponds. Jays and House Wrens eat juveniles and eggs. Brown-Headed Cowbird chicks in cedar waxwing nests typically don't survive, in part because the cowbird chicks can't develop on a high-fruit diet. (Cowbirds reproduce by laying eggs in the nests of other birds, with the cowbird chick outcompeting the chicks of the nesting parents.)

# Fun Facts

- Some Cedar Waxwings in the Northeast United States and Southeast Canada have an orange tip on their tails. This coloration is caused by berries of an introduced species of honeysuckle, (Morrow's honeysuckle), eaten while their tail feathers were growing.
- Adult Cedar Waxwings form monogamous bonds during each breeding season. The courtship ritual begins when a male dances for a female and gives her fruit, flower petals, or insects. If the female is interested, the gift is passed back and forth several times until the female eventually eats it.
- Building a nest takes a female Cedar Waxwing 5 to 6 days and may require more than 2,500 individual trips to the nest. They occasionally save time by taking nest materials from other birds' nests, including nests of Eastern Kingbirds, Yellow-Throated Vireos, orioles, robins, and Yellow Warblers.
- The oldest known Cedar Waxwing was 8 years, 2 months old.
- Waxwings do not seem to return to the same area every year so it seems that they lead a nomadic existence, probably governed by the availability of berries. This unpredictability was once thought to be a bad omen earning them the name of "pest-birds" in some parts of Europe.

# Tanagers

# Western Tanager (Piranga Iudoviciana)

Spring is a wonderful time at the Tualatin River National Wildlife Refuge because many migratory birds visit. The 7-inch Western Tanager is one of the most conspicuous species, mainly because the males are so colorful. Thus, there is no confusing this species with others. The male has a red-orange brilliant head: bright yellow belly, chest, and rump; and black back



Western Tanager male (Don Holland)

and tail. The wings are black with a yellow shoulder stripe and a prominent white wing bar. Females are more challenging to identify. They lack the vivid colors of the male. The females have greenish-yellow heads and chests, dull gray backs, and gray wings with two pale wing bars. Immature males resemble adults but have yellow heads that gradually become red as they obtain their breeding plumage.

The song of the male Western Tanager is "cheerful" and a bit like that of the American Robin. However, it's not as "sweet" and is often interrupted with harsher "call" sounds. The Western Tanager's song may be described as "che-ree, che-ree, che-ree, pit-r-ick pit-r-ick". Often, the males sing from the tops of coniferous trees such as Douglas firs.

# **Diet and Feeding Behavior**

Western Tanagers eat almost any insect they can find, but mainly wasps, beetles, and ants. Their diet also includes caterpillars, grasshoppers, dragonflies, and termites. Western Tanagers spend most

#### Tanagers

Tanagers

of the time foraging (looking for food) in or near the tops of trees. Sometimes Western Tanagers fly out from a tree and catch an insect mid-air. Western Tanagers also eat fruits (such as cherries, elderberries, and blackberries), buds, and seeds. Their pointy, stout bills are perfectly adapted for these feeding habits.

# Reproduction

Western Tanagers breed mostly in mountainous areas—in coniferous forests, and in woodlands that have a mix of coniferous and deciduous trees. This species is very territorial. Males sing loudly and often from treetops to attract mates and defend territories.

Nesting season is generally in June, though there are records of eggs laid by early May. Western Tanagers are monogamous, meaning that a male and female pair do not mate with others. They have only one brood (family) each year. The female builds the nest, usually high in a conifer tree and well out on a horizontal branch. The typical nest is a loosely woven cup of twigs, grasses, moss, and strips of tree bark. The female lines the nest with animal hair, feathers, and fine plant materials. Usually, she lays 4 blue-green eggs with brown markings. The female incubates (keeps warm) the eggs for about 13 days. Once the eggs hatch, both parents care for the young. During this time the female calls out, which may signal the male to bring food to the nest. When the male arrives at the nest, he may sing or call to encourage the chicks to eat. The young leave the nest 10 - 14 days after hatching.

# **Distribution and Habitat**

Western Tanagers are migratory. In April they fly to Oregon from their oak-pine wintering grounds of southern Mexico and Central America. Western Tanagers are widespread in conifer forests in Oregon during the summer. By mid-July, however, the species starts migrating south. The peak of their migration is in late August and early September. By October, Western Tanagers are rare in Oregon.

### Tanagers

Western Tanagers breed in much of western North America from southeastern Alaska and Canada's Northwest Territories to southern California. They breed as far east as western South Dakota and west Texas.

# Conservation

The Western Tanager is widespread and common. Western Tanagers do not need large patches of forest for breeding. Thus, they fare better than species that require larger areas of undisturbed forest.



• Western Tanagers migrate mainly at night either alone or in groups of up to 30.



Western Tanager Range Map. https://www.allaboutbirds.org/guide/Western\_Tanager/ maps-range

- The male's red head color comes from rhodoxanthin, a pigment found in insects the Western Tanager eats. Many other birds with red feathers acquire their red pigments, known as carotenoids, from plants.
- The Lewis and Clark Expedition (1804-1806) collected a Western Tanager. American ornithologist, Alexander Wilson, formally described the species in 1811 based on that specimen.

# *Swifts* Vaux's Swift (*Chaetura vauxi*)

Often called "a flying cigar with wings," the Vaux's Swift is one of the most amazing aerialists of the bird world. Vaux's Swifts are only 4 to 4.5 inches long, but they have an 11-12 inch wingspan. Their pointed wings are sickleand their shaped, wingbeats are stiff and very fast. Vaux's Swifts



Vaux's Swift (Don Holland)

do not perch because their tiny feet and extremely short legs are too weak. Instead, they cling to vertical surfaces. The Vaux's Swift is in the family, *Apodidae*, which means, "without feet".

Vaux's Swifts have tiny bills, but large mouth openings. Their tails are short and square. Vaux's Swifts are dark gray-brown with slightly lighter throats, chests, and rumps. However, these color contrasts are hard to see because these birds fly so fast, and you will not see them perching. Males and females look alike.

Vaux's Swifts make high-pitched chipping, squeaking, and twittering sounds, followed by even higher-pitched buzzy trills.

# **Diet and Feeding Behavior**

Vaux's Swifts forage above treetops, forest openings, and water. They have a voracious appetite for flying insects including mosquitos, gnats, winged ants, small beetles, flies, bees, mayflies, moths, and aphids. Vaux's Swifts also hunt "ballooning" spiders and flightless insects that
Swifts

are carried high by air currents. (Ballooning spiders deploy their silk to catch the wind.) Vaux's Swifts also skim aquatic insects from the surface of streams and lakes. One adult Vaux's Swift that is feeding young may catch over 5,000 insects a day.

## Reproduction

Vaux's Swift breeding season begins in April, with nesting from May to July. Male and female Vaux's Swifts court and copulate (mate) in flight. Courting Vaux's Swifts chase each other and glide through the air with wings held in a V-shape.

Vaux's Swifts typically nest in hollow tree snags, where available. They may nest in pairs or in colonies. While in flight Vaux's Swifts break off small twigs from trees for nesting materials. Vaux's Swifts paste the twigs together with their sticky saliva on the interior wall of the snag cavity, not the bottom. The nest is a shallow half cup. Both parents build the nest.

Adults access their nests by flying in and out of the top of the snag or through an old woodpecker hole. Females lay 4-6 white eggs. Both parents incubate the eggs (keep warm) for about 19 days. Both parents feed the young. As the young develop, they become adventurous and begin clinging to the cavity wall near the nest. The young begin taking short flights when they are 20-21 days old. They are capable of full flight at 28-32 days after hatching. The young may leave and return to roost at their nest site for several nights after fledging (leaving the nest). Vaux's Swifts have one brood (family) per year and may use the same nest tree for many years.

## **Distribution and Habitat**

The Vaux's Swift nests and roosts in large, hollow trees and snags found in coniferous forests below 4,500 feet elevation. Vaux's Swifts breed in old growth forests from southeast Alaska south to northern California, and east to Idaho and the Rocky Mountains in Montana.

#### Swifts

Vaux's Swifts follow their food supply (flying insects). When temperatures drop and insect populations decrease in late summer and early fall, it signals that it's time to go. From mid-September to early October, Vaux's Swifts migrate to Mexico, Central America, Colombia, and northern Venezuela. They return to their breeding areas in mid-April to early May. In Oregon, Vaux's Swifts return in late April.

After the breeding season, Vaux's Swifts gather in large



Vaux's Swift Range Map. https://www.allaboutbirds.org/guide/Vauxs\_Swift/mapsrange

groups (hundreds, and sometimes thousands) to roost (sleep) communally. This behavior allows them to conserve body heat on cold nights before they migrate south for the winter. Vaux's Swifts use tall, hollow tree snags and burned-out tree stumps in forests for this purpose. Sometimes, though, Vaux's Swifts disperse to urban areas to roost in brick chimneys. Just before sunset, flocks of Vaux's Swifts begin flying in a large vortex pattern (whirlpool motion) above the roost site. This behavior may last for up to an hour. Suddenly at sunset, the swifts begin "dropping" into the top of the roost, often several individuals at a time. From a distance, this almost looks like an invisible giant is pouring birds through a funnel into the roost. Inside the roost, Vaux's Swifts cling to the roost walls with their tiny "clawed" feet. They spend the night in the roost and emerge in the morning.

## Conservation

Vaux's Swifts may be declining throughout their range due to the loss of older forest habitat and large snags that they need for nesting and roosting. Many old brick chimney roosting sites have been torn down or Swifts

Swifts have collapsed. Modern chimney construction is not suitable because the liners do not have good toe-holds. In addition, chimney covers

## **Fun Facts**

prevent access to roost and nest sites.

- The Vaux's Swift lives much of its life on the wing. It forages for food, drinks, bathes, courts, collects nesting materials, and copulates in flight.
- The Vaux's Swift is the smallest of the North American swifts and is the western counterpart of the Chimney Swift.
- Even though swifts look a lot like swallows and consume insects while flying, swifts are more closely related to hummingbirds.
- Vaux's Swifts are named for the Philadelphia naturalist, William Sansom Vaux, who lived from 1811-1882. Although some people pronounce this species' name as "voh," Mr. Vaux pronounced his name as "vauwks".
- A group of swifts is known as a "box", "flock", "screaming frenzy", and "swoop" of swifts.
- For 2 weeks in September the largest concentration of roosting Vaux's Swifts in North America is in Portland, Oregon at Chapman Elementary September School. check In out https://audubonportland.org/go-outside/swift-watch/ for a possible opportunity to see a Vaux's Swift vortex.

## Orange-crowned Warbler (*Leiothlypis celata*)

The Orange-crowned Warbler is a plain, very small bird (less than 5 inches long). It is slightly smaller **Black-capped** than а Chickadee. Orangecrowned Warblers are drab yellow-olive and have short wings lacking wingbars. The orange feathers on its head (for which it was named) are covered by tips of adjoining feathers, and almost never



Orange-crowned Warbler (Don Holland)

visible unless the bird is agitated or excited. Immature and female Orange-crowned Warblers usually lack the orange "crown". Orangecrowned Warblers have very faint eyelines and subtle "broken" eye rings. The most colorful part of an Orange-crowned Warbler is the yellow area towards the base of, and beneath, its tail. Orange-crowned Warblers have tiny, exceptionally pointy bills. Males and females are very similar.

The Orange-crowned Warbler's song is a sustained, fast trill of notes that do not rise or fall very much, but that descend in pitch and volume towards the end. The song can be confused with the trill of the Darkeyed Junco. Orange-crowned Warblers also have a simple, clear, high call that is a sharp "tsk".

Although abundant in the Spring and Summer, people often overlook Orange-crowned Warblers because of their dull coloration and their habit of foraging in dense brush. Look and listen for Orange-crowned

Warblers on the Refuge in riparian vegetation along Chicken Creek and the Tualatin River, and in brushy areas along forest edges.

## **Diet and Feeding Behavior**

Orange-crowned Warblers feed in deciduous (trees that drop their leaves in the fall) and conifer habitats, as well as in clearcut areas, where there are shrubs and brush. Orange-crowned Warblers eat a wide variety of insects. They also eat spiders, and sometimes also eat seeds, fruit, and plant galls. (Plant galls are abnormal growths caused by the irritation from an insect laying eggs on the plant. At the Refuge look for galls caused by wasps laying eggs on oak leaves and stems.) Orangecrowned Warblers glean most of their food from leaves and twigs, but they also eat sap flowing out of Red-breasted Sapsucker and other woodpecker species' holes in trees. Orange-crowned Warblers will also pierce the base of flowers with their sharp bills to get at nectar. Orangecrowned Warblers flit from branch to branch while foraging. Orangecrowned Warbler parents feed their nestlings insect larvae.

## Reproduction

Orange-crowned Warblers breed in thickets and brushy shrubs of deciduous forests, woodlands, and riparian corridors. They usually build nests on the ground in small depressions, or on steep stream banks and hillsides, protected by overhanging vegetation. Occasionally, Orange-crowned Warblers nest in shrubby bushes or trees, not far off the ground. The female builds the 4-inch by 2.5-inch nest, using leaves, little twigs, bark, grass, and moss. She lines the nest with dry grass or animal hair. The male does not help with nest building.

Female Orange-crowned Warblers lay 4-5 (but sometimes 3-6) white or creamy-white eggs that have reddish-brown speckles that are larger at the large end of the egg. The adult female incubates (keeps warm) the eggs for 11-13 days. Both parents feed the young. They fledge (leave the nest) when they are 10-13 days old, but they cannot fly very well then. Both parents feed them for a few days after fledging.

The Orange-crowned Warbler is one of the earliest arriving migratory songbirds in Oregon, often arriving in mid-March, with the peak of arrivals taking place in April. Male Orange-crowned Warblers migrate earlier than females, and begin singing in late March to early April. Often, males stop singing after forming a pair bond with a female. Breeding is underway by May. Males' singing tapers off in late June and stops in July. Males return to territories they defended the previous year. Orange-crowned Warblers have only one brood (family) a year.

## **Distribution and Habitat**

The Orange-crowned Warbler breeds from Alaska across Canada and in the U.S. west of the Rocky Mountains in a wide variety of habitats. In fact, Orange-crowned Warblers breed in more forest types than nearly any other warbler species.

Like other insect-eating birds, the Orange-crowned Warbler migrates. Although a few remain in western Oregon in the winter, most Orange-



Orange-crowned Warbler Range Map. https://www.allaboutbirds.org/guide/Orangecrowned\_Warbler/maps-range

crowned Warblers migrate to the southern U.S., Mexico, and Central America by mid-October.

#### Conservation

Orange-crowned Warbler populations declined by about 34% between 1966 and 2014 according to the North American Breeding Bird Survey. It is a species whose populations are jeopardized by the decline of broadleaf forests in the Pacific Northwest. Nevertheless, the Orangecrowned Warbler is one of the most abundant migrants in Oregon. Because Orange-crowned Warblers can live in a variety of habitats in

the winter, they are not as susceptible to disturbances (such as logging) as many other migratory bird species. Orange-crowned Warblers may, in fact, benefit somewhat when logging opens up forests and allows dense shrubby vegetation to grow in.

- American zoologist Thomas Say described the Orange-crowned Warbler in 1822.
- The genus name for the Orange-crowned Warbler, *Leiothlypis*, is derived from the Ancient Greek word, meaning "plain". The species name for the Orange-Crowned Warbler, *celatus*, is Latin and means "secret" or "hidden".
- The Orange-crowned Warbler was once called the Lutescent Warbler. Lutescent is a fancy word for yellow. Yellow Warbler might be simpler descriptive name for this bird, except that name is already taken by another yellow-colored warbler that you can find on the Refuge.
- A group of warblers is called a "bouquet," a "confusion," a "fall," and a "wrench" of warblers.

## Yellow-rumped Warbler (Setophaga coronata)

If you're visiting the Tualatin National Wildlife River Refuge and you see some small birds with yellow rump patches flying in and out of the branches of trees, you've Yellow-rumped seen 5.5-inch Warblers. These jokingly called birds are "butterbutts" because of those rump patches. Look more closely, and you may also notice yellow patches on their sides, and small yellow "caps" on their heads. They have two thin white wingbars, but it might be hard to see them because this is a bird that doesn't sit still very long.

There are two kinds of Yellow-rumped Warblers in Oregon—the Audubon's and the Myrtle. The best way to tell them apart is by their throat patches. The



Yellow-rumped Warbler (Audubon's Warbler). (Ken Durbin)



Yellow-rumped Warbler (Myrtle Warbler). (Ken Durbin)

Audubon's Warbler has a bright yellow throat, and the Myrtle has a white one. Otherwise, they are similar, having black chests and dark gray heads and backs. Female Yellow-rumped Warblers are similar to males, but duller overall. On the Refuge, you are most likely to see the Audubon's.

## **Diet and Feeding Behavior**

Yellow-rumped Warblers eat insects. They pick ants, aphids, and caterpillars off leaves, but often catch flying insects such as flies, beetles, bees, wasps, craneflies, and gnats in the air. Yellow-rumped Warblers also eat nectar from flowers and sap from tree holes made by woodpeckers called sapsuckers. During the winter when insects are scarce, Yellow-rumped Warblers eat small fruits, berries, and seeds.

## Reproduction

Yellow-rumped Warblers start breeding by May. Nests are cup-shaped and are usually on the limbs of conifer trees, about 15-20 feet above the ground. Females lay 4-5 eggs and incubate them for nearly 2 weeks. After the young hatch, both parents feed the young for a few more weeks. After that, the young leave the nest.

## **Distribution and Habitat**

Yellow-rumped Warblers occur in most of Canada and in every state in the U.S., except Hawaii. Although they are officially considered the same species, the Audubon's Warbler is found primarily in the western parts of Canada and the U.S., whereas the Myrtle Warbler is found mostly in the east. Overall, the species breeds from Alaska south to Guatemala and east to the northeastern United States. The Audubon's Yellow-rumped Warbler breeds throughout Oregon from sea



Yellow-rumped Warbler Range Map. https://www.allaboutbirds.org/guide/Yellowrumped\_Warbler/maps-range

level to timberline. The Myrtle does not breed in Oregon.

Yellow-rumped Warblers spend the winter across much of the southern U.S., Mexico, and the western Caribbean. Yellow-rumped Warblers are

Warblers

Warblers

common on the Refuge when they return to Oregon in the spring. Yellow-rumped Warblers tend to migrate north earlier and south later than other warbler species. In western Oregon, Yellow-rumped Warblers migrate north from mid-March through early May, peaking in early April to early May. They migrate south in late September and October, later than most other warbler species. Yellow-rumped Warblers are uncommon on the Refuge during the fall and winter.

The species lives in a variety of habitats but is often found in coniferous forests and mixed coniferous-deciduous forests. Yellow-rumped Warblers like the edges of forests near open meadows and water. Look for them in these habitats on the Refuge, especially on spring days.

## Conservation

The Yellow-rumped Warbler is one of the most common warblers in North America.

- For many years, it was thought that the Audubon's Warbler and the Myrtle Warbler were two separate species. But in 1973, scientists decided they were the same species because Audubon's and Myrtles routinely interbred in a small area in western Canada. Using DNA analysis, some scientists now believe they really are separate species. Officially, however, they are still considered one species.
- Unlike other warblers, Yellow-rumped Warblers can digest the waxes in "bayberry" and "wax myrtle" plants. This allows Yellow-rumped Warblers to winter in areas as far north as Newfoundland and Nova Scotia, when few insects are available!
- Males of this species tend to forage higher up in trees than females.

## Townsend's Warbler (Setophaga townsendi)

many warblers, the Like Townsend's Warbler is a little smaller than a sparrow, with a thin short beak and a mix of black, white, and yellow markings. To identify а Townsend's Warbler, look for its bold black and yellow head colors. Its cap and throat are black. Its face is yellow with a black mask. Male and female are similar, females have but more



Townsend's Warbler (Ken Durbin)

muted colors. The Townsend's Warbler is 5 inches beak to tail, with an 8-inch wingspan and a weight of a third of an ounce.

## **Diet and Feeding Behavior**

In breeding season, Townsend's Warblers eat mostly insects and insect larvae, usually foraging in the treetops. They also eat spiders. On migration, Townsend's Warblers add nectar from flowers and seeds to their diet. At feeders, they like mealworms, peanut butter, and suet.

#### Reproduction

Townsend's Warblers breed in mature coniferous and mixed forests, especially old-growth firs, rarely in logged areas. The male arrives first and selects or fights for a territory. The female checks out several sites in the territory, then picks one. She builds a 4-inch cup nest of bark, needles, twigs, plant fibers, grass, lichens, and spider cocoons. She then lines the nest with grass, moss, and hair. She usually lays 4 or 5 eggs and incubates (keeps warm) them for 11 to 14 days. Both adults defend the territory and feed the young. The young can fly about 10 days after they hatch.

## **Distribution and Habitat**

Townsend's Warblers breed in coniferous forests from southern Alaska through British Columbia and as far south as Salem and Boise. They winter along the coast from Puget Sound to southern California, plus most of Mexico and parts of Central America. During migration the Townsend's Warbler ranges from the West Coast to east of the Rockies. During migration and in winter, they frequent backyard feeders and habitats with trees and shrubs, including desert oases. In Oregon the Townsend's Warbler is most common in the Cascades but



can appear at any elevation. At the Refuge, look in the forest along the year-round trail, especially in the treetops. The <u>northwestbirding.com</u> website has photos of Townsend's Warblers taken at the Refuge in February.

## Conservation

The Townsend's Warbler population is common and stable, with an estimated 21 million breeding adults. The greatest threat is logging of old-growth forests. Other threats come from cats, window strikes, and collisions with cars.

- The Townsend's Warbler was named for John Kirk Townsend, who first collected one near the mouth of the Columbia River in 1835.
- Townsend's Warblers wintering in Mexico eat lots of "honeydew," a sugary secretion produced by scale insects.
- Sometimes a female will start building a nest in one tree, then move all the materials to another tree before finishing the construction.
- The oldest known Townsend's Warbler was 10 years 8 months when captured and released in California.

## Common Yellowthroat (Geothlypis trichas)

If you see a beautiful bird with a bright yellow throat and belly, a brownish-olive back. а bold black "mask of Zoro," and a white stripe above the mask, it's probably male а Common Yellowthroat. This 5-inch species is one of the many warblers that lives at the **Tualatin River National Wildlife** Refuge in the spring and summer. Because it hangs out in dense bushes and small trees. most likely you will hear this bird before you see it. It's distinctive "witchity-witchity" song can be heard in nearly all parts of the Refuge, except in the coniferous forest.

Female Common Yellowthroats are harder to identify. They have brownish-olive backs, and yellowish underparts, but do not have the black face mask.



Common Yellowthroat male (Ken Durbin)



Female Common Yellowthroat. Hal Trachtenberg, 06/24/2008 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

Common Yellowthroats are

among the category of "wood warblers," which include a number of small-to-medium-sized, brightly-colored songbirds.

#### **Diet and Feeding Behavior**

Common Yellowthroats have a varied diet. They primarily dine on insects, including dragonflies, beetles, aphids, leafhoppers, moths,

butterflies, grasshoppers, flies, and ants. They also pick spiders off of leaves, and even eat seeds and fruit.

#### Reproduction

late April, breeding By is underway for this species. Common Yellowthroats make nests by weaving grass into deep cups. They tend to make low bushes. in nests but sometimes they build nests over water in "emergent vegetation" (plants that grow in water bodies). They line their nests with grass and hair. Usually they lay 4 eggs, but this can vary from 3 to 6. The female Yellowthroat incubates them for about 12 days before hatching. The babies leave the nest about 9 or 10 days later. A pair of Common Yellowthroats usually raises two families each year.

## **Distribution and Habitat**

Common Yellowthroats breed all over North America, from the southern coast of Alaska to central Mexico. They are migratory, arriving in western Oregon in late March or early April. They start migrating back to their wintering grounds in the southern U.S., Mexico and



Common Yellowthroat Nest. (Roger Masse), 06/09/2008 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



Common Yellowthroat Range Map. https://www.allaboutbirds.org/guide/Common \_Yellowthroat/maps-range

Central America in late August and early September. Most of the Common Yellowthroats that breed in Oregon leave for their wintering grounds by October.

The Common Yellowthroat is a creature of marshes, particularly with cattails, willows and thickets of dense grasses and brushy vegetation.

## Conservation

The Common Yellowthroat is one of the most widespread warbler species in North America. In Oregon, the species seems to be doing well, and populations may be increasing.

## Fun (or not so fun) Facts

- Brown-headed Cowbirds sometimes "parasitize" Common Yellowthroat nests. This means a female Cowbird lays its eggs in a Yellowthroat nest. When the Brown-headed Cowbirds' strategy succeeds, as it often does, the baby Cowbirds hatch first and/or outcompete the smaller baby Yellowthroats. The Cowbirds may also damage or remove the Yellowthroat eggs. The Yellowthroat parents then unwittingly raise the baby Cowbirds.
- Common Yellowthroats have a small territory (usually only 1 or 2 acres in size), which they defend.
- Females build the nests, and do not reuse old nests.

## Wilson's Warbler (*Cardellina pusilla*)

The Wilson's Warbler is a very small bird (less than 5 inches long) with large black "beady" eyes on a yellow face. Wilson's Warblers have bright yellow chests and bellies, but their upper parts are yellow-olive-green. Adult males have a very noticeable black cap, which some say looks like a bad Female toupee. Wilson's Warblers are like males, but they lack a black cap and



Male Wilson's Warbler. (Becky Matsubara), 04/08/2021. Flickr. CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

are somewhat duller. Like other warblers, the Wilson's Warbler has a tiny, pointy bill.

Wilson's Warblers are very active, chasing insects and often twitching their long tails. Wilson's Warblers are also quite vocal. Their song is a series of 10 to 15 short, rapid, sweet notes that have a sharp, "chatty" quality. The last few notes are usually lower and faster, down slurred, and sometimes two-syllabled. Wilson's Warblers also emit trills and chip sounds.

Look and listen for Wilson's Warblers in the Spring and Summer on the Refuge, especially in riparian vegetation along Chicken Creek and the Tualatin River, and in brushy areas along forest edges. Wilson's Warblers have little fear of humans, and so are fairly easy to observe as they search the outside areas of tree branches for insects. Wilson's Warblers avoid dense forest interiors, and usually feed within 10 feet of the ground, which also makes them more observable.

## **Diet and Feeding Behavior**

Wilson's Warblers eat insects for over 90% of their diet. Wilson's Warblers also eat spiders, seeds, and sometimes berries and fruit. Like flycatchers, Wilson's Warblers often catch insects in flight. However, Wilson's Warblers are much smaller than flycatchers. The behavior of flying out and back to catch insects is called "sallying."

#### Reproduction

Pacific Coast populations of Wilson's Warblers breed in shrubby habitat or in young stands of conifers, alders, and maples. The breeding season for Wilson's Warblers is well underway by May with pair formation beginning in March and April. Mating behavior begins when a male establishes his territory and begins to sing. Females fly into the territory and are followed by the male. After mating, males almost never sing. Nesting begins about 2 weeks after pairing. The nest is a bulky cup of plant material (such as leaves, thin grass, rootlets, and moss) almost always in a little depression on the ground, well hidden in vegetation. The female builds the nest. She lines the nest with hair and fine plant materials. The female lays a clutch of 4-7 (but usually 5) brown-flecked creamy white eggs. She keeps the eggs warm (incubates) for 11-13 days. Once they hatch, the young warblers mature quickly and fledge (leave the nest) in about 10 days. Young Wilson's Warblers can usually fly the day after they leave the nest, but continue to communicate with their parents, who feed them for up to another few weeks.

Male Wilson's Warblers vigorously defend territories of 1-3 acres during the breeding season. If other male warblers attempt to intrude into a territory, there will be chases and even fighting. Wilson's Warblers normally have only one brood (family) per year. Wilson's Warblers typically find new mates each year.

## **Distribution and Habitat**

The Wilson's Warbler lives throughout much of North America, the Caribbean, and Central America. The species breeds across Canada and the western U.S. The Wilson's Warbler lives in brushy areas, especially in willow or alder thickets at forest edges and in vegetation along streams. They avoid dense forests and can live second-growth in forests. Wilson's Warblers breed up to about 11,500 feet elevation.

Like other insect-eating birds, the Wilson's Warbler is a migratory species. Most Wilson's Warblers leave





Oregon by October, heading for wintering grounds in coastal Mexico and Central America. They return in the early Spring.

## Conservation

Populations of Wilson's Warblers declined significantly between 1966 and 2015, especially in the Western U.S. But because Wilson's Warblers can live in a variety of habitats in both their wintering grounds (including coffee plantations) and their breeding grounds, they are not as susceptible to disturbances (such as logging) as many other migratory bird species. Nonetheless, the Wilson's Warbler is affected by habitat loss on breeding and wintering grounds, as well as along migratory pathways. Wilson's Warblers are vulnerable to attacks by domestic cats and parasitism by Brown-headed Cowbirds. (Brown-headed Cowbirds lay eggs in the Wilson's Warbler's nest. If the Wilson's Warbler fails to

recognize and eliminate those eggs, the Cowbird nestlings outcompete the Wilson's Warbler nestlings.)

- American ornithologist, Alexander Wilson described the Wilson's Warbler in 1811.
- The genus name for Wilson's Warbler, *Cardellina*, is a diminutive of the Italian word, *Cardella*, which is a name for the European goldfinch. While the Wilson's Warbler and its cousins in the genus *Cardella* may be little and gold, they are not goldfinches. The species name, *pusilla* means "very small".
- Western populations of Wilson's Warblers tend to be brighter yellow than populations of the Eastern U.S.
- A group of warblers is called a "bouquet", a "confusion", a "fall", and a "wrench" of warblers.

## Yellow-breasted Chat (Icteria virens)

One of the exciting things about the Tualatin River National Wildlife Refuge is that it sometimes attracts unusual species. The Yellow-breasted Chat is one example. You may find this species on the Refuge in the Spring and Summer, but it is considered rare.

Ornithologists (people who study birds) once classified the Yellow-breasted Chat as an unusual member of the warbler family. However, in 2017 the American Ornithological Society concluded the Chat its own family. warranted Icteriidae, based on its genetic and physical characteristics.

The Yellow-breasted Chat is 7.5 inches long with а wingspan of nearly 10 inches. The Chat has a large, stout, black bill. If you are lucky enough to see this unusual bird, you may notice its long tail, bright yellow/orange breast and throat. white belly. olive/gray back, and white "spectacles" around its eyes. Males and females look alike.



Yellow-breasted Chat. (Wendy Miller), 05/02/2018 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



Yellow-breasted Chat Nest with Chicks. (Melissa Roach), Date Unknown. https://bioone.org/journals/thecondor/volume-120/issue-3/CONDOR-17-189.1/

You're likely to hear this species before you see it because it is very vocal. Chats hide in dense patches of vegetation. It has many very distinctive and loud songs—some raspy, some harsh, and others "chatty". Listen for rapid series of "chit chit chit chit chit" noises, or high piercing "whistles". Chats sound a little like tropical bird sounds in old jungle movies!

## **Diet and Feeding Behavior**

Yellow-breasted Chats eat insects. They glean (pick) beetles, bugs, ants, wasps, bees, caterpillars, moths, spiders, and grasshoppers off vegetation. Chats also eat berries and fruits such as wild grapes, elderberries, and blackberries. Chats hold food items with their feet while feeding.

## Reproduction

Female Yellow-breasted Chats use plant material to build cup-shaped nests in brushy areas, such as willow and blackberry thickets, as well as in woods along streams. Nests are usually placed 2 to 3 feet above the ground and are well-concealed. The female lays 3-6 eggs and incubates (keeps warm) them for a couple of weeks. Both parents feed the young. About 8-11 days after hatching, the young fledge (leave the nest). Oddly, the Yellow-breasted Chat remains vocal until the young fledge. Sometimes, a pair of Chats will raise two families a year.

## **Distribution and Habitat**

Yellow-breasted Chats live throughout much of the U.S., especially on the edges of large dense thickets in riparian areas (near streams). They are absent from dense forests, high mountains and deserts. In the Willamette Valley, Chats usually live in riparian areas that have Himalayan blackberry, willow, Oregon ash, dogwood, and small deciduous trees 20 to 30 feet tall.

Yellow-breasted Chats breed from the very southern-most parts of Canada and New England throughout most of the U.S., all the way into southern Mexico. Chats migrate to south Texas, Florida, and down to Panama for the winter. Come Spring, Yellow-breasted Chats return to Oregon, usually in late April and early May.

## Conservation

There is some concern about this species because of loss of riparian and floodplain habitat. In the Willamette Valley, urban



Yellow-breasted Nuthatch Range Map. https://www.allaboutbirds.org/guide/Yellowbreasted\_Chat/maps-range

development and farming have reduced Chat habitat. But overall, the species seems to be doing alright.

- Yellow-breasted Chats have a strange display flight. While singing, they pump their tails and flap their wings up and down, dangling their legs.
- Although very vocal, they are actually shy birds, and generally stay concealed in dense brush.
- Yellow-breasted Chats are known to sing at night.

## Falcons and Caracaras American Kestrel (Falco sparverius)

The American Kestrel is the smallest and most common falcon in North America. The Kestrel is about 12 inches long, about the size of a Mourning Dove. Kestrel wingspan is 27 – 31 inches. The female, at about 6.5 ounces, is larger than the male at about 5.5 ounces. The male Kestrel is more colorful than the female, which is rare among hawks. See the photos of a male and female to compare their striking appearances. Juvenile Kestrels look similar to the females.

#### **Diet and Feeding Behavior**

American Kestrels normally hunt by day. A Kestrel may scan for prey from the same perch all day — or change perches frequently. A Kestrel pounces on its prey, seizing it with one or both feet; the bird may eat a small meal on the ground, or carry larger prey back to a perch. American



Male American Kestrel. (Brian Smucker)



Female American Kestrel. (Len Blumin), 01/14/2009 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

Kestrels eat mostly insects and other invertebrates, as well as small

Falcons and Caracaras

rodents and birds. American Kestrels sometimes eat small snakes, lizards, and frogs. Kestrels hide kills to save the food for lean times or to hide it from thieves.

## Reproduction

American Kestrels often nest in the same territory year after year. Some pairs remain together across years. Kestrels that do not migrate often remain at the nest site year-round. In migratory populations, males return to the breeding grounds first. Pairs bond using aerial displays and courtship feeding. Aerial displays incorporate a series of dives and ascents, during which the male calls several times. Males play the primary role in searching for suitable nest sites. After finding a potential nest site, the male seeks out the female and leads her to it. The female makes the final choice.

Kestrels nest in holes (cavities) in trees, or on a cliff or building ledge. The parents line the hole or ledge with sticks and straw or scrape a small depression. Kestrels compete over the limited supply of nesting cavities with other cavity-nesters, and sometimes successfully fight off or evict Bluebirds. Kestrels reuse nest sites, particularly if they successfully raised young there previously. Typically, nest sites are in trees along wood edges.

American Kestrels are vocal during the breeding season. Their most common call is a rapid, high-pitched klee-klee-klee-klee. The male often "flutter-glides" (slow flight made buoyant by short and fast wingbeats) and calls as he approaches the nest site when delivering prey. In response, the female flies out of the nest cavity and "flutter-glides" with him. Both fly together to a perch where the male transfers food to the female.

Pairs usually raise a single group of young each year. Kestrels lay replacement eggs if their first effort fails early in the season. American Kestrels usually lay four to five eggs. The eggs are white to yellowish or light reddish-brown, mottled with violet-magenta, gray, or brown. Falcons and Caracaras

Falcons and Caracaras

Incubation (egg warming) begins shortly before the last egg is laid. Incubation takes about 30 days, and the female does most of it.

Upon hatching the young are feeble, with sparse white down over pinkish skin. The young's eyes partially open by the first or second day. The female broods (warms) the nestlings continually until they are about nine days old. The male brings food to the female and the nestlings during this time. Thereafter, the female broods only at night and during inclement weather. As her brooding time decreases, the female's hunting and feeding time increases. When the nestlings are two weeks old, the adults begin to leave intact prey at the nest. The young fledge (leave the nest) about 30 days after hatching, often over a period of several days. Young Kestrels depend on their parents for food for two to three weeks after they fledge. During this time, the young sometimes return to the nest cavity to roost and remain close to their siblings.

You may see American Kestrels harassing larger hawks and eagles during migration, as well as attacking hawks in the Kestrel's territories during breeding season.

#### **Distribution and Habitat**

Kestrels live in a wide variety of habitats, including farmland and urban areas. Kestrels live mostly at low to moderate elevations in deciduous and mixed deciduousforests throughout coniferous much of the state, and less often in coniferous forests. At the Refuge you can often see a Kestrel perched on a high tree branch or on a telephone post or wire, on the lookout for prey. Many Kestrels in southern or middle latitudes are residents. while permanent



American Kestrel Range Map. https://www.allaboutbirds.org/guide/Ameri can\_Kestrel/maps-range northern birds may migrate far to the south. Young birds tend to migrate farther than adults.

## Conservation

The American Kestrel is the continent's most common and widespread falcon, but populations declined by about 66% between 1966 and 2015. Declines stem from continued clearing of land and felling of the standing dead trees these birds depend on for their nest sites. The American Kestrel is also losing prey sources and nesting cavities to so-called "clean" farming practices, which remove hedgerows, trees, and brush. An additional threat is exposure to pesticides and other pollutants, which can reduce the number of eggs laid and hatching success. For Kestrels in North America, a larger pesticide problem is the destruction of insects, spiders, and other prey on which Kestrels depend.

- Sports fans sometimes get an extra show during night games: Kestrels perching on light standards or foul poles, tracking moths and other insects in the powerful stadium light beams, and catching these snacks on the wing. Some of their hunting flights make it onto TV sports coverage.
- When nature calls, nestling Kestrels back up, raise their tails, and squirt poop onto the walls of the nest cavity. The poop dries on the cavity walls and stays off the nestlings. The nest gets to be a smelly place, with poop feces on the walls and uneaten parts of small animals on the floor.
- In addition to having exceptionally good eyesight, Kestrels can also see ultra-violet light. This is useful in locating voles because they leave a trail of urine wherever they go and the urine glows in ultra-violet light.

Falcons and Caracaras

## Peregrine Falcon (Falco peregrinus)

The Peregrine Falcon is a perfectly predator built for with speed, compact а torpedo-shaped body, powerful chest muscles, and pointed wings. The fastest creature in nature, it has been clocked at over 200 mph in a power dive or "stoop." A typical Peregrine weighs about 1.6 pounds and has a wingspan of about 3 feet. Adults have dark backs, barred bellies and often



An adult Peregrine Falcon. Note the creamy chest and the lighter belly than in a juvenile. (Brian Smucker)

creamy chests. The dark head, which looks like a helmet with earflaps, is distinctive. Juveniles are dark gray and heavily streaked.

## **Diet and Feeding Behavior**



A juvenile Peregrin Falcon in hand. (Brian Smucker)

Like hawks, falcons are carnivores. They hunt other birds by diving or stooping from on high, or by flying fast and level from behind. A Peregrine may stun or even kill its prey with a blow of its "fists", finishing off its prey with a bite to the back of the neck. If it misses, a Peregrine may attack its prey again and again.

## Reproduction

Peregrine Falcons traditionally nest on cliff faces. However, they are well adapted to human structures. For example, they nest on bridges in Portland and San Francisco, as well as tall buildings. A nest is usually a "scrape" (flat spot smoothed out) or a collection of pebbles. The female lays 2 to 5 eggs and incubates (warms) for 29 to 32 days. After hatching, it is another 35 to 42 days until the young fly.

## **Distribution and Habitat**

Peregrine Falcons live worldwide. In the United States they live mostly along the with smaller coasts. populations farther inland. "Peregrine" means traveler or pilgrim. Some birds fly over 15,000 miles a year from the Arctic to South America, while others find suitable year-round habitat and don't migrate far.

At the Refuge, look for a chunky bird perched on one of the tall snags in the open grassy area.



## Conservation

Peregrine Falcons are one of the most dramatic examples of a creature nearly annihilated by Peregrine Falcon Range Map. https://www.allaboutbirds.org/guide/Peregrine\_Falcon/ maps-range

humans, then brought back to healthy levels by humans. In the 1950s and 1960s, the Peregrine Falcon almost became extinct due to widespread use of DDT to kill insects. The DDT moved up the food chain and caused Peregrines to lay eggs with shells so thin that the adults broke the eggs just by sitting on them to incubate. Falcons and Caracaras

Falcons and Caracaras

A small group of scientists resolved to save the Peregrine Falcon through intensive research, education and captive breeding. This project started at Cornell University and resulted in The Peregrine Fund (TPF), a small nonprofit that played a key role in bringing back Peregrines and California Condors. In Oregon, the Peregrine Falcon was recovered by placing over 170 artificially produced young in nest sites (hacking) between 1986 and 1995 by the Oregon Department of Fish and Wildlife. TPF now works to save endangered raptors (birds of prey) throughout the world.

With the ban of DDT, active captive breeding, and education, the Peregrine Falcon recovered. The United States and Oregon removed the Peregrine Falcon from their Endangered Species Lists in 1999 and 2007, respectively. The estimated Peregrine Falcon world population is 140,000 breeding birds, with about 23,800 in the US.

- Peregrines fly so far, are so admired, and are so well known that a winery in New Zealand is named for them.
- Falconers have long used Peregrines and other falcons to hunt and to race. A modern adaptation: several falconers will, for a fee, fly their birds over vineyards in the fall to chase away starlings, which cause millions of dollars of damage to the ripening grapes.
- To watch a Peregrine Falcon webcam at the campanile (bell tower) on the University of California campus, go to <u>https://calfalcons.berkeley.edu/webcams/</u>. You can find videos of Peregrine Falcon hunting stoops on YouTube.
- A Peregrine has small nose cones or baffles in its nostrils to keep it from passing out as it stoops.

Ospreys, Kites, Hawks and Eagles

Ospreys, Kites, Hawks and Eagles

## Ospreys, Kites, Hawks and Eagles Osprey (Pandion haliaetus)

Ospreys are birds of prey, sometimes called fish hawk or fish eagle. The name "Osprey" comes from Anglo-French *ospriet*, which in turn came from Medieval Latin *avis prede* "bird of prey."

Ospreys have a white head with a dark eye stripe, a black bill, bluishgray lower legs, and a barred tail. Their feathers are dark brown and barred above and white below. When flying, Ospreys display distinctively crooked wings, with a dark spot visible at the wrist. The underbelly white and head distinguish them from an immature bald eagle, a turkey vulture, or Red-tailed hawk. The Osprey call is a series of loud, sharp, whistles often increasing in speed before tapering off.



Adult Osprey eating a fish. (Brian Smucker)



Osprey tending nest. (Brian Smucker)

The Osprey wingspan is about  $5\frac{1}{2}$  feet (1.67 meters), but it only weighs around 3 pounds (1.4 kg). Like most raptors, females are, on average, larger than males.

## **Diet and Feeding Behavior**

Unlike most hawks, the vast majority of an Osprey's food is fish, although it sometimes eats small birds, mammals, amphibians, and reptiles. An osprey hunts fish by circling over a body of water. When spotting fish near the surface, a bird may hover briefly before suddenly folding its wings to plunge feet first to the water surface to grab the fish with its specialized feet. Ospreys have an outer toe that can reverse to hold the fish with two talons (claws) in front and two in back. They also have foot pads with tiny impaling spines (spicules). While Ospreys can only catch fish within 3 feet (1 m) of the water's surface, some biologists estimate that they may catch fish in 4 out of 5 attempts and may even catch two fish in one dive. Their normal catch is fish of 12-14 inches (30-36 cm). Ospreys rarely take fish over 16" (40 cm). Ospreys likely get most of the water they need from the flesh of their prey, although there are reports of adults drinking on hot days.

## Reproduction

In winter, Ospreys usually roost alone or in small winter flocks of 6 to 10. A mating pair reunites in late February to March at the nest site. During breeding season, males perform an aerial "sky-dance" sometimes called fish-flight. Clasping a fish or stick in his talons, the male hovers as high as 600 feet before swooping toward the nest site. Sustaining this display for ten minutes or more, he repeats screaming calls while gradually descending to the nest. Breeding pairs are thought to mate for life.

Ospreys construct easily-recognizable large stick nests, generally within 2 miles of water in which the birds can fish. A first-season nest may be less than 2 ½ feet (.8 m) in diameter and 3-6 inches deep (8-15 cm), but after many seasons the nest can be 3-6 feet (1-2 m) in diameter and 10-13 feet (3-4 m) deep. Ospreys build nests in trees with a surface area sufficient for the Ospreys to pile the sticks. When natural sites are scarce Ospreys use specially constructed nest platforms, power poles, cellular communication towers, channel markers, or similar taller structures. Both adults build the nest. The Ospreys line the nest bowls with soft grasses, bark, sod, vines, algae or other scraps of material.

Ospreys prefer nest sites with nearby perches from which they can see the nest. They will defend the immediate area around their nest and Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles chase other Osprey from that area. Ospreys strongly bond with the nest site. Breeding pairs often return to the same nest territory year after year.

Osprey become sexually mature at about three years of age. Courtship activities, breeding, egg laying and incubation (keeping eggs warm) occurs March through May. Ospreys raise one brood per year and lay 1 to 4 eggs (3 on average). Both parents incubate the eggs for about 38 days. Most incubation is by the female. After the eggs hatch the female leaves the nest occasionally and shares hunting duties with the male until the nestlings are ready to fly. The parents bring whole fish to the nest to feed the young.

Nestlings begin wing-flapping exercises at 4-5 weeks of age and are ready to fly at 7-8 weeks, usually in late July to early August. The young return to the nest site for food for several weeks and to rest between test flights. Young Osprey are almost fully grown when they leave the nest but can be distinguished from their parents by buffy fringes on all their back feathers.

## **Distribution and Habitat**

Adept at soaring and diving but not maneuvering in tight spaces, Osprey keep to open areas with water, including rivers, lakes, reservoirs, lagoons, swamps, and marshes. Osprey frequent deep water only where fish swim near the surface.

Ospreys live from Alaska to South America and on all continents except Antarctica. The majority of Osprey populations migrate, spending summers breeding in northern latitudes, including most of



Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles Oregon, and wintering in southern latitudes. In late August, most Ospreys fly south to wintering grounds. Birds from Oregon have been tracked as far south as Honduras. Biologists note an increasing number of Osprey wintering in Oregon. Ospreys may be seen at the Refuge at Wapato Lake.

## Conservation

In the U.S., the main factors that affect osprey populations include: suitable nest sites, food supply, human disturbances and hazards, and chemical contaminants. Populations drastically declined during the 1970s as the result of pesticide use but are now increasing. In 1976, only 13 Osprey pairs nested along the Willamette River between Eugene and Portland. By 1993 that number increased to 78 pairs. In 2001, there were an estimated 234 pairs. Osprey populations across North America are following the same trend. However, natural nest sites are disappearing due to logging, development, and removal of dead and dying trees.

Although Ospreys are relatively tolerant of human activities compared to other birds of prey, individual Ospreys vary in their uneasiness around people. Disturbance can cause adults to abandon a nest, which can be fatal to embryos and nestlings. Both federal and state wildlife laws protect Ospreys. Their conservation status is "Least Concern."

- An Osprey may fly more than 160,000 migration miles (258,000 km) during its 15-to-20-year lifetime. One flew 80 miles per hour (129 km per hour) while coasting from updrafts.
- An Osprey pair raising two nestlings consumes about 375 pounds (170 kg) of fish during the breeding season.
- When flying with a fish in its talons, an Osprey lines up its catch head first for less wind resistance.
- The average time an Osprey hunts before making a catch is about 12 minutes something to think about next time you throw your line in the water.

Ospreys, Kites, Hawks and Eagles

- The oldest known Osprey was 25 years, 2 months old.
- During 13 days in 2008 an osprey flew 2,700 miles (4345 km) from Martha's Vineyard, Massachusetts, to French Guiana, South America.

# Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles Bald Eagle (Haliaeetus leucocephalus)

When you visit the Tualatin National River Wildlife Refuge you are likely to see our national bird, the Bald Eagle. This is a very large dark brown/black bird, with a 7 to 8 foot wingspan and a body that is over 3 feet long! Adults have white heads and tails; massive, hooked yellow bills; and yellow feet. Like many other raptor (bird of prey) species, females are than larger males. but otherwise they look alike. It takes about 4 to 5 years they before attain this distinctive plumage. Immature Bald Eagles have dark heads and a lot of white feathering on their wings and body.

Although the similarly-sized Turkey Vulture is also seen at the Refuge, you can tell the species apart by of the way they hold their wings when soaring. Bald Eagles soar with their broad wings nearly



Mature Bald Eagle. (Ken Durbin)



Nesting Bald Eagle and Chick. (Kenneth Cole Schneider), 01/27/2014 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

flat (horizontal), whereas Turkey Vultures hold theirs in a "V" shape, and
Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles kind of teeter-totter as they soar. Also, Turkey Vultures have tiny heads (without feathers), compared with those of the Bald Eagle.

Despite its large size, the Bald Eagle has a weak, "chirpy" voice.

#### **Diet and Feeding Behavior**

Bald Eagles eat a variety of prey, but mostly fish. However, they will capture injured or dying waterfowl, and once in a while, small mammals, road-kill deer, and sheep and cow afterbirth (the placenta and fetal membranes from a mother's uterus after it gives birth). Bald Eagles sometimes steal fish from Ospreys!

#### Reproduction

A Bald Eagle pair builds the nest, usually from February to June. Nest trees are typically within a mile of water, and are among the tallest and oldest trees in the area. Nests include sticks and large tree limbs. Nests can be huge (5 or more feet in diameter, 4 feet deep, and weighing hundreds of pounds). A pair of eagles may use the same nest for many years, repairing and adding to it annually. You can see a large Bald Eagle nest up close inside the Jackson Bottom visitor center in Hillsboro.

Bald Eagles are very territorial during the breeding season, and have strong nest-site and mate fidelity (loyalty). Generally, the female lays 1-3 eggs. The parents share incubation (keep the eggs warm) for 34-46 days. After hatching, the parents feed the young for another 56-98 days, until the young eagles fledge (leave the nest).

## **Distribution and Habitat**

The Bald Eagle is one of 8 species of sea eagle (the genus Haliaeetus) in the world, but the only one found in North America.

The Bald Eagle is found throughout Alaska, Canada, the continental U.S., and as far south as Baja California. It is found year-round where food is available, but may migrate to find food in the winter.

Ospreys, Kites, Hawks and Eagles This species is usually found near water bodies where it can hunt for fish and/or waterfowl. But they nest in forested areas and large trees and snags (standing, dead trees) near the ocean, along rivers, lakes and reservoirs. They have nested in or near the Refuge in recent years.

#### Conservation

Recovery of the Bald Eagle is a success story. Once considered "vermin," the Bald Eagle was on the eradication list in every state in the U.S.



https://www.allaboutbirds.org/guide/Bald\_Eagle/mapsrange

The Bald Eagle Protection Act of 1940 legally protected the species. The Bald Eagle was in serious trouble when the 1973 federal Endangered Species Act laid the legal foundation for recovery efforts.

The Bald Eagle became uncommon in much of the U.S., including Oregon, by 1940. Cutting of nest trees, power line electrocution, shooting, trapping, and poisoning were the main reasons for the Bald Eagle's decline. After 1940 use of the pesticide DDT against agricultural pests and mosquitos devastated Bald Eagle reproduction. DDT and related chemicals caused egg-shell thinning. As a result, the U.S. Fish and Wildlife Service listed the Bald Eagle as endangered throughout most of the U.S. in 1978. It was listed as threatened (a less critical status) in Oregon, Washington, Minnesota, Wisconsin, and Michigan. The listing included neither Alaska, where the species is numerous, nor Hawaii, where it is not found. Oregon also listed the Bald Eagle as threatened under the Oregon Endangered Species Act.

Banning of DDT and efforts to protect habitat resulted in dramatic increases in Bald Eagle populations, both in Oregon and throughout the U.S. Now, the species is no longer listed under state or federal Endangered Species Acts, but the Bald Eagle is still a protected species.

- Bald Eagles are not bald. The word "bald" comes from a word that means "shining white" and refers to head color, not bare skin.
- The Bald Eagle was selected as the official emblem of the American colonies in 1782, and of the United States in 1787. Benjamin Franklin criticized the selection, maintaining that the Bald Eagle was "of bad moral character" while, by comparison, the Turkey was "a Bird of Courage".
- Sometimes, the territory of a pair of Bald Eagles has more than one nest, but the pair will use only one of the nests each year. We know (as of 2019) of two Bald Eagle nests visible from the Refuge, most likely built by the same pair. Ask personnel at the Refuge Visitor Center, or a blue vested trail rover, how to spot the nests.
- Bald Eagles have tremendous eyesight, enabling them to see their prey from great distances. Their eyesight is 4 to 8 times better than humans!
- While Bald Eagles and Golden Eagles are similar in appearance, particularly when immature, these two majestic species are not closely related. You are not likely to find a Golden Eagle at the Refuge.

# Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles Northern Harrier (*Circus hudsonius*)

The Northern Harrier is a medium-sized hawk that appears delicate due to its slender body, thin legs and narrow wings. It has a 3.5-foot wingspan but weighs only a pound.

Northern Harriers have a distinctive white rump patch. Adult females are streaked brown and creamy below, with brown backs. Adult males are white below with black wingtips and light gray backs. Coming out of the fog, adult males look like gray ghosts. First-year Northern Harriers are solid pumpkin-colored on the chest and belly, with brown backs.

The Northern Harrier is the only North American hawk



Northern Harrier. Note white rump patch. (Ken Durbin)



A juvenile Northern Harrier. Note the owl-like facial disk. (Brian Smucker)

with an owl-like facial disk that helps focus sound. In flight, it usually carries its wings angling up in a shallow "V" shape.

#### **Diet and Feeding Behavior**

Northern Harriers are predators. They hunt small rodents and small birds by flying 5 to 10 feet off the ground and surprising their prey. Harriers hunt in vineyards by flying down the rows at about vine-top height. They like open fields and grassy or marshy areas. Harriers may also ride Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles thermals (rising air) up high with other hawks and vultures. They usually perch low on small trees, stumps, or fence posts.

#### Reproduction

A pair of Harriers builds a nest on the ground out of cattails, reeds, or grasses. Mammals that prey on Harrier chicks (coyotes, raccoons, dogs) can follow human scent trails, so it is important to avoid going near or trying to find a nest. A male Harrier often has 2 or more mates.

The female lays 4 or 5 eggs and incubates (keeps warm) the eggs for 28 to 36 days. Once hatched, the young grow quickly and can fly in about 2 weeks.

## **Distribution and Habitat**

Northern Harriers are present in Oregon all year but most numerous in winter, breeding mostly in Canada and wintering in the US. The Northern Harrier is the only member of its genus in the US, but there are other species scattered around the world.

## Conservation

While Northern Harriers are not threatened or endangered, their numbers are slowly declining. The greatest threats to Northern Harriers are loss of habitat and



Northern Harrier Range Map. https://www.allaboutbirds.org/guide/ Northern\_Harrier/maps-range

loss of food supply, both due to human development. They are also threatened by poisoning from eating poisoned rodents. There are about 490,000 breeding Northern Harriers in the US.

- Red-tailed Hawks and Northern Harriers may harass each other, particularly during migration, but are not serious threats to each other.
- To protect its chicks, a Northern Harrier may fly back and forth above them, staying between a threatening hawk above and the Harrier's young below.
- *Circus*, the genus name, comes from the Greek word for circling, due to its circling flight not from a clown act.
- The Northern Harrier has several calls, but most people never hear them.
- A fighter jet was named after the Harrier, due to its ability to take off and land in a very small space.



Northern Harrier hunting. (Ken Durbin)

# Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles Sharp-shinned Hawk (*Accipiter striatus*)

Sharp-shinned Hawk is Α а predator slightly larger than a jay. With broad rounded wings and a squared-off tail a Sharp-shinned Hawk is adapted for flying through dense forest. A female's wingspan is about 23 inches. She weighs about 6 ounces. Males are smaller, 18-inch wingspan and with an weighing about 4 ounces. An adult has a bluish-gray back, wings, and crown; reddish barred underparts; and yellow, orange, or red eyes. Juveniles have a brown back and head, creamy white underparts with brown vertical streaks, and yellow eyes. All have banded tails. The flight is a flap-flap-flap-glide — not a steady beat — with the flaps too fast to count. (The slightly larger Cooper's Hawk virtually looks identical to a Sharp-shinned, but its wing flaps are slow enough to count).

#### **Diet and Feeding Behavior**

Sharp-shinned Hawks eat small birds, mostly sparrow size. Usually, they catch prey by launching a fast attack from a tree, shrub, or other cover. A favorite hunting spot is a



An adult male Sharp-shinned Hawk. Note that the tail end is almost a straight line. (Brian Smucker)



An adult Sharp-shinned Hawk. Note the deep red eyes. (Brian Smucker)



A fully grown juvenile Sharp-shinned Hawk just banded in California. (Brian Smucker)

Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles bird feeder. Sharp-shinned Hawks also eat small rodents and grasshoppers.

#### Reproduction

Sharp-shinned Hawks build a nest that is 1 to 2 feet across on a flat tree branch or fork. The nesting tree is usually a conifer, fairly high but under the canopy. Sharp-shinned Hawks use twigs, bark, grass, and pine needles to build the nest. The female usually lays 4 or 5 eggs and incubates (keeps the eggs warm) for 30 to 35 days. The young fly 4 to 5 weeks after hatching. The male hunts and brings food for the female and young.

## **Distribution and Habitat**

Most Sharp-shinned Hawks nest in Canada or Alaska. Some nest in the mountains of the eastern and western US, almost always in deep forest. Sharp-shinned Hawks winter throughout most of the US and as far south as migration Panama. The is heavily concentrated in late September and early October. Sharp-shinned Hawks mav migrate in the open or along north-south ridge lines. At the Refuge, look for Sharp-shinned Hawks flying just above treetop level along the year-round trail.



Sharp-shinned Hawk Range Map. https://www.allaboutbirds.org/guide/Sharpshinned\_Hawk/maps-range

# Conservation

The population is stable at about 700,000 birds of breeding age. The Sharp-shinned Hawk is of low concern and not threatened. The greatest threats are rat poison (the hawks eat poisoned rodents and small birds), fires, and spring heat waves.

However, the Puerto Rican subspecies is highly endangered, due mostly to loss of habitat. These birds were nearly wiped out by Hurricane Maria. They live only in mountain forests and never leave the island. Today, The Peregrine Fund is hand-raising chicks to save the Puerto Rican subspecies from extinction.

- Hawkwatch monitors may see hundreds to a few thousand Sharpshinned Hawks a day during peak migration.
- Females are about a third bigger than males and can catch larger prey.
- Male Sharp-shinned Hawks are the smallest hawks in North America. They don't really have sharp shins, but their skinny legs do have a small ridge that looks sharp.
- An adult often plucks the feathers and removes the head before bringing bird prey to the young. Unlike owls, hawks usually do not eat feathers.
- A Sharp-shinned Hawk's talons are about the size of cat claws.
- The oldest known Sharp-shinned Hawk was a banded male 12 years 2 months old, when recaptured in Minnesota.

# Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles Cooper's Hawk (Accipiter cooperii)

A Cooper's Hawk is a crowsized predator. It has broad rounded wings and a long rounded tail, adapted for flying through dense forest. Α female 36-inch has а wingspan and weighs about a pound. Males are smaller, with 28-inch wingspan а and weighing about 10 ounces. An adult has a bluish-gray back, wings, and crown; a reddish barred or scalloped chest and belly; and yellow, orange, or red eyes. Juveniles have a back and brown head. а creamy white chest and belly with brown vertical streaks, and yellow eyes. Adult and juvenile Cooper's Hawks have banded tails. The Cooper's Hawk's flight consists of a flapflap-flap, followed by a glide not a steady beat — with the



Adult Cooper's Hawk on nest (Brian Smucker)

Cooper's Hawk chick with adult in background (Brian Smucker)



flaps slow enough to count. (A Sharp-shinned Hawk looks virtually identical to a Cooper's, but its wing flaps are too fast to count).

#### **Diet and Feeding Behavior**

Cooper's Hawks eat mostly birds up to pigeon size. They use several ways to catch their prey: 1. Perch where the Cooper's Hawk can see small birds, including at feeders. The Cooper's Hawk then catches small

Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles birds as they fly off. 2. Swoop in and catch prey birds on their perches or on the ground. 3. Chase down flying birds and catch them on the wing.

Cooper's Hawks also eat squirrels, chipmunks, mice, and bats.

#### Reproduction

The male builds a nest of small branches and twigs in an oak, fir, or pine tree, usually 25 to 50 feet off the ground. The nest is 2 or more feet across and sits on a flat branch or in a tree crotch. The female usually lays 3 to 5 eggs and incubates (keeps warm) the eggs 34 to 36 days. The young fly 4 to 5 weeks after hatching. Meanwhile, the male hunts and brings food for the female and young.

## **Distribution and Habitat**

Cooper's Hawks are found yearround throughout most of the US. Those that nest in southern Canada or the far northern US migrate south as far as Mexico. The southerly migration may run all fall. but the heaviest concentration is in late September and early October. In the Willamette Valley, Cooper's Hawks nest and live year-round in forests, parks, golf courses, and backyards. At the Refuge, they are usually seen flying just above the treetops.



Cooper's Hawk Range Map. https://www.allaboutbirds.org/guide/Coope rs\_Hawk/maps-range

## Conservation

The population is stable at about 700,000 birds of breeding age. The Cooper's Hawk population is of low concern and not threatened. The greatest threats are rat poison (the hawk eats poisoned rodents and small birds), fires, spring heat waves, and loss of habitat.

## Fun facts

- When a female Cooper's Hawk on a nest feels threatened, she makes a call that sounds like a duck.
- There is another way a Cooper's Hawk may catch prey on the ground: fly in, land 5 to 10 feet from the prey, then run and jump on it.
- A Cooper's Hawk kills its prey by squeezing with its powerful feet and sharp inch-long talons.
- The oldest known Cooper's Hawk was a male banded in California and found in Washington at 20 years 4 months old.



Juvenile Cooper's Hawk (Brian Smucker)

# Ospreys, Kites, Hawks and Eagles Ospreys, Kites, Hawks and Eagles Red-tailed Hawk (*Buteo jamaicensis*)

The Red-tailed Hawk (Redtail) is a large, soaring bird. Its shape is roughly like a small version of a Bald Eagle. Adults' tails are brick red from above and pink from below (Figure 2). The tails of young Red-tailed Hawks have bands of dark and light gray-brown (Figure 3). The Redtail's head and back are brown. The underside of the Redtail's wings is mostly white with a dark patch at the leading edge of the wing.



An adult Red-tailed Hawk. (Ken Durbin)

Figure 1 provides a common front view (white chest and mottled dark

belly band) of a perched Red-tailed Hawk. Less commonly, a Redtail's chest and belly may be reddish or dark brown.

A Redtail is built for soaring on its broad 4-foot-long wings. It often rides updrafts and circles up in thermals (rising warm air). Hollow bones contribute to its light weight, only 2 to 3 pounds. Females are larger than males, but there is a lot of overlap in size. To reliably determine the sex of a Redtail requires a series of detailed measurements, or DNA analysis, or seeing a pair mate.

#### **Diet and Feeding Behavior**

Redtails are predators that eat rodents, lizards, snakes, and small to medium birds. Redtails kill prey with their strong talons and tear off the meat with their sharp beaks. Redtails hunt from the air and from perches in open areas (such as fields, pastures, and golf courses). You can see Redtails along roads perched atop trees, poles, or cables. Redtails also scavenge (eat dead animals not killed by the Redtail).

Ospreys, Kites, Hawks and Eagles



The tail of an adult Red-tailed Hawk. (Brian Smucker)



A juvenile Red-tailed Hawk in hand. Note the white chest, dark belly band and gray-brown banded tail. (Brian Smucker)

#### Reproduction

A pair of Redtails builds a stick nest near the top of a large tree. The pair lines the nest with twigs and fresh or dry foliage, usually near the field or open grassy area where they hunt. Many Redtails nest in the Willamette Valley. A pair may use the same nest for many years or build a new one.

The female lays 1 to 4 eggs. Both parents incubate the eggs (keep warm) for about 35 days. Upon hatching the chicks are downy white. The Redtails tear off and feed bits of prey to the chicks in the nest. As the chicks grow and develop feathers and muscles, they start feeding themselves from the food delivered to the nest. The head is the last part of the young bird to grow feathers. The young fledge (fly) about 42 days after hatching, most often in June. Once they are flying well, the young learn to hunt.

## **Distribution and Habitat**

Redtails are common in open areas throughout much of the world. Many Redtails live in Oregon year-round, while others come from farther north for the winter, as they migrate south to find food.

#### Conservation

the greatest Humans pose threats to Redtails by shooting, destruction of habitat. and (Redtails poisoning. take in rodenticides from eating poisoned rodents).

Great Horned Owls often take nests built by Redtails. The Redtails usually move a half mile or more away, but some build new nests as close as the same clump of trees. Great Horned Owls will kill and eat Redtail chicks. While the chicks are young, a parent is almost always in the nest or nearby.

There are an estimated 17 million breeding Redtails in the



tailed Hawk/maps-range

US. They are not threatened or endangered. Still, Redtails are protected.

- A Red-tailed Hawk can hang in one spot (called kiting) with a good updraft, as at a bluff edge, but it can't hover. If you see a small hawk with a red tail hovering, it's a Kestrel.
- The Redtail has a strong, distinctive call or scream. If you see an eagle, hawk or even vulture in a movie or TV show, the call you hear is almost always that of a Redtail.
- A Redtail has excellent eyesight. If you can see it as a speck in the sky, it can see a mouse at your feet.
- Redtails are wary of humans. Redtails will not steal your dog or cat from your yard.

- In the US we call Redtails and similar species buteos. Europeans refer to Redtails as buzzards, but if someone says a large bird is a buzzard in the US, it is a vulture.
- Occasionally, a Redtail has unusual plumage. One male had several white feathers on its back and the topside of its wings. Its young looked normal.



Figure 4: An adult Red-tailed Hawk in flight. (Ken Durbin)

# Sparrows and Towhees Spotted Towhee (*Pipilo maculatus*)

The Spotted Towhee is a striking, extra-large sparrow. former name, Rufouslts sided Towhee, describes the Spotted Towhee's distinctive reddish orange sides like the color of a robin's breast. The Spotted Towhee's current name is due to bright white spots on its black back and wings. The Spotted Towhee's black head and neck, red eyes, and white belly are distinctive, as well. Females slightly browner than are males. Both are chunky and show white tail edges in flight.

#### **Diet and Feeding Behavior**

Spotted Towhees are ground feeders that hop and kick in



Spotted Towhee (Ken Durbin)



leaf litter to uncover food. People often hear them rustling before seeing them. Their diet varies with the season and includes insects, seeds, berries, acorns, and cherries. Spotted Towhees collect seeds below feeders.

#### Reproduction

The female builds a cup nest on the ground or low in a shrub or grass. Nest materials include leaves, twigs, and bark for the nest structure and fine grasses, roots, and hairs for the lining. The nest is about 4.5 inches across. The female usually lays 3 to 5 eggs and incubates (keeps warm)

for 12 or 13 days before the eggs hatch; the male defends the area and brings food. The young leave the nest about 10 to 14 days after hatching but may stay near the adults for months.

#### **Distribution and Habitat**

Spotted Towhees are common across the western US, north into Canada, and south into Mexico. Northern populations migrate, but in Oregon most birds stay year-round. They are usually found on or near the ground in areas with leaf litter and scrub or bramble cover. On the Refuge, Spotted Towhees are common along the yearround trail in both open and Spotted forested areas. Towhees are usually solitary except in nesting season, never in flocks.



Spotted Towhee Range Map. https://www.allaboutbirds.org/guide/Spotted\_Towhee/ maps-range

#### Conservation

The population is stable and of low concern, with an estimated 33 million breeding birds. Most Spotted Towhees (79%) live at least part of the year in the US. Wildfires damage some habitat, but Spotted Towhees adapt well to human presence and are common around yards and gardens with some scrubby cover.

## **Fun Facts**

• Early in the breeding season, males become prolific vocalists. To attract a mate, they perch on top of a shrub or small tree and spend up to 90% of the morning singing. The song includes a fast trill. Once a male has a mate, he seldom sings. The Spotted Towhee also has a distinctive call, which sounds like a mewing cat. Check

out recordings of the Spotted Towhee's song and call at <u>https://www.allaboutbirds.org/guide/Spotted\_Towhee/sounds</u>. Then listen for them in your yard or at the Refuge.

- Spotted Towhees and Eastern Towhees used to be grouped together under the name Rufous-sided Towhee.
- The oldest known Spotted Towhee was over 11 years old when trapped and released at a California banding station.

# Song Sparrow (Melospiza melodia)

The Song Sparrow is one of the most commonly seen birds on the Tualatin River National Wildlife Refuge. This sparrow is one of those "little brown birds" (or LBBs) that people often ignore because at first glance, it is not very distinctive or colorful. It is worth taking a closer look, however, because Song Sparrows are quite beautiful and interesting.

Song Sparrows are about 6.25 inches long, with fairly long tails and stubby, conical (cone-shaped) grayish bills. They have heavily streaked gray-brown backs and sides. Their dull whitish breast is also streaked, with a dark spot in the middle (some people refer to this as a "stick pin"). The patterns on the head of a Song Sparrow are



Song Sparrow (Ken Durbin)



Fox Sparrow (Don Holland)

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fairly complex. There is a gray stripe on the brown crown, and a gray eyebrow and cheek. Brown stripes run along both sides of the whitish throat. Males and females are similar. Juveniles are duller and don't always have a breast spot.

Song Sparrows are sometimes confused with Fox Sparrows, which are also found on the Refuge. Fox Sparrows are bigger, darker, and their

Sparrows and Towhees

breasts have large brown spots, rather than streaks. Fox Sparrows lack the brown and gray streaks on their faces that Song Sparrows have.

As both their common and scientific names imply, the Song Sparrow has a very melodic song that starts with three short notes followed by trills. However, there are many variations to this pattern, and an individual may sing as many as 20 different tunes! Both males and females sing. Juvenile birds begin singing within 2 months of hatching. This species is one of the most vocal bird species. Song Sparrows sing throughout the spring and summer, and even during the winter. Song Sparrows also emit a loud "chip" when disturbed.

#### **Diet and Feeding Behavior**

Song Sparrows feed mainly on the ground, although they readily come to home feeders. Their preferred diet is a combination of insects and seeds, but they will also eat berries (including blackberries and elderberries). Outside the breeding season, small flocks of Song Sparrows often form for protection from predators. Some individuals keep a lookout while others feed.

#### Reproduction

In Oregon, Song Sparrows begin breeding as early as mid-April. Their territories are an acre or less. The female constructs a cup-shaped nest from grass, leaves, and bark strips. Often Song Sparrows line their nests with hair. Nests are usually on the ground or in a bush only 2 to 4 feet off the ground. Females lay 2 to 6 pale green eggs, with reddish-brown markings. Females incubate (sit on the eggs to keep them warm) for 12 to 14 days. Young are on their own in about 5 weeks after hatching. Song Sparrows may have as many as 3 broods (families) per season.

## **Distribution and Habitat**

Song Sparrows breed from the Aleutian Islands and mainland Alaska, across much of Canada. The species also breeds throughout most of the "lower 48" states and northern Mexico. Song Sparrows live year-round in much of their range. Those that breed at high elevations go to

lower elevations for the winter. Northern populations migrate to the southern U.S. or Mexico for the winter and mix with non-migratory populations.

Song Sparrows live in many habitats, including open grassy fields, thickets, brushy areas, farmland, forest edges, and along marshes, lakes, and streams. They are common in urban areas, suburban yards, and city parks. Song Sparrows live throughout Oregon, except for the desert areas of eastern Oregon.

#### Conservation

Song Sparrows are widespread, abundant, and fairly adaptable where there is available habitat. However, like many other songbirds, they are targets of house cats, hawks, and owls.



Song Sparrow Range Map.

https://www.allaboutbirds.org/guide/Song\_Sparrow/ma ps-range

- The Song Sparrow is thought to be the most widespread bird species in North America.
- Although there is a lot of variation in the size and plumage of Song Sparrows across their geographic range, there is essentially no variation in their song.
- Studies show that Song Sparrows fear owls and hawks without previous exposure to these predators (instinct), but learn to fear cats.

Sparrows and Towhees

# White-crowned Sparrow (Zonotrichia leucophrys)

White-crowned Sparrows are "New World Sparrows", which species include numerous worldwide. This large family is found mostly in the Western Hemisphere, thus the name, "New World". White-crowned Sparrows are in the genus Zonotrichia. which also includes the Golden-crowned Sparrow and the Whitethroated Sparrow, both of which can also be found on the **Tualatin River National Wildlife** Refuge. These, and several other sparrow species found on the Refuge, are sometimes difficult to tell apart. That the White-crowned Sparrow is 6-7 medium-sized (about inches long), has a streaky brown back and wings, and a



White-crowned Sparrow front view. (Brian Smucker)



White-crowned Sparrow back view. (Ken Durbin)

pale, cone-shaped bill doesn't help very much. However, adult Whitecrowned Sparrows have bold black and white striped heads, gray faces, and plain (unstreaked) gray chests and bellies. (Immatures' head stripes are brown and gray). Males and females look alike. Sometimes, Whitecrowned Sparrows join flocks of Golden-crowned Sparrows on the Tualatin River National Wildlife Refuge. Golden-crowned Sparrows have yellow patches on the tops of their heads, giving them their name, and distinguishing them from White-crowned Sparrows. The song of the White-crowned Sparrow is melodious and distinctive. It begins with clear whistles followed by a series of trills or buzzing sounds on different pitches. It sounds like "seee sitli-sitli te-te-te-te-te-te-zrrr" to some people. Males often sing from exposed perches during the breeding season, but later are more secretive. Look and listen for the males in the Refuge parking lot (or other area parking lots).

A juvenile male White-crowned Sparrow learns songs from its father and other nearby males. At first, the juvenile will practice a song, and may add and then discard new sounds. Eventually, he will end up with just one or two songs that he will sing into adulthood. White-crowned Sparrows have dialects – songs that are specific to the birds in their "neighborhood". These dialects pass down through generations of males in the area. White-crowned Sparrows use song to identify neighbors vs strangers. Males that have grown up on the edge of two "neighborhoods" may become "bilingual" (the ability to sing both dialects).

#### **Diet and Feeding Behavior**

White-crowned Sparrows eat seeds, grass, berries, plant buds, and insects, mostly on the ground. They are rarely more than 12 feet from cover. White-crowned Sparrows will forage for a while then dash back into the safety of cover, before coming out again to continue feeding. Occasionally they may catch an insect in the air. Scientists studying White-crowned Sparrows think an individual must eat a seed every 4 to 5 seconds to survive in winter.

## Reproduction

Like many sparrow species, White-crowned Sparrows breed in brushy thickets along streams, edges of forests, and even in suburban areas. This species does not require trees for breeding and is not found in dense forests.

The female White-crowned Sparrow constructs the nest. The nest is an open cup comprised of plant material on the outside. The female lines

#### Sparrows and Towhees

the nest with fine grass, animal hair, and feathers. It is usually built on the ground underneath a shrub, or in a small bush. Normally, the female incubates (keeps warm) 3 to 5 eggs for 11-14 days. About 7-12 days after hatching, the young leave the nest, but the male may care for them for up to 6 weeks. The female sometimes begins another family during this time.

## **Distribution and Habitat**

White-crowned Sparrows breed in Alaska and northern Canada. In the "lower 48 states" the species breeds in brushy habitat in the western U.S., including the Cascade, Sierra Nevada, Rocky Mountains. and This species complicated has а distribution pattern. Some White-crowned Sparrows migrate, and some do not. The White-crowned Sparrow includes 5 subspecies, each with its own distribution pattern.

During the winter, Whitecrowned Sparrows are widespread and abundant in



White-crowned Sparrow Range Map. https://www.allaboutbirds.org/guide/Whitecrowned\_Sparrow/maps-range

Oregon. You can often see them in open areas near dense cover, such as blackberry patches. Most of the White-crowned Sparrows seen during winter months east of the Cascade Mountains migrated from areas to the north. Some individuals migrate as far south as central Mexico, however.

#### Conservation

White-crowned Sparrows are common, but brush-clearing for agriculture may be reducing their habitat at lower elevations. On the other hand, farming creates new habitat by providing foraging areas. Livestock grazing in riparian areas in eastern Oregon sometimes destroys streamside vegetation, which negatively affects this species.

- The black and white striped pattern on the head of the Whitecrowned Sparrow has given it the nickname "skunk head".
- The scientific name for this species is from Ancient Greek and reflects the striking appearance of the White-crowned Sparrow's head. The genus name, *Zonotrichia*, is derived from the words *zone* ("band"), and *trikhos* ("hair"). The species name, *leucophyrys*, combines *leukos* ("white") and *ophrus* ("eyebrow").
- The White-crowned Sparrow is one of the most-studied birds in North America. Much of what we know about bird song has come from studying this species.
- The oldest known White-crowned Sparrow lived to be 13 years and 4 months.
- The White-crowned Sparrow may stay awake for up to 2 weeks during migration.

Sparrows and Towhees

# Golden-crowned Sparrow (Zonotrichia atricapilla)

The Golden-crowned Sparrow is a large, common sparrow most readily identified by the yellow patch on top of its head and its sad-sounding three-descendingnote call. The sides of its head from the eyes to the yellow crown are black. Otherwise, the Golden-crowned Sparrow is a mix of gray and brown, with some black and white markings, like many sparrows. It measures about 7 inches beak to tail and weighs about one ounce. Like most seed eaters, it has a short, stout bill.

#### **Diet and Feeding Behavior**

The Golden-crowned Sparrow eats mostly seeds, but after that, it is very flexible. Its diet includes ants, wasps, bees, moths, butterflies, beetles, termites, grains, fruits, buds, flowers,



Golden-crowned Sparrow (Brian Smucker)



Nonbreeding Golden-crowned Sparrow (Ken Durbin)

even garden vegetable plants. In flocks, the birds may challenge each other for food by raising their crowns and running at each other.

#### Reproduction

Golden-crowned Sparrows usually nest on the ground, or sometimes low in shrubs or trees. The male establishes a territory. The female then moves about collecting nest material, while the male follows and sings. The nest is a 3-inch cup made of twigs, grasses, bark, moss, ferns, and leaves, lined with hair or feathers. Golden-crowned Sparrows often

camouflage the nest with overhanging branches or tall grasses. The female lays 3 to 5 eggs and incubates (keeps the eggs warm) for 11 to 13 days before the eggs hatch. Both adults feed the young until they fly, 9 to 11 days after hatching. The pair may have 1 or 2 broods (families) a year.

## **Distribution and Habitat**

Golden-crowned Sparrows live west of the Rockies, usually west of the Cascades and Sierras. Most spend summer in Northwest Canada and Alaska in Washington, winter and California, and Oregon, Northern Baja. Spring and fall are transition periods. They like grassy and shrubby areas, including fields, pastures, and yards. You can find Golden-Sparrows at crowned the Refuge during the fall, winter, and spring. Look and listen for them along or on the year-round trail between the oak savannah



https://www.allaboutbirds.org/guide/Goldencrowned\_Sparrow/maps-range

and the forest, and around the wetland overlook. They are usually on the ground or in shrubs and blackberries, occasionally in trees. Goldencrowned Sparrows often appear in small flocks, sometimes mixed with White-crowned Sparrows or Dark-eyed Juncos.

#### Conservation

Golden-crowned Sparrows are abundant, with a stable population and are of low concern, with an estimated population of 4 million breeding birds. Their ability to adapt to many foods and human environments

gives them a lot of flexibility. Common threats are house cats, shrikes (a bird), small to medium hawks, and small to medium owls.

- Despite their abundance, Golden-crowned Sparrows are one of the least-studied songbirds, especially on their breeding grounds.
- Golden-crowned Sparrows like California. They arrive early and are among the last to leave. They migrate north in response to spring's longer hours of daylight, nesting when they arrive.
- Due to its sad-sounding call, Yukon gold miners called it the "no gold here" bird, or Weary Willie. Others say its call is saying "oh dear me."
- The oldest known Golden-crowned Sparrow was 10 years 6 months old when captured and released by a California bander.

# Savannah Sparrow (Passerculus sandwichensis)

The Savannah Sparrow is very common and, like many sparrows, it has several different looks that vary with geography, from dark to grayish to reddish to pale. On average, it is 5.5 inches long, with a 6.75-inch wingspan and a weight of three-fourths of an ounce. The Savannah Sparrow is a little smaller



Savannah Sparrow (Don Holland)

than the even more common Song Sparrow. The Savannah Sparrow has a short forked tail, a small head with a short beak, a white belly, and overall color lighter than a Song Sparrow. The Savannah Sparrow has a slight crest at the back of its head and a yellowish stripe or spot (called a "lore") above its eye. It sings in a thin, high voice that sounds almost like an insect.

#### **Diet and Feeding Behavior**

The Savannah Sparrow eats mostly insects and seeds, depending on availability. Its diet includes spiders, insects, and millipedes. The Savannah Sparrow usually forages by walking or running on the ground but it sometimes catches insects in the air. When eating seeds, it stays on or near the ground, avoiding trees. The Savannah Sparrow may also eat berries. It is often in a small flock.

#### Reproduction

The female Savannah Sparrow picks a spot, usually on the ground amid dead grass or other plants, but sometimes in a shrub or other low plants. She makes a grass cup nest about 3 inches across lined with finer grass. The female hides the nest under dead plants and approaches the nest through a grass tunnel. She lays 2 to 6 eggs (most commonly 4) and

keeps the eggs warm (incubates) 12 or 13 days. Both adults feed the young until they fly, which is usually 8 to 13 days after hatching.

# **Distribution and Habitat**

Savannah Sparrow The lives throughout North America and the northern part of Central America. It breeds and summers throughout Canada and the northern twothirds of the US, including Oregon. The Savannah Sparrow winters in US, the southern Mexico, Guatemala, and Belize. There are year-round populations around Puget Sound, from North Central California to Baja, and in central Mexico. Savannah Sparrows like open grassy fields with few trees. They are not shy and often perch atop grasses or weeds. Breeding



Savannah Sparrow Range Map. https://www.allaboutbirds.org/guide/Savan nah\_Sparrow/maps-range

males perch on fenceposts, shrubs, and small trees to sing. At the Refuge, look for Savannah Sparrows in the open meadows along the seasonal trail in spring, summer, and fall.

#### Conservation

The Savannah Sparrow population is declining but is still plentiful and widespread, making it a species of low concern. The estimated population is 180 million birds of breeding age. Threats include pesticides, conversion of pastures and hayfields to row crops, and mowing hayfields before the young can fly.

- The Savannah Sparrow gets it common name from where it was first identified, Savannah, Georgia.
- The scientific species name, *sandwichensis*, comes from Sandwich Bay in the Aleutian Islands, where the Aleutian subspecies was first found. It does not come from the Hawaiian Islands, which were once called the Sandwich Islands, or from the South Sandwich Islands near Antarctica.
- A female Savannah Sparrow may gather more than her weight in food every day while feeding nestlings.
- Savannah Sparrows tend to return every year to where they hatched.
- To migrate, Savannah Sparrows gather in large flocks, then take off together at night.
- When disturbed, a Savannah Sparrow may run like a mouse or fly to a low bush.
- The oldest known Savannah Sparrow was 6 years 10 months old when recaptured in Michigan.

# Dark-eyed Junco (Junco hyemalis)

The Dark-eyed Junco is a sparrow with a stocky body, a sturdy pink bill, and dark eyes. It is usually seen foraging (see photo below). When the Dark-eved Junco flies, the outside edges of its tail flash a distinctive white. It is about 5.5 inches long and weighs less than an ounce. There are at least 6 different Dark-eyed Junco populations, each with some variations in color. Oregon birds have black heads and necks. brown-to-reddish sides, and white bellies. The back and belly colors are muted than similarmore looking Spotted Towhees. Within a population, males and females look alike.

#### **Diet and Feeding Behavior**

About 75% of the food of Dark-eyed Juncos is seeds. Particularly during the breeding season they also



Dark-eyed Junco - Oregon. (Ken Durbin)



Female Dark-eyed Junco with nesting materials. (Ken Durbin)

eat insects, beetles, grasshoppers, bugs, spiders, and berries. Darkeyed Juncos usually feed on the ground among leaf and grass litter by hopping and kicking, often doing a "chip" call. They also feed among

brambles, shrubs, and small trees. Dark-eyed Juncos are common at backyard feeders, usually foraging on the ground below the feeder.

#### Reproduction

The female chooses the nest site, usually on the ground with some cover, such as grass, a log, a rock, or even under a building. Some nests are in brambles, shrubs, or trees within 10 feet of the ground. The female builds a cup nest of grasses and leaves, about 5 inches across, lined with fine grasses, hair, or feathers. She lays 3 to 6 eggs and incubates (warms) the eggs for 12 to 13 days. Both parents feed the nestlings. The young fly from the nest about 9 to 13 days after hatching. A Junco pair may have 1, 2, or even 3 broods (families) a year.

## **Distribution and Habitat**

Juncos are found in woods, clearings, open areas, fields, parks, and yards from sea level to 11,000 feet. At the Refuge, look for them on or near the ground on or along the yearround trail. Different populations may winter together in mixed groups. Dark-eyed Juncos that breed in Alaska and Canada migrate to the Southern US and Northern Mexico in winter, while many others stay in one place year-round.

The ranges of the 6 Dark-eyed Junco populations are as follow:

• Oregon: All Western US, north to Alaska and south into Northern Mexico.



Red-breasted Nuthatch Range Map. https://www.allaboutbirds.org/guide/Redbreasted\_Nuthatch/maps-range

- Slate-colored: All the US and most of Canada. These birds are mostly gray, with no brown.
- Pink-sided: mostly Arizona, New Mexico, Colorado, and Northern Mexico.
- Gray-headed: Arizona, New Mexico, Northern Mexico, and parts of Utah and Nevada.
- White-winged: mostly Eastern Colorado.
- Red-Backed: Southern Arizona, Southern New Mexico, and the El Paso area.

## Conservation

Black-eyed Juncos are one of the most abundant and widespread birds in North America. One estimate puts the population at 63 million; another puts it at 200 million.

- Juncos in eastern North America are snowbirds, breeding in Canada and migrating south to the US for the winter months. Oregon Juncos are present year-round at the Refuge.
- The oldest known Dark-eyed Junco was captured and released in West Virginia 11 years 4 months after it was banded, also in West Virginia.

# Cardinals, Grosbeaks and Allies Black-headed Grosbeak (Pheucticus melanocephalus)

Black-headed Grosbeak Α looks like an oversized finch. with a large head and a very large bill. It's about 50% bigger than a House or Purple Finch, a little smaller than a Robin. The male has a solid black head, black wings with white bars, and an orange chest. The female has a streaked brown wing, back and а lightly streaked yellow-white or rosy chest, and a dark head with a bold white stripe on each side.

#### **Diet and Feeding Behavior**

Black-headed Grosbeaks eat mostly insects, seeds, and berries. The range of food includes beetles, caterpillars, spiders, snails, mistletoe, and poison oak. Grosbeaks forage the ground and low on They branches. sometimes insects mid-air snatch in Black-headed Grosbeaks also sunflower eat seeds and orchard fruits.



Black-headed Grosbeak Male: (Michael Abbot), 04/06/2020 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



Female Black-headed Grosbeak with a twig for her nest. (Brian Smucker)
#### Reproduction

Black-headed Grosbeak pairs share many duties, including incubating (keeping warm) eggs and feeding their young. The female builds a cup nest about 6 inches across in a shrub or tree, up to about 25 feet off the ground. Common materials include twigs, grasses, roots, and other plant fibers, with softer materials for a lining. The weave of the nest materials is open enough that one may see the eggs through the nest itself.

Incubation of 2 to 5 eggs lasts 12 to 14 days. The young climb out of the nest about 12 days after hatching but can't fly for another 2 weeks. The young call as the adults bring food.

#### **Distribution and Habitat**

Black-headed Grosbeaks are found across the Western US from late spring through fall. They commonly nest in the Willamette Valley. Black-headed Grosbeaks migrate to Mexico for the winter, where others live year-round. At the Refuge. Black-headed Grosbeaks are most often seen in trees and bushes along the seasonal trails next to grassy areas. Common habitat includes a wide range of settings, such as hardwood and mixed forests, field and forest edges, suburban and greenbelts. Black-headed Grosbeaks also visit residential feeders.



Black-headed Grosbeak Range Map. https://www.allaboutbirds.org/guide/Blackheaded\_Grosbeak/maps-range

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#### Conservation

The Black-headed Grosbeak's population is stable or increasing across its range. Its population level is of low concern and the bird is not threatened. An estimated 14 million breeding birds adapt well to changes in habitat and available foods.

- Black-headed Grosbeaks can eat foods that are toxic to most birds, including mistletoe berries and monarch butterflies.
- The male gets his breeding plumage at 2 years old. Without it, he can't attract a mate or defend a territory.
- Both males and females sing.
- The oldest known Black-headed Grosbeak was about 12 years old when captured and released at a banding station.

#### Cardinals, Grosbeaks and Allies

# Lazuli Bunting (Passerina amoena)

One of the most beautiful birds you might see if you're visiting the Tualatin River National Wildlife Refuge in the late spring or summer is the Lazuli Bunting. The scientific name for this species means "beautiful sparrow," but it's not a sparrow. Lazuli Buntings are actually related to cardinals and grosbeaks.

Male Lazuli Buntings have a bright turquoise head and throat, which contrast with a cinnamon breast and sides. Their belly is white, and there are two white bars on each wing (the upper bar is wider and more easily seen). Females are brownish, and far less noticeable. Lazuli Buntings are shaped like a finch, and are a little over 5 inches long—smaller than Western Bluebirds, which are also found on the Refuge.

Another way to tell these two species apart is by color. Western Bluebirds are a "truer blue" and they lack white wingbars.

Male Lazuli Bunting (Ken Durbin)



Female Lazuli Bunting. (TJ Gehling) 05/22/2014 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

The song of the male Lazuli

Bunting is sweet and "warbly". With luck you may spot one singing from atop a perch, such as a small tree or large shrub. Year-old males learn

their songs from older males in nearby breeding grounds, when they try to breed for the first time. A young male copies fragments of older males' songs, combining them in various ways to make a song that is uniquely his.

# **Diet and Feeding Behavior**

Lazuli Buntings have a varied diet. They eat mostly spiders and insects (including caterpillars, grasshoppers, ants, beetles, bees, and butterflies in the spring and summer. In the fall, they dine on seeds and berries from grasses and plants such as chokecherry and serviceberry.

# Reproduction

Lazuli Buntings are migratory birds. They usually start arriving in Oregon during late April or early May. Males arrive 4-6 days before females to establish their territories. When a female arrives in a territory, the male follows her around and sings to her. Females build the nests, and they not the males—select the spot. The females weave cup-shaped nests of grass, hair, strips of bark, and leaves with spider web or tent caterpillar "silk". The nest is usually in a shrub or willow within 3 feet of the ground. It may take from 5 days to a week for her to build the nest. A female Lazuli Bunting lays 3 to 5 pale blue eggs, which she incubates for about 12 days. The young fledge (leave the nest) in a few weeks after hatching. Lazuli Buntings may have more than one family each year, starting in late May and continuing through mid-July. Male Lazuli Buntings may have more than one mate.

# **Distribution and Habitat**

Lazuli Buntings are fairly common in the Western U.S.—from the Pacific Coast east to the Great Plains. Within this range, they are absent from northwestern Washington and deserts. Their breeding range is from southern Canada to Baja California, and includes Oregon. After the breeding season, they sometimes form flocks and fly to meadows in higher elevations. Lazuli Buntings start migrating back to their wintering grounds in southern Arizona and western Mexico by the end of the summer.

#### Cardinals, Grosbeaks and Allies

This is a species that likes fairly open grassland-savannas with some shrubs and small trees for singing perches. They can also be found in brushy hillsides, thickets, and hedges along farm fields. You will not find a Lazuli Bunting in dense forests.

#### Conservation

Lazuli Buntings seem to be doing well. However. they are vulnerable to predation by Brown-headed Cowbirds, which sometimes lay their eggs in bunting nests. When this happens, the Lazuli Bunting parents incubate the cowbird eggs and raise them as their

# Breeding Migration Winter

Cardinals, Grosbeaks and Allies

Lazuli Bunting Range Map. https://www.allaboutbirds.org/guide/Lazuli Bu nting/maps-range

own. Like many other bird species, they are also affected by habitat loss due to development, especially in the Willamette Valley.

- The blue feathers of the Lazuli Bunting are not really blue! The blue color is due to refraction (bending) of light waves.
- Lazuli Buntings are in the scientific order Passeriformes, and the genus *Passerina*. Those words are related to the word, *passerine*, which means "perching".
- In the Great Plains, Lazuli Buntings sometimes breed with Indigo Buntings. Some scientists think they are the s ame species.

# Blackbirds and Orioles Red-winged Blackbird (Agelaius phoeniceus)

One of the most common and conspicuous (visible and noisy) species you will encounter at the Tualatin National River Wildlife Refuge is the Red-winged Blackbird. The 8-inch-long male is easily identified by its bright red wing patches with yellow edges on an otherwise black body. The female is harder to identify because she is one of those "brown birds" that resembles other species. She has a heavilystreaked breast and a beige stripe above her eyes. Both sexes have a fairly long, pointy bill, but his is black and hers is brownish-yellow. The female is harder to spot because of her color, and she often stays because hidden in vegetation.



Male Red-winged Blackbird (Brian Smucker)



Female Red-winged Blackbird (Ken Durbin)

The sounds of the Red-winged Blackbird are unmistakable, and are frequently heard at the Refuge. Listen for its gurgling kona-karee-eee, o-ka-leee or konk-a-ree songs, as well as a variety of short kek or check calls.

# **Diet and Feeding Behavior**

Red-winged Blackbirds have a varied diet. During the breeding season, they favor caterpillars, grubs, grasshoppers, mayflies, spiders, beetles, snails, and even damselflies. During the winter, though, they eat grains in farm fields and seeds from a variety of plants. Red-winged Blackbirds also eat berries and small fruits.

#### Reproduction

Male Red-winged Blackbirds begin the mating season by perching on small trees or stalks and fluffing their feathers out, displaying their beautiful red shoulder patches. That display is meant to defend territories, not to attract females. Males are very territorial, and will chase intruders (including humans) who get too close.

Red-winged Blackbirds breed by late April. The female constructs a cupshaped nest from plant material. The female attaches the nest to cattails or other vegetation growing out of water (emergent vegetation). The female usually builds the nest within 8-32 inches above water.

Usually, a female lays 4 pale blue-green eggs with dark brown spots, but she may lay as few as 3 or as many as 5. The female Red-winged Blackbird incubates (keeps warm) the eggs for 10-12 days. The young leave the nest about 11-14 days after hatching, but stay near the nest for another 10 days.

Red-winged Blackbird pairs raise 2 or even 3 families each year, but they build a new nest for each family. It's thought that this helps keep the nests free of parasites which can kill their babies.

# **Distribution and Habitat**

Red-winged Blackbirds inhabit North America wherever there are marshes and wetlands. They breed from Coast to Coast, from southeastern Alaska, across Canada and the continental United States, most of Mexico, and coastal Central America as far as Costa Rica. In the winter, large flocks of this species spend time in farmlands.

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#### Conservation

The Red-winged Blackbird is one of the most widespread and abundant bird species in North America. In Oregon, the species is doing well.

#### **Fun Facts**

- Female Red-winged Blackbirds sometimes sing, but their songs are very different from the males' songs. They are "whimpery" and "chattery".
- A male Red-winged Blackbird may have as many as 15 mates!



Red-winged Blackbird Range Map. https://www.allaboutbirds.org/guide/Redwinged\_Blackbird/maps-range

 The bright red wing patch of this species is called an "epaulet". Military uniforms sometimes have a decorative shoulder patch also called an epaulet.

#### **Blackbirds and Orioles**

**Blackbirds and Orioles** 

# Western Meadowlark (Sternella neglecta)

grasslands, fields, and In shrubby areas, look for a lowflying chunky bird that, as it perches, shows bright а yellow breast with a bold black necklace. You've just spotted a Western Meadowlark! In spite of the bright breast color, Meadowlarks are related to blackbirds. The Meadowlark weighs slightly more and its tail is shorter than a Robin. The Meadowlark's back is mottled brown and black and its head is striped. You may spot white patches on the outer tail as it flies. It has dark eyes, gray/pink legs, and a tapered bill about the same length as its head.

If you flush a Meadowlark, it will often flutter low and land on the ground. When the male sings, he often perches on a



Western Meadowlark (Cal Crandall)



fence post or at the top of sagebrush. The song consists of loud bubbly notes intermixed with whistles. Different birds sing their own variations.

#### **Diet and Feeding Behavior**

Meadowlarks eat beetles, grasshoppers, crickets, other insects, and caterpillars, especially during the summer. During the fall and winter, when insects are not readily available, they switch to seeds and waste grain from cultivated fields. To find food, Meadowlarks walk along the

ground and look for anything that moves. Meadowlarks often probe the ground with their bill in a manner that is called "gaping." This strategy relies on the unusually strong muscles that open their bill. They insert their bill into the soil, and then open their bill to create a hole. This gives Meadowlarks access to insects and other food items that most birds can't reach.

#### Reproduction

The breeding season begins in spring. The male establishes his breeding territory up to a month before the females arrive. His claimed area ranges between 15 to 35 acres in Willamette Valley habitats. Defense of the territory includes song and a "jump flight," in which the male Meadowlark springs several feet straight up into the air, flutters his wings, and dangles his legs. When the female enters his territory, the male faces her, puffs out his chest feathers and points his bill up in the air to show off his black V-shaped necklace. He also spreads his tail feathers and flicks his wings. Many males have more than one mate at a time.

The female builds the nest in a small depression on the ground in a dense grass. The nest might have a dome of grass stems woven into the surrounding vegetation or it might be "topless." The female Meadowlark lines the nest with soft, dry grasses and stems of shrubs. During the 6-8 days of nest construction and subsequent feeding, the Meadowlarks wear small trails through the grass leading to the nest.

The female lays 3-7 eggs, averaging about 5. The eggs are white with brown and purple spots. The female incubates (keeps warm) the eggs for 13-15 days before they hatch. Western Meadowlarks are sensitive to human activity and will abandon a nest if disturbed.

Both parents feed the nestlings, although mostly by the female. Young Meadowlarks leave the nest after about 12 days, even though they cannot fly yet. The parents continue to feed the young for at least

another two weeks. The parents may then raise a second brood during the breeding season.

# **Distribution and Habitat**

Western Meadowlarks range from southwestern Canada through the western 2/3 of the US to Mexico and may be found in Oregon year-round. Birds in the northern part of the range move short distances south in winter. Birds living at elevation go downslope in winter.

Watch for Western Meadowlarks foraging in open fields of lowgrowing vegetation and along marshes and road edges with sparse cover. During breeding season, you will often hear the male Meadowlark before seeing



Western Meadowlark Range Map. https://www.allaboutbirds.org/guide/Wester n\_Meadowlark/maps-range

him. In winter you may see Meadowlarks in mixed flocks with blackbirds and starlings.

#### Conservation

The Western Meadowlark breeding population is concentrated in the Great Plains states, spreading east and west in appropriate habitats. Although abundant in some areas, Western Meadowlark populations are generally decreasing. Habitat loss due to various factors (e.g., conversion of open fields to other uses and fire suppression) is a major factor.

The Western Meadowlark is an important species for grassland bird conservation. The Meadowlark's need for large areas with a variety of habitat conditions overlaps the habitat needs of other grassland bird Blackbirds and Orioles

species. Due to declining Western Meadowlark population, the Oregon Conservation Strategy identified the Western Meadowlark as Species of Greatest Conservation Need, listing the species as "sensitive."

- Western and Eastern Meadowlarks are *sympatric*, meaning that their ranges overlap in the grasslands of the Midwest, but interbreeding is rare. Although similar in appearance, the song and calls of the two species differ. The Easterns prefer wetter habitat than that of the Westerns.
- In 1844, John James Audubon noted that members of the Lewis and Clark Expedition identified the species, but said that no one had taken "the least notice" of the bird since then, earning the bird its name of "Sternella *neglecta*". It is not neglected now. It is the state bird of six states, including Oregon (at least for now).
- If the female builds a roof over the nest, she might also construct an entrance tunnel several feet long. A study of the Eastern Meadowlark found significantly higher losses from predators in the open nests than in the fully or partly covered ones.

#### **Blackbirds and Orioles**

**Blackbirds and Orioles** 

# Brewer's Blackbird (Euphagus cyanocephalus)

**Red-winged** Think of а Blackbird without the red, and you have Brewer's Blackbird. It's about the size of a robin, 8 to 10 inches head to tail and weighing 2 to 3 ounces. Its beak is conical, with a sharp tip. Males are shiny black with bright yellow eyes. Females, a little smaller than males, gray-brown have duller feathers and dark eyes. Calls are similar to Red-winged Blackbirds'. Brewer's Blackbirds are often found with Red-winged Blackbirds and starlings.

#### **Diet and Feeding Behavior**

Brewer's Blackbirds feed on open ground or grassy areas. They eat mostly seeds and grains, supplemented by insects and berries. Around humans, Brewer's Blackbirds may scavenge almost anything dropped or left behind. Some hang around



Brewer's Blackbird (U.S. Fish and Wildlife Service, Scott Somershoe)



Brewer's Blackbird nest (U.S. Fish and Wildlife Service, Tom Koerner)

parking lots and eat insects off car grilles.

#### Reproduction

Brewer's Blackbirds nest in colonies of a few to nearly 100 pairs, most often in May. They prefer small trees or shrubs near water but also use reeds and tall grasses. The female builds a cup nest about 6 inches across from plant stems, twigs, hairs, and grasses. She lays 3 to 7 eggs and incubates them (keeps warm) 12 to 14 days. Both parents feed the young from hatch until they fly, usually 13 or 14 days. Males may protect the colony by posting guards, who watch and call alarms.

#### **Distribution and Habitat**

Brewer's **Blackbirds** are common across the Western US year-round; most of these birds do not migrate. Populations east of the Rockies breed in the Northern US and Southern Canada, as far east as the Great Lakes. These eastern birds usually migrate in large flocks to Florida, South Central US, and Mexico. Natural habitats vary greatly, from mountains to below sea level and coastal scrub to open woods to sagebrush, but not forests. Brewer's Blackbirds often prefer habitat modified by people like farm fields, golf courses, city streets, and lawns.



Brewer's Blackbird Range Map. https://www.allaboutbirds.org/guide/Bre wers\_Blackbird/maps-range

The best place to look is an open grassy area with some water. At the Refuge, look for Brewer's Blackbirds in mixed flocks with Red-winged Blackbirds along the seasonal trail between the main ponds, and in the nearby meadows.

#### Conservation

Brewer's Blackbird populations dropped by 69% between 1966 and 2014, but then stabilized. There are an estimated 20 million of them, making them common and of low concern. Predators include hawks, owls, crows, jays, snakes, and a variety of small mammals. However, Brewer's Blackbirds more likely die from human causes, including shooting, trapping, and poisoning (to protect agricultural crops) and window strikes. On the other hand, they have adapted well to farms and towns, where they help control insect populations.

- Brewer's Blackbirds bob or jerk their heads when they walk.
- They may follow a tractor in a field, catching insects turned up by a plow.
- The species name, cyanocephalus, means blue-headed. Adult males do show some metallic blue, green, or purple, but it is nothing like the bright blue of a bluebird or jay.
- Brewer's Blackbirds like to be near water and may walk on lily pads or in shallow water, but they don't swim.
- A Brewer's Blackbird drinks by flying low over water, scooping some up in its bill, then swallowing while flying.
- The oldest known Brewer's Blackbird was over 12 years, 6 months when found in California.

# House Finch (*Haemorhous mexicanus*) & Purple Finch (*Haemorhous purpureus*)

The House Finch and the Purple Finch are two sparrow-sized birds that are very hard to tell apart. Many birders confuse the two species or simply give up. To add to the confusion, purple is not the color which comes to mind when you see a Purple Finch. Both species are about 6 inches from sturdy bill to short tail and weigh less than an ounce. The males of both species generally have reddish heads and chests. The Purple Finch has more red on its back. The male House Finch has streaked Both females are mostly flanks. brown, with brown and white streaked chests. Both females have chest streaks, but the female House Finch's chest is a little grayer.

There are color variations in both males. The male House Finch may have yellow or orange on its head and chest rather than red. The male Purple Finch is more rose-colored in the eastern US but redder in the West. Roger Tory Peterson (a well-known ornithologist) described the eastern



Male House Finch (Ken Durbin)



Male Purple Finch (Don Holland)

#### Finches

Purple Finch as a "sparrow dipped in raspberry juice."

House Finch males sing all year, females only in spring. The male Purple Finch often sings perched at the top of a tall tree.

#### **Diet and Feeding Behavior**

Both finches eat mostly seeds and are common at feeders, on the ground, and in trees. Both also eat some fruits, from strawberries and blackberries to plums, peaches, and figs.



House Finch Male – orange varian (Brian Smucker)

Purple Finches eat some insects, but this is rare for House Finches.

#### Reproduction

The House Finch nests in a wide variety of places: trees, cacti, buildings, street lights, hanging planters, and ledges. The Purple Finch nests only in trees in forests, usually on a horizontal branch 15 to 20 feet off the ground. Both make cup-shaped nests from leaves, stems, small twigs and roots, string, feathers, and bits of wool. The nests are about 6 inches across. The female usually lays 4 or 5 eggs and incubates them about 13 days. The young can fly about 2 weeks after hatching. Both parents feed the young. House Finches may have 2 or 3 broods (families of young) a year. Purple Finches usually have only 1 brood a year.

# **Distribution and Habitat**

Both species are common in Western Oregon year-round. The House Finch lives yearround throughout the US and Mexico. The Purple Finch breeds in Canada, the West Coast of the US, and New England. The Purple Finch winters in the far west of the US to Northern Baja and in the eastern half of the US. Both species are common in yards, parks, farms, grasslands, and open woods. The House Finch also lives in deserts. Both are quite social, often found in flocks. When not foraging, they like to perch in the tops of trees.



At the Refuge, look for both species along all the trails. They may be on the ground, in low weeds or brambles, or in trees. Also look for both species atop the large oaks between the oak savannah and the ponds, often mixed with goldfinches. The male Purple Finch often sings from the top of a tall Douglas Fir.

#### Conservation

The House Finch is of low concern and very common, with an estimated 40 million breeding adults. The Purple Finch is of low concern but declining, with about 6.4 million adults. The House Finch is more aggressive and can push the Purple Finch out of a territory. Audubon scientists predict that climate change may push the Purple Finch population to Canada, leaving the US to House Finches. Predators of both species include small hawks, crows, and skunks.

# Fun facts

- The House Finch may have come to the West Coast from Hawaii. From there, it appeared in the East, sold illegally in pet shops. Shop owners then released the birds into the wild to avoid prosecution, and House Finches spread widely after that.
- Male finch color comes from its food. Females prefer the males with the most color.
- The oldest known House Finch was 11 years 7 months old when captured and released by banders in New York. The oldest known Purple Finch was at least 14.
- Both finches used to be classified in the genus *Carpodacus*, from Greek for "fruit biter." That genus includes the Old World rosefinches. The House and Purple Finches' current genus, *Haemorhous*, comes from Greek for blood.

#### Finches

# American Goldfinch (Spinus tristis)

There are 2 goldfinch species in Oregon that look a lot alike and regularly mix with each other in flocks: American Goldfinch and Lesser Goldfinch. Both are about sparrow size, with the American Goldfinch a little larger than the Lesser. Both are a mix of gold, greenish yellow, brown, and black. Both have bright plumage in the spring and summer, and are more drab in fall and winter. Both have a bouncy flight and tend to move about in groups.

The American Goldfinch breeding male has a black forehead and wings, with bright yellow chest, belly, and back. The breeding female has more muted yellows and no cap. In winter, both male and female American Goldfinches are yellow-brown, with buffy wing



American Goldfinch Male (Brian Smucker)

Lesser Goldfinch Male. (Mick Thompson), 11/23/2017, Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



bars. The Lesser Goldfinch breeding male has a full dark cap (not just the forehead) and yellow-green back.

#### **Diet and Feeding behavior**

American Goldfinches are strict vegetarians, feeding entirely on seeds and buds. They prefer sunflower and thistle seeds and alder, birch, and cedar buds.

#### Reproduction

The female American Goldfinch builds a cup nest about 3 inches across in a shrub or sapling in an open Materials area. are mostly grasses tightly woven held together with spiderwebs. The female lines the nest with plant fluff. The female lays 2 to 7 eggs and incubates (keeps warm) the eggs 12 to 14 days while the male brings food. Both adults feed the young, who start to fly 11 to 17 days after hatching.

#### **Distribution and Habitat**

Goldfinches American live throughout the US. They prefer open grassy areas. American Goldfinches are common in the Willamette Valley year-round. At the Refuge you can find American Goldfinches in the Oak Savannah, the open areas south of the forest, and in the central areas. Look open among low grasses, small shrubs, and trees and in



American Goldfinch Female. (Jerry McFarland), 06/05/2016, Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



American Goldfinch Range Map. https://www.allaboutbirds.org/guide/American \_Goldfinch/maps-range

treetops. Some American Goldfinches breed in the Northern US and Southern Canada and migrate to the Southern US and Northern Mexico in winter.

#### Finches

#### Conservation

The population is stable and of low concern, with an estimated 42 million breeding birds, 91% of them in the US at least part of the year.

- The American Goldfinch is the only finch that has 2 plumages (different colored feathers during breeding and non-breeding seasons).
- Goldfinches nest in June and July when thistles have seeds (a major food source), later than most birds.
- Goldfinches flock to home feeders, looking for sunflower and nyjer (thistle) seeds.
- The species name, tristis, comes from the call, which sounds sad to humans. Tristis is a Latin word for sad.
- The oldest known American Goldfinch was 10 years and 9 months old when captured and released at a banding station in Maryland.

# Evening Grosbeak (Coccothraustes vespertinus)

The Evening Grosbeak is a large finch, almost as large as a California Scrub-Jay, or about the same size as the more common Blackheaded Grosbeak. The Evening Grosbeak has a massive head and bill, a stocky body, and a short tail. It measures 8 inches bill to tail, with a 14-inch wingspan and a weight of 2 ounces. Males have black heads, yellow bellies, and white on their wings. The



Evening Grosbeak (U.S. Fish and Wildlife Service, Keith Ramos)

male has a striking bright yellow jagged stripe on its head above its eyes and beak. Females and juveniles are mostly gray with a yellow tinge on their heads and bodies, with black wings that have white patches.

#### **Diet and Feeding Behavior**

Evening Grosbeaks use their heavy, strong bills to crush seeds that are too big or sturdy for other finches. At feeders, they can quickly decimate the supply of sunflower seeds. Evening Grosbeaks also eat buds of maples and other trees, berries, cherries, spruce budworms, caterpillars, and aphids.

#### Reproduction

Evening Grosbeaks breed in conifer forests of North America, in mixed forests in the Rockies, and above 5,000 feet in Central Mexico. They usually nest high in trees, up to 100 feet above the ground. The female builds a flimsy, 5-inch saucer nest of twigs, grasses, roots, lichens, and pine needles. She lays 2 to 5 eggs and incubates (keeps the eggs warm) 12 to 14 days. The male brings the female food but does not defend the

territory. Both adults feed the young, which can fly 12 to 14 days after hatching. A pair sometimes has 2 broods (groups of young) a year.

# **Distribution and Habitat**

Evening Grosbeaks commonly live year-round across southern Canada and the northern US, including Oregon. The northern nesters spread south through more of the US during the winter. In Oregon, the migration is a short altitude adjustment, with the birds moving from the mountains to the valleys in winter. However, some nest in the southern Willamette Valley. You never quite know when you may see Evening Grosbeaks at the Refuge or at your feeder, but spring and summer are most





likely. Evening Grosbeaks form pairs in the breeding season and in noisy flocks in winter when they may show up at backyard feeders. They also spread to deciduous and mixed open areas in winter. Migration dates, locations, and numbers are quite irregular.

# Conservation

Evening Grosbeaks are numerous and widespread. They lived almost exclusively west of the Rockies until the late 1800s, then spread throughout the country. Evening Grosbeaks are now declining in the East. The estimated breeding-age population is 4.1 million birds. Threats include logging and development of forested areas and diseases such as salmonella and West Nile virus. Due to climate change, the Audubon Society expects Evening Grosbeaks in Oregon to become limited to the Cascades.

# Fun facts

- The name "Evening Grosbeak" is only half accurate. The birds do have huge, heavy beaks. The first people to describe the Evening Grosbeak saw and heard them calling in the evening, so they included "evening" in their common name. The scientific species name, vespertinus, means evening singer. Eventually ornithologists recognized the birds' noisy daytime nature, but by then, the name was set.
- Even though it is a songbird, the male Evening Grosbeak does not sing to attract a mate. To woo a mate a male Evening Grosbeaks will dance in front of the female and feed her.
- Evening Grosbeaks are known to break small twigs off maple trees and drink the sap.
- The oldest known Evening Grosbeak was a male 16 years 3 months old when found in New Brunswick. It had been banded in Connecticut.

# Gallinaceous Birds

# Ring-necked Pheasant (Phasianus colchicus)

**Ring-necked** The Pheasant is a Eurasian game bird that owes its existence in the US to hunters. Think of it as a large, colorful chicken with a very long tail. A female is a buffy, mottled brown, chunky bird with a long tail. A male has a similar body but with brighter colors that include copper and sometimes purple, а bright red face, a metalliclooking blue-green neck, a white neck ring, and an extremely long tail. Nothing else looks like it. The **Ring-necked** Pheasant averages 21 inches head to tail for a female — up to 35 inches for a male — with a wingspan of 31 inches



Male Ring-necked Pheasant. (Allan Hack), 11/04/2007 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/



Female Ring-necked Pheasant. (Eric Ellingson), 10/16/2017 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

and a weight of 2.5 pounds. This bird walks or runs on the ground, flying only when flushed.

# **Diet and Feeding Behavior**

Ring-necked Pheasants forage on the ground in fields and grassy areas, eating mostly grains, seeds, and insects. They also eat grasses, leaves, roots, fruits, nuts, snails, and earthworms. Ring-necked Pheasants readily adapt to whatever food is available.

#### Reproduction

Most Ring-necked Pheasants are bred and raised in coops and pens by hunters and gun clubs. In the wild, a male establishes and guards a territory, fighting off rivals as well as intruders. He collects a harem of females and mates with all of them. The female nests in tall vegetation. She uses or makes a small depression, then lines it with nearby plants, twigs, corn husks, and feathers. The finished nest is a bowl about 7 inches across. She usually lays 10 to 12 eggs and keeps the eggs warm (incubates) for 23 to 28 days. The young leave the nest right away and follow the female, eating on their own. They can make short flights about 12 days after hatching.

#### **Distribution and Habitat**

Ring-necked Pheasants live in a band across the North Central US. Washington from and Oregon to Delaware and Maine. They are most plentiful in grassy areas in the Plains states, but they live in Hawaiian mountains, mainland forests, and even deserts. In winter, Ring-necked Pheasants often separate into male and female flocks. At the Refuge, look for them in the open grassy fields and along the edge of the forest.



Ring-necked Pheasant Range Map. https://www.allaboutbirds.org/guide/Ringnecked\_Pheasant/maps-range

#### Gallinaceous Birds

#### Conservation

Ring-necked Pheasants are common and of low concern. They successfully breed in the wild and millions are raised and harvested each year by hunters. Others are run over by cars and farm machinery. Ring-necked Pheasants rarely die of old age. Most live a year or less. Predators include foxes, raccoons, skunks, hawks, and owls.

- The first Ring-necked Pheasants in the US were brought from Shanghai, China to the Willamette Valley in 1882 to be raised on a farm to be hunted.
- A Ring-necked Pheasant female may lay eggs in the nest of a Prairie Chicken. When this happens, the male Pheasant chases the Prairie Chickens away.
- A Ring-necked Pheasant that is flushed by dogs or humans usually flies 600 feet or less, but it can take off and fly very quickly for that short period.
- The Ring-necked Pheasant is the state bird of South Dakota. While it is not native, pheasant hunting is big business in the state.
- Pheasant hunters help save several native bird species by their participation in land acquisition, habitat restoration, and habitat preservation projects on millions of acres of grasslands.
- Usually only the roosters (males) are hunted, but this varies by state.

# California Quail (Callipepla californica)

The California Quail is a round, stocky bird with short, sturdy legs. It is about 10 inches tall, weighs about 6 ounces and sticks to the ground, except for short, quick flights to escape The California danger. Quail's best identifying feature is black head а plume. The male sports a and forward-leaning thick plume. The female's plume is thin and mostly erect. The male has a black face, curved white marks on its head and neck, white spots on the back of its neck, and a brown cap. The male's chest and back are gray. Its belly looks like it is covered with scales, and its sides are streaked. A female is appears similar but with more subdued colors, and no



California Quail adult male. (Brian Smucker)



California Quail with Chicks, (Allan Hack). 08/04/2008 Flickr, CC BY-NC-ND 4.0 https://creativecommons.org/licenses/by-nc-nd/4.0/

black or white markings. Flocks of young chicks look like walnuts on toothpicks. Quail usually form groups (coveys) of one or two families in spring and coveys of 10 to hundreds of birds in winter.

# **Diet and Feeding Behavior**

California Quail eat mostly seeds and leaves while walking on the ground. A covey often kicks away leaves, dirt, or mulch to reach the food below. Food may include berries, acorns (especially if run over by cars), insects, and snails. To move from one spot to another, California Quail walk or run, flying only when scared.

#### Reproduction

A female California Quail makes a nest by digging a shallow scrape in the ground, usually well hidden under a shrub, small tree, or grasses. She lines it with stems and grasses. She lays 12 to 16 eggs, usually in May, June, or July. The female keeps the eggs warm (incubates) for 22 to 23 days, while the male keeps watch nearby. The chicks can walk and peck within an hour of hatching, following and mimicking the adults. The female protects her young by hiding them under her body and outspread wings. The male helps by watching from a post, tree, or low roof, and calling an alarm when he spots danger. Sometimes two or more families work together to herd and raise their young.

# **Distribution and Habitat**

California Quail are native to most of California, northern Baja, and parts of southern Oregon. They have been introduced more widely and are now common from southern British Columbia to the southern tip of Baja. California Quail live in open grassy areas, sagebrush, chaparral, deserts, parks, and backyards. (Chaparral typically includes low trees and shrubs, often dense. Chaparral favors areas with hot dry summers and cool wet winters.) California Quail tend to avoid mountains, though their range does overlap with Mountain Quail, which are identified by their long, thin, vertical head plumes. California Quail are common around houses, especially if there is birdseed on the ground. They do not migrate. A quail usually spends its entire life within 10 miles of where it hatched. Look for California Quail at the Refuge in open areas near

#### Gallinaceous Birds

**Gallionaceous Birds** 

cover, such as bushes and tall grass. One such location is near the Year-Round Trail a few yards past the River Overlook. If you can't see a covey of California Quail, you may hear them call Chi-ca-go.

#### Conservation

California The Quail is considered a species of least concern, with an estimated 3.8 million breeding birds. Cooper's hawks catch and eat the young, snakes and eat the eggs. California Quail upland are



game birds, and it is legal to hunt them. The hunting season is September through January in Oregon and about the same in California. Oregon hunters killed 27,612 California Quail in in 2020. California Hunters killed 245,111 in 2016-17.

- A California Quail's head plume looks like one feather, but it is actually 6 feathers.
- A California Quail has been clocked running 12 miles an hour.
- California Quail often get enough water from their food, but in sustained heat, they must find water to drink.
- A female California Quail may lay her eggs in another quail's nest. This is called "egg dumping" and can result in up to 28 eggs in one nest.
- People introduced California Quail into many parts of the world for hunting. In New Zealand, California Quail now live on North Island and the northern part of South Island.

Gallinaceous Birds

- Humans eat both eggs and meat from domesticated quail. People raise domesticated quail like chickens on farms.
- The oldest known California Quail was 6 years 11 months.

# Hunting

Under the National Wildlife Refuge System Administration Act of 1966 and the National Wildlife Refuge System Improvement Act of 1997 (among other laws) and the U.S. Fish and Wildlife Service's policy, hunting may be permitted on a national wildlife refuge, as long as it is compatible with the purpose for which the refuge was established and acquired. The decision to permit hunting on national wildlife refuges is made on a case-by-case basis. Considerations include biological soundness, economic feasibility, effects on other refuge programs and public demand. In accordance with federal regulations, the harvesting of wildlife on refuges through hunting is regulated to ensure sufficient population numbers and habitat health.

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## Contributors

Volunteers and staff from the Refuge and the Friends of the Refuge prepared this guide.

**Primary Contributors:** 

- Jim Alexander: Editor
- Natalie Balkam: Project Coordinator
- Ken Durbin: Photography
- Don Holland: Photography
- Claire Puchy: Author
- Rod Roberson: Formatter/Photography
- Brian Smucker: Author/Photography

Other Contributors:

- Patrick Allaire
- Rick Bennet
- Cathy Crandall
- Rachel Dunham
- Todd McKinney
- Phyllis Millan
- Rob Mustard
- Ana Sanchez

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- If using a computer, we use a standard PDF reader such as *Adobe Acrobat* or most any mainstream PDF reader. As an example, when you click on a bird from the Table of Birds, you will be taken to the article about that bird. To return to the the referencing bird picture in the Table of Birds, simultaneously select Alt + Back-Arrow.
- If using an Android phone or tablet, we use the free app, <u>ReadEra PDF Reader</u>. As an example, when you click on a bird from the Table of Birds, you will be taken to the article about that bird. You will see a small rectangle at the bottom left that, when tapped, will take you back to the referencing bird picture in the Table of Birds. There are other apps you can install that work similarly.
- If using an iPhone or iPad, we have found <u>Foxit Reader for</u> <u>iPhone/iPad</u> to work well and provide similar functionality to ReadEra PDF Reader. We have used Foxit Reader on both Windows and Android and it has similar features as ReadEra. More recommendations for PDF readers for iPhone/iPad can be found <u>here</u>.

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