# Feathered Stars and other Wetland Birds

# Franklin's Gull (also known as the Prairie Dove)

# description

The male and female of this species look alike except that the male is slightly larger. They have a wingspan of about three feet and weigh 8-10 ounces. They are named after a polar explorer named Sir John Franklin. They have a red bill that acts as a stimulus while they feed their young. The bill fades to black by the time they migrate in the Fall. In breeding plumage, this species has a black hood and a dark red bill with a black mark near the tip. The dark gray of the back extends to the upper part of the wings. The under parts of the bird, including the wings, are white.

## Food/feeding

They feed along lakeshores and riverbanks and glean worms, grubs, grasshoppers and mice from plowed fields. They hunt dragonflies on the wing and in late summer gorge on brine fly pupae and adults.

#### habitat

Franklin's Gulls build floating platform nests of grass or cattails in water several feet deep and anchor the nests to surrounding vegetation. These gulls avoid human populations and are not usually tempted by handouts or garbage. They breed in large colonies in inland marshes and winter on the Pacific coast of South America.

# adaptations

These migrating gulls make long trips to nest in the marshes of the Great Salt Lake.

- The gulls arrive in early April from as far away as Chile along the shores of South America. Thousands nest here and leave by late September or early October.
- They molt or shed all of their worn feathers twice a year. The gulls need new, strong feathers to meet the demands of their 5000-mile flight.
- They nest in dense, mixed species colonies along with White-faced Ibis, Egrets, Forster's Terns, Black-necked Stilts and Black-crowned Night Herons. A single colony can contain over 4,000 breeding pairs.

# reproduction

Both parents take turns incubating the 2-3 eggs laid by the female. The eggs hatch in 25 days.

- Franklin's Gulls build floating nests of fine grass and plant down in stands of bulrush or reeds.
- The nest sinks as the material below the water decays, so it requires continual maintenance. Both parents add new nest material daily until one or two weeks before departing.
- Older chicks also add nest material to the nest from close-by plant materials.

# key facts

- A single colony of Franklin's Gulls can contain over 4,000 breeding pairs.
- The Great Salt Lake is an extremely important nesting and feeding site for a large percentage of the world bird population.
- Preserve waters here provide critical nesting habitat for Franklin's Gulls during high water years.
- These gulls migrate farther that almost any other birds found at the Great Salt Lake.
- Each gull can accumulate over ten thousand miles on the round trip between its nesting site here and wintering grounds in South America.
- Twice a year molting provides new strong feathers for the long migration.

# Wilson's Phalarope

## description

Wilson's Phalarope is a slender, small-to-medium sized shorebird with long legs and a long, needlelike bill. Females are more brightly colored than males. In breeding plumage, females have a gray crown, a blackish-burgundy stripe running from the base of the bill down the length of the neck. They are grayish with some burgundy markings, and whitish undersides. Males have a dark head, are grayish-brown with a touch of chestnut on the upper breast, and white undersides. During breeding season, both sexes have black legs. In the winter, the sexes look alike, with yellow legs, pale gray bodies, and white undersides. This is a unique shorebird that breeds across much of central and western North America, and winters in southern South America. There have been up to 600,000 (a world record) of these birds at the Great Salt Lake.

#### Habitat

Wilson's Phalaropes like the open water of lakes and salt marshes or adjacent sandbars or mud flats. They often nest near saline water on mudflats, sedge meadows and cattail marshes or beaver ponds. They migrate in flocks in long non-stop flights resting and feeding here at the Great Salt Lake on their way to nesting sites farther north. Females begin arriving here in late June, while males arrive a few weeks later. They winter in western South America in shallow, saline and alkaline lakes on the high plains of Bolivia, Peru and Argentina.

# adaptations

Females and males reverse roles in this species.

- Females are larger and more brightly colored and more aggressive than males. They compete for males.
- The male's underside has increased flow of warm blood creating warmth to incubate eggs.
- Males perform all parental duties, such as scraping out several hollows for a nest, and lining the nest with vegetation. They make several scrapes, and wait until the female lays an egg to line it with grasses.
- Both parents perform distraction displays when alarmed.
- Summers here at the Great Salt Lake, they molt their feathers and increase their body weight up to 2x in July and August.

#### food/feeding

These birds often feed close behind avocets, feeding on prey the long-legged waders have stirred up.

- They feast upon abundant brine flies and brine shrimp, mosquito larvae and other aquatic insects, spiders, and seeds of aquatic plants.
- Sometimes they forage along the shore, but more often in open waters
  while swimming. They spin in tight circles on the water, up to 60
  revolutions per minute stabbing the water at each turn to pick brine fly
  larvae or other invertebrates at or just beneath the surface.
- Spinning is believed to stir up prey from the bottom of shallow water or to activate motionless invertebrates so that they can be seen.

# reproduction

A few Wilson's Phalarope nest at the Great Salt Lake, but more often they rest and feed here on their way to nesting sites farther north.

- The male makes several scrapes. The female chooses one, and then the male lines the nest after the first egg is laid.
- Incubation period is 16-21 days. The female lays an average of four eggs and the eggs are incubated and the young tended by the male.
- The nest is usually near water in a well-concealed depression lined with grass and other vegetation.

# key facts

Wilson's Phalarope will double their body weight as they rest and feed at the Great Salt Lake. They stay here for 30-45 days during July and August in preparation for their long flight to South America.

- Their numbers are threatened by Peregrine and Prairie Falcons. Their eggs are threatened by foxes, skunks and raccoons.
- Great Salt Lake hosts the largest gathering of these birds in the world.
- During the summer close to 50% of the world's population stop here on their southward journey. As many as 800,000 were counted here in 1998.
- These birds are threatened by loss of habitat and wetlands in their breeding and migration patterns.

• The draining of wetlands continues to be a threat to the species.

# Long-billed Curlew

## description

These birds are recognized by their long, downward curving bills and their large size. They are the largest sandpipers and the largest shorebirds in North America. Their dark, earth-colored backs, speckled with buff and white, serve to camouflage curlews on grassland breeding grounds. Their undersides are cinnamon colored. They have a wingspan of 35 inches and weigh 17-34 ounces. The females are about 1/3 larger than the males.

#### habitat

Long-billed Curlews breed in grasslands and dry open prairies in the western United States and southern Canada. Their nest is a scrape in the ground lined with grass, weeds and plant stems. Their clutch size is about four eggs. After the chicks hatch, the adults lead them to areas of denser grass near the lake, where they feed mostly on grasshoppers. They are often seen on dry land, feeding and nesting in grasslands or salt playas around the Great Salt Lake.

## adaptations

- Their color is perfect camouflage in grasses and dry vegetation.
- Their exceptionally long down-curved bill is very effective at probing for food in mud and water or grasses, while still keeping an eye out for danger.
- They have long legs for wading in water and mudflats.
- Chicks emerge from the egg with a straight and stubby bill.

# food/feeding

Curlews use their long bills to probe deeply under soil and mud for insects, worms and burrowing spiders. They eat worms and larvae in mud, insects in dense vegetation, and brine fly larvae in shallow water. When nesting, they feed on grasshoppers and other insects in grasses and along sloughs. Their diet consists of insects, fly larvae, aquatic insects, mollusks, crustaceans and small amphibians.

# reproduction

Long-billedCurlews breed in grasslands and dry open prairies. Their nest is a scrape in the ground lined with grass, weeds and plant stems. Their clutch size is about four eggs. Both parents incubate the eggs, often the female in the daytime and the male at night. After the chicks hatch, the adults lead them to areas of denser grass, where they feed mostly on grasshoppers. The young are independent in 32-45 days. To defend their nests, curlews feign injuries to lead predators away from their eggs and chicks. Sometimes curlew neighbors assist them by calling and diving at predators.

## key facts

- They are the largest of all North American shorebirds (up to 2 lbs. With a three-foot wingspan.
- The curlew's call—cur-lee—not its bill shape, gives this bird its common name.
- An estimated 2,000 Curlews nest in grassy areas along the shores of the Great Salt Lake. This is a significant area for curlew nesting habitat.
- Masters of camouflage, predators can pass within a few feet of these birds and not see them.
- Once found throughout the Midwest, they have been driven out by grassland conversion, pesticide application and hunting.

# White-faced Ibis

#### description

White-faced Ibises spend most of their time in brackish or fresh water cattail and bulrush marshes.

- They are 19 inches long, with a wingspan of 37 inches. They weigh 16 to 18 ounces.
- The sexes are similar except that male breeding plumage has a reddish sheen.
- They are medium sized, long-legged waders.
- They have a dark gray bill six or seven inches long that curves downward.
- In flight, they hold their long necks extended.

#### habitat

These birds nest in large colonies. Up to 28,000 have been counted at the Great Salt Lake. They spend their time in marshes and thick stands of hard-stemmed bulrush. The bulrushes appear to be especially important for nesting places.

- Thousands of these birds arrive at the Great Salt Lake in mid-April to nest. They leave for wintering grounds by late September.
- They have a range of winter habitats, some winter along the Pacific Coast from California to Mexico, and some winter along the Gulf Coast.
- Groups can fly in a long, changing dark line or a V-pattern for many miles to feed on insects and worms in flood irrigated pasturelands, then return to the marshes in the evening.

# adaptations

These birds are colonial nesters. They build their nests in bulrushes or other emergent vegetation.

- As many as 1,500 breeding pairs (along with thousands of Franklin's Gulls, Snowy Egrets, Black-necked Stilts, and Black-crowned Heron can nest together in the Great Salt Lake Preserve.
- The Shorelands Preserve is one of a very key few sites on the lake for White-faced Ibis nesting during high-water years. The extensive marshes provide nesting habitat when other marsh areas have been drowned by salty water.

- These birds are declining throughout the North American range. Some causes are: lack of wetlands, pesticides, draining, drought, grazing and burning of habitat.
- Colony disturbance can cause partial or complete desertion of nests, especially during nest-site selection, nest building, and incubation periods.

## food/feeding

White-faced Ibises feed on brine fly and midge larvae and other aquatic vertebrates. They also eat amphibians and other small vertebrates, earthworms and fish. Occasionally they will eat aquatic vegetation, leeches, snails, and spiders. They often fly in groups for many miles to feed on insects and worms in irrigated pasturelands, returning to the marshes in the evening.

#### reproduction

A bulky platform nest is made in the shape of a deep cup. It is made of coarse materials and lined with plant matter. The nests are often built floating over water, anchored to vegetation so that small changes in water level do not spoil their nesting success.

- The nest is constantly guarded. Females incubate the eggs at night, the males during part of the day.
- Both parents feed the young. Three to four chicks take regurgitated food from the adult's bill.
- These birds may quickly find new habitat after rains or flooding.
- Water conditions determine whether nesting occurs in a particular area or not. Therefore, nesting sites can often move around from year to year.

# key facts

- Long legs and long bills equip these birds to probe among pools and tufts of wetland vegetation.
- A long (six-seven inch) down-curved bill allows them to forage in shallow mud and water. This bill is very sensitive and able to feel for food the birds cannot see.
- The Great Salt Lake hosts the largest breeding population of White-faced Ibises. As many as 21,000 breeding adults and as much as 50% of the North American population gather here each summer.
- These birds are declining throughout the North American range. Threats such as loss of wetlands, drought, pesticides and other habitat

deterioration caused by draining, burning, and grazing are seen as probable causes.

# American Avocet

## description

American Avocets have bright copper-colored plumage on their head and necks during mating season. In winter they are black, gray and white. They have three forward toes on each foot enclosed in a partial web. This serves both in powerful swimming and prevents them from getting mired in mud. Males are slightly larger and have slightly less of a curve in their bill. They are 17-18 inches long, have a wingspan of 28 inches, and weigh 10-12 ounces.

#### habitat

These are colonial birds that live in shallow lake water and marsh ponds, often among waterside vegetation such as hard-stemmed bulrushes. They may feed at different depths in water to avoid direct competition with Black-necked Stilts feeding at the same location.

- They yearly range from Southern Canada to Mexico, traveling in small groups or in groups of up to thousands.
- They winter in the marshes of central and western Mexico. They arrive at the Great Salt Lake starting in late March and are often the first shore birds to arrive.
- Up to 10,000 nest at the Great Salt Lake.
- Their numbers reach over 250,000 as they stop to rest and feed here during their migration. This is nearly half (45%) of the world population.

# adaptations

Avocets have long legs and upturned bills for shallow water feeding. The difference in the angle of the bill upturn between male and female may cause a difference in feeding, helping to maximize food success while avoiding direct competition.

- Adults will aggressively attack predators, sometimes physically striking Northern Harriers or Common Ravens.
- They will swoop at ground predators, modulating the pitch of their call to resemble a Doppler effect, making themselves appear more threatening by simulating a greater approaching speed.
- Male and female both perform a very impressive courtship display dance.

# food/feeding

Food is found by both sight and touch with a very sensitive bill. They feed on aquatic invertebrates in water or sediments, including brine shrimp, brine fly and midge larvae, brine flies, water boatmen, and adult and larval beetles. They also eat terrestrial invertebrates, small fish and seeds, salt grass and bulrushes.

- The difference in the angle of the bill upturn allows them to feed together with maximum success while avoiding direct competition.
- They usually feed while wading in shallow water.
- They feed leaning forward with the tip of their bill in the water, slightly open, swinging it back and forth to stir the bottom to expose and catch insects and small crustaceans.
- Sometimes a flock will feed this way in unison and will also snatch insects from the air.
- Due to the difference in bill curvature, males also plunge for food. Their head and upper breast enter the water to capture food from within the water column.

#### reproduction

Monogamous pairs select a nest site and incubate together.

- They either scrape a nest in the soft substrate at the water's edge or build a floating nest of gathered vegetation.
- Nests of either kind are often lined with vegetation, pebbles, shells, feathers and mud chips. They are slightly elevated to give the incubating parents an unobstructed view.
- American Avocets have an elaborate courtship display. The female extends her head forward with the bill held barely above the water. The male then struts around his mate several times, thrashing the water with his bill and grooming his chest and wing feathers. The act finishes with the pair marching through the shallow water with crossed bills.
- Day-old American Avocets can walk, swim, and even dive to escape predators. Chicks leave the nest within 24 hours after hatching. They fly in four to five weeks.
- Pairs do not usually remain together after the breeding season.

## key facts

The number of American Avocets reaches over 250,000 at the Great Salt Lake. This is 2.5 times the number of migrants compared to anywhere else in the world, according to the American Ornithological Union.

- The Great Salt Lake Shorelands Preserve is particularly important to American Avocets in low water years, when more of their foraging sites are exposed.
- These birds have bright copper-colored plumage on their head and necks during mating season. In winter they are black, gray and white.
- Populations of American Avocets are stable or possibly increasing.
- American Avocets either scrape a nest in the soft substrate at the water's edge or build a floating nest of gathered vegetation.
- American Avocets have an elaborate courtship display.
- Day-old Avocets can walk, swim, and even dive to escape predators. Chicks leave the nest within 24 hours after hatching. They fly in four to five weeks.
- Pairs do not usually stay together after the breeding season.

# Snowy Plover

#### description

The western Snowy Plover is a sparrow-sized, light colored shorebird with dark patches on either side of the neck, behind the eye, and on the forehead. The male and female are similar except in breeding plumage. The male has black neck patches, forehead, and ear coverts. The female is mainly black to drab.

- Their size is 6-7 inches. They weigh 1.2 to 2 ounces and have a wingspan of 13 inches.
- The pale color of the plover's back matches its playa and mudflats habitat for camouflage.
- The young are speckled to blend in with their surroundings.

#### habitat

Plovers nest, rest and forage on sandy, muddy, and barren terrain near water. They can be found on beaches, dry mud or salt flats, sandy areas, and margins of rivers, lakes and ponds. They like places with little vegetation and do not choose to live in marshes. At the Great Salt Lake, they are usually seen on playas and mudflats that are exposed at low lake levels.

## adaptations

Snowy Plovers build a scrape nest that blends in with the landscape.

- They have large eyes that help them spot tiny invertebrate prey.
- Because the nests and eggs are so well camouflaged, parent birds will place small stones nearby to assist in finding them.
- Because they cannot drink the nearby alkaline or saline water, they get much of their water from the succulent insects they eat.
- They cool off by immersing themselves in water, then letting evaporation cooling take place. They also apply water collected in their breast feathers from nearby pools to their eggs. When nesting, they stand over their eggs to create a shadow rather than sitting on the eggs.
- They use injury-feigning distraction display such as pretending to have a broken wing to lure intruders away from the nest.

# food/feeding

Snowy Plovers eat mostly insects and their larvae. At the Great Salt Lake, they make the most of abundant brine fly pupae that carpet the mud and shallows, as well as adult flies as they emerge. They also forage in the mud for beetles and other invertebrates. In their feeding manners, they run, freeze, and pick. They use their sharp eyes to find food. reproduction

Snowy Plover nests are surprisingly simple and hard to see. They often scrape their shallow nests out on barren playas amid grass tufts marked with twigs and debris and line them with bits of concealing ornaments.

- Plovers are loosely colonial.
- The downy young leave the nest within three hours of hatching. They flatten themselves on the ground when a parent signals the approach of people or potential predators.
- The young can walk, run, and swim well and forage unassisted by parents, but require brooding for many days after hatching.
- Plover females leave the nest after the young are six days old. The male stays with the young for 47 days.
- Snowy plovers frequently raise two broads a year. The female goes to initiate a new breeding attempt with a different male.

## key facts

The Great Salt Lake hosts the largest gathering of Snowy Plovers in the world. An estimated 10,000 have been known to breed here.

- Snowy Plovers like it best where others hate it most. They inhabit the most hostile of all Great Basin environments: scarcely vegetated alkali and salt flats where temperatures approach 110 degrees and water is too alkaline or salty to drink.
- Their highly camouflaged nests and eggs are difficult to detect even on a barren flat, since they blend in so well with background.
- Because the birds live on beaches, nesting attempts are sometimes disrupted by human visitors. People can fail to notice they are keeping the birds away from their nests.
- The Great Salt Lake Preserve is particularly important to Snowy Plovers in low-water years, when the receding lake exposes more playas and mudflats, their habitat of choice.

# Other Wetlands Birds

# Barn Owl

## description

The Barn Owl has a light gray body with numerous fine dark lines and scattered pale spots on the feathers. There are buff markings on wings and on the back. The under parts of the owl's body are white with a few black spots, occasionally none. Feathering on the lower legs may be sparse. The heart-shaped face is white with a brownish edge. The eyes have brown marks at the front and a black iris. The beak is off-white and the feet are yellowish-white to brownish. Males and females are similar in size and color, females and juveniles are generally more densely spotted. Generally nocturnal, it is not uncommon to see this species emerge at dusk or be active at dawn, occasionally being seen in flight during full daylight. Flight is noiseless, with wing beats interrupted by gliding.

- The Barn Owl calls infrequently, the usual call being a drawn out rasping screech. The courtship call of male owls at nest is a shrill, repetitive twittering. Adults returning to a nest may give a low, froglike croak.
- Barn Owls are 13 to 16 inches long with a wingspan of 39-49 inches. They weigh 16 to 20 ounces.
- Females are larger and heavier than males.

#### habitat

Barn Owls are cavity dwellers. They inhabit tree cavities, small caves in cliffs, holes in cut banks, or other natural or artificial snug and quiet enclosures ten feet or more off the ground. They like dry, open country, including farms, marshes, fields, and grasslands.

- They are semi-colonial. Up to 38 Barn Owls have been found living together in loose colonies.
- They are essentially non-migratory, reluctant to move from an area. Many reside within 50 miles of where they were nestlings.

## adaptations

As with all owls, the Barn Owl cannot move its eyes in its sockets, so instead it rotates its head 180 degrees each way to see nearly all around. It is the only North American owl that can catch its prey in total darkness.

- The Barn Owl has blackish eyes, unusually long and smaller than other owls, but with more sensitive rods for night vision. This owl has a muscular iris, designed to respond like an automatic shade or curtain, which allows just the right amount of light to pass through the cornea, back through a transparent lens and onto the retina. With plenty of light, Barn Owls found hunting during the day are able to locate their prey by sight from great distances.
- Their hearing is thought to be 35 to 100 times more sensitive than our own. They can hear squeaking, scratching or rustling through the dirt, leaves, or grass, pinpoint the location of the sound, and then align their beak like an arrow toward their prey.
- Their extraordinarily light body weight, wingspan and feathers are unique, designed to render them almost silent in flight.

## Food/feeding

The Barn Owl's digestive system is unique. Pellets begin forming in the digestive track as soon as prey is swallowed, and enzymatic juices break down prey body tissue, leaving bony materials and hair or feathers undigested.

- Barn Owls swallow small birds and rodents whole. Since they do not have teeth for grinding, they cannot pass whole bone and claws through their digestive tract safely. Instead, these materials form a pellet that is surrounded with the hair or feathers of the prey consumed. The pellet is then orally expelled, or gagged, and the Barn Owl begins feeding again.
- The Barn Owl relies on small mammals, rodents and insectivores for its food. Voles are its most important source of food, followed by deer, mice, shrews and rats. Adults may eat one rodent nightly. Chicks may eat two to five nightly.
- Pellet contents are a direct indication of what an owl has fed on. A one year study of a particular Barn Owl revealed the following diet: 1,407 mice, 143 rats, 7 bats, 5 young rabbits, 375 house sparrows, 23 starlings, 54 other birds, 2 lizards, 174 frogs, 25 moths, and 52 crickets.

The Barn Owl nests in March-April. They choose a snug, quiet cavity or enclosure at least ten feet off the ground. No actual nesting material is used.

- The female lays one egg at two to three day intervals. The average is five to eight eggs, but can be up to fifteen. She begins incubating immediately after the first egg is laid.
- During the incubation period, she remains on the eggs almost continually, with the male bringing food. Incubation is 30-33 days.
- While an adult Barn Owl may eat one rodent a night, each chick may
  eat from two to five. During the course of the breeding season, as
  many as three thousand rodents and small birds may be consumed by
  the parents and their family of five chicks.
- The young fly at eight weeks but are fed by their parents for an additional four to six weeks. By July most of the young have left the nest and flown to nearby trees or buildings for the final stages of their development.
- A second nest for the season with the same mate may be started in the same or in a different location. A male Barn Owl may have two concurrent mates nesting as much as a mile apart.
- The young owls mature at about eighteen months andwill begin this reproductive process themselves.

# key facts

Barn Owls are built to hunt. They can rotate their necks nearly 180 degrees each way. Their light bodyweight, wingspan, and feathers are designed to render them almost silent in flight.

- Since Barn Owls lack teeth and a large digestive track, they swallow most prey whole then cough up pellets containing fur and bones.
- Their hearing is 35 to 100 times more sensitive than our own.
- Their hunting sequence is the following: they hear the sound of prey and pinpoint the location. They launch with silent wings from their vantage point, legs swinging back and forth. When they see their prey, they throw their head back and their feet forward to sink razor sharp talons deep into prey.

- They are the only North American owl that can catch prey in total darkness.
- Predators of this owl include the Great Horned owl.
- Their life span is relatively short, commonly one to two years. Rarely, they will live to eleven years. They are the most widely distributed land bird in the world.

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# Marsh Wren

# description

This small noisy inhabitant of cattail marshes is more often heard than seen. The Marsh Wren is about four inches long with a short, thin bill. It has brown upper parts and a solid crown, a black back with white streaks, a puffy belly, white throat and breast, and wings and tail barred with black. It frequently holds its tail upright and is seen straddling plant stalks. It remains hidden in deep vegetation but sings its distinctive song all day and throughout the night. Its distinctive song is a gurgling rattling trill. habitat

The Marsh Wren likes cattail marshes, dense wet meadows, bulrush marshes and brackish marshes with abundant reeds. This species moves actively on or near the marsh floor, gleaning insects from plants and just below water. Marsh Wren nests are domed structures attached to several stems of emergent marsh vegetation such as cattails or bulrushes. Early-season nests are usually placed between 1 1/2 and 3 feet above water, and higher later in the season. Strips of cattail leaves, grass or other stems up to a foot long are woven into a hollow ball about 7" tall and 5" wide with an entrance hole near the top on one side.

#### adaptations

For defense purposes, the nests of Marsh Wrens are separated from nesting colonies of Red-winged and Yellow–headed Blackbirds. Marsh Wrens will destroy the nests and eggs of other birds when they are left unguarded.

- A male Marsh Wren will sometimes puncture the eggs and kill the nestlings of his mate when they are left unguarded. A female will attack the nests of other females if left unguarded as well.
- This species is known for its distinctive and constant song.
- A male Marsh Wren can have several mates at the same time, but females in the same harem are known to attack the eggs of other females if left unguarded.

# food/feeding

Marsh Wrens eat a wide variety of adult and larval aquatic invertebrates, especially midges, flies, mosquitoes, moths, caterpillars, ants, crane flies, dragonflies and damselflies. They also eat spiders, snails and occasionally other birds' eggs. They move actively about on or near the marsh floor, gleaning insects from plants and from just below the water.

#### reproduction

Males display while perched above the females by puffing up their feathers until they look like little balls with their tails cocked over their backs, fluttering half-open wings, and moving their heads from side to side.

- Each Spring, to impress the females during courtship, a male will weave anywhere from 14 to22 "dummy nests" in his territory. Only one to three of these will be used for nesting, although the male will sleep in them during other times of the year.
- When a potential mate visits his territory, the male will display to her then fly to his courting center where she may visit the nests and if he is successful in courting, she will chose one and lay her eggs.
- After mating, males accompany the females on an inspection of the nests. Selecting one, the female lines it with finer leaves and stems, cattail down and feathers. She constructs a lip at the doorway, extending inward, so that there is a sort of tubular entrance. Inside she lays four to six dark brownish eggs and incubates them for about two weeks.
- Males with superior territories often have second or even third mates, especially in western populations. Mates of polygamous males usually tend the young hatchlings without much help. After about 12 days in the nest, the young fledge before their flying abilities are fully developed. They may use some of the dummy nests for roosting, and are fed for up to two more weeks. Marsh Wrens typically have two broods a season.

# key facts

- The Marsh Wren is often heard and not seen due to its habit of remaining within cover of dense vegetation.
- A common and noisy inhabitant of marshes, the Marsh Wren sings all day and through the night.
- Its distinctive song is one of the characteristics of freshwater wetlands—a gurgling, rattling trill.
- Marsh Wrens are small (5" long) with brownish upper parts and white or whitish throat, breast, and belly. The bill is thin and relatively long. On the back are distinctive black and white longitudinal streaks. Sexes are alike.
- Populations have declined in many coastal regions due to increased development and recreational use of beach nesting areas.
- These birds make full use of the building material, cover and food sources of a marsh.

•	A male Marsh Wren will mate with and provide nesting for up to three females in a season.

# Northern Harrier (Formerly known as Marsh Hawk)

## description

The adult male has pale gray body plumage, paler underneath, a dark gray head, black tips on flight feathers, and narrow dark bars on tail. The adult female is larger than the male and is mottled in browns. Both show a distinctive white rump patch at the base of the tail and have long narrow wings and tail. They are one of the few raptors in which the sexes look quite different. They are 18 to 20 inches long with a wingspan of 40 to 46 inches. They weigh 13-19 ounces.

#### habitat

Northern Harriers like open grassland and cattail marshes, wet meadows, pastures, prairies, croplands, and woodlands. They do not like to be far from water. They nest on the ground in dense grass and hayfields.

#### adaptations

Unlike other hawks, the Northern Harrier relies on its hearing as well as its vision to capture prey.

- It has large ear openings in its skull, and the feathers of its face are stiff to help transmit sound.
- The Northern Harrier has a pronounced facial disk like an owl, and their hearing is much more acute than other hawks, though not as acute as owls.
- The Northern Harrier hunts by flying low to the ground looking for small rodents.
- The male will perform repeated swoop-and-stall dives both during courtship and after pair bonding.
- Some males pair with up to five mates in a season.

# food/feeding

The Northern Harrier feeds on small mammals, especially voles. It also eats birds, snakes, lizards, toads and large insects.

- It has been known to eat larger prey such as rabbits and ducks and to subdue large prey by drowning it.
- Northern Harriers hunt in grasslands, especially near wetlands and agricultural areas.
- The male will sometimes pass food to the female while both are in flight. The male calls to the female, who leaves the nest to join him in

the air, turns partly on her side and receives prey dropped from 10 to 20 feet.

#### reproduction

Courtship occurs for Northern Harriers between March 24 and May 3. Most males are mated to one or two females at the same time. Some males pair with up to five mates in a season.

- Their nest is a raised platform of vegetation placed on the ground in dense shrubs, cattails or tall vegetation. The nest is built by the female, with the male providing some material.
- From three to nine eggs are laid in May. Eggs are pale blue at laying and turn white and unspotted in a few days.
- Females incubate the usually four to six eggs for 30 to 32 days and take care of the offspring while the male provides the bulk of the food for his mates and their nestlings.
- The eggs hatch in June. Hatchlings are covered in white down, with their eyes open.
- The young can fly at 30-35 days, and are on the wing in abundance in early August.

# key facts

Northern Harriers are one of the few raptors in which male and female look different.

- They are major wetlands predators. They hunt by flying slowly, close to the ground, looking for small rodents.
- They are one of the few raptors in which the sexes look quite different. They are 18 to 20 inches long with a wingspan of 40 to 46 inches. They weigh 13-19 ounces.
- They have keen senses and use hearing as well as vision to hunt. They have a pronounced facial disk like that of an owl.
- They are acrobats in the air. The male will perform impressive and repeated swoop-and-stall U-shaped dives both during courtship and after pair bonding. The male will pass food to the female while they are both in the air.
- Harriers are so named because they harry (raid or annoy) their prey by their continuous low-flying habit.
- The Northern Harrier population declined in the 20<sup>th</sup> century from loss of wetlands and changes in farming practices. Now the population is stable or only slightly declining in most areas.

# Red-winged Blackbird



**Adult Male** 

Adult female

## description

The male and female of this species differ considerably. The male is black with red shoulders and the female is brown and striped all over. They have a sharply pointed bill. The black male can hide the brilliant red shoulders or show them off in a dazzling display. The striped female looks so different from the male that she could almost be mistaken for a large dark sparrow. They are about 7-9 inches long, have a wingspan of 12-16 inches, and weigh 1.1 to 2.7 ounces.

#### habitat

Red-winged Blackbirds live in cattail and saltwater marshes and wet meadows. They breed in a variety of wetland and grassy areas, including marshes, meadows, alfalfa fields, and open patches in woodlands. They roost in habitats with dense cover. adaptations

The black male can hide his brilliant red shoulders or show them off.

- When singing to defend territory or to attract a female, the male fluffs the red epaulettes and half-spreads his wings to show off the red to the fullest extent.
- Males whose red shoulders were concealed with black lost their territory to rivals.
- Their song is short and raspy.
- The Red-winged Blackbird forms roosting congregations in all months
  of the year. In the summer it will roost in small numbers at night in
  the wetlands where it forages and breeds.
- In winter, it can form huge congregations of several million birds, which congregate in the evening and spread out each morning.
- Some may travel as far as 50 miles between the roosting and feeding sites. They commonly share winter roosting sites with other Blackbird species and European Starlings.
- They do not migrate, but stay in the region year-round.

## food/feeding

This species feeds on seeds, insects, beetles, caterpillars, grasshoppers, spiders, millipedes and snails.

- During the breeding season, their diet is primarily insects with some seeds, grain and other plant matter.
- They will catch insects in flight. During the non-breeding season, their diet is primarily seeds, grains and berries.
- They probe in vegetation for insects, spreading their bill to look in plants and under objects. They glean seeds from the ground.

#### reproduction

The male Red-winged Blackbird usually arrives at nesting sites a week or so ahead of the female.

- A flashy and richly voiced male who has managed to establish a large and productive territory will attract several mates to his cattail mansion.
- Their nest is an open cup woven with dried cattail leaves and lined with grass, cattail seed down and other soft materials.
- They make their nests in cattails or shoreline shrubs from mid-May through June. Eggs are typically oval, pale blue-green to gray in color, overlaid with streaks, blotches and spots.
- The clutch size is usually 3-4 eggs. The hatchlings are helpless with sparse down. One male may have as many as fifteen different females making nests in his territory.
- The male fiercely defends his territory during breeding season. He
  vigorously keeps other males out and defends the nests from
  predators. He will attack much larger animals, including horses and
  people.

# key facts

- Male and female Red-winged Blackbirds look dramatically different.
   The males are dressed for show and the females for concealment.
- The male usually arrives at nesting sites a week or so ahead of the female. A flashy and richly voiced male who establishes a large and productive territory, will attract several mates to his cattail mansion.
- The male fiercely defends his territory. He may spend more than a quarter of the daylight hours in territory defense.
- When singing to defend territory or to attract a mate, the male fluffs his red epaulettes and half-spreads his wings to show off the red to the fullest extent. The Red-winged Blackbird's song is short and raspy.

- They remain in the region year-round and roost in congregations in all months of the year, sharing their roosting sites with other Blackbird species and European Starlings.
- The striped female looks so different from the male that she could almost be mistaken for a large dark sparrow. Red-winged Blackbirds are about 7-9 inches long, have a wingspan of 12-16 inches, and weigh 1.1 to 2.7 ounces.

# Red-tailed Hawk

#### description

Red-tailed Hawks are large, stocky birds. They are brown with a white breast and a broad, rust-colored tail. The male and female look alike except that the female is larger. Their plumage is extremely variable. They are 18-25 inches long, and have a wingspan of 46 to 58 inches. They can weigh as much as four pounds, but normally weigh one and a half to three pounds.

#### habitat

The Red-tailed Hawk is the most common and widespread hawk in North America. It is a bird of open country. It is found in open areas with scattered elevated perches, including agricultural areas, fields, pasture, parkland, broken woodland, and scrub desert. It is frequently seen on utility poles where it watches for rodents in the grass along the roadside. It nests in trees and on cliffs, and hunts over grasslands, open woodlands and agricultural areas. It is a common, permanent Great Basin resident. adaptations

The Red-tailed Hawk is often a sit-and-wait predator, usually watching from an elevated perch for available prey.

- They spend little time in the air unless the wind is suitable for static soaring or hovering.
- Their call is a raspy, scraping, down slurred "kree-eee-ar" scream.
- This is a common, permanent Great Basin resident. Migrants from the north cause their peak numbers to be reached in the winter.

# food/feeding

Red-tailed Hawks eat primarily ground squirrels and other small rodents. They also eat a wide variety of other animals including birds and snakes, even rattlesnakes. reproduction

In the courtship display, a pair soars in wide circles at a great height. The male dives down in a steep drop, then shoots up again at nearly as steep an angle. He extends his legs and touches or grasps her briefly. The pair may grab onto one another and may interlock their talons and spiral towards the ground.

- The Red-tailed Hawk's nest is a bulky bowl of sticks in a tall tree or on a cliff ledge. It is usually added to each year and lined with bark, green twigs, and other items.
- The female lays one to three eggs in April. Both parents incubate the eggs for about a month. The hatchlings are helpless and covered with white down. The female raises the young alone. There are usually two fledglings.

• The young fly in June or July when they are 6-7 weeks old. About half of nests are successful in raising any young.

# key facts

- The Red-tailed Hawk is the most common and widespread hawk in North America.
- It is a bird of open country with a length of 18-25 inches and a wingspan of 46 to 58 inches. It weighs from one and a half to two pounds.
- This bird is a sit-and-wait predator that spends little time in the air unless the wind is suitable for static soaring or hovering.
- Male and female Red-tailed Hawks perform an impressive grasp-and spiral aerial display as part of their courtship and mating.
- The sound this hawk makes is a raspy cry. It is used in movies to represent any hawk or eagle anywhere in the world.

# Sandhill Crane

# description

The Sandhill Crane is a large bird with long legs and a long neck. It is 47 inches long with a wingspan of six and a half feet. It weighs from seven to ten pounds. It has a long, pointed bill, and holds its neck straight both at rest and in flight, not tucking it in like herons do. Its dark gray legs are extended in flight. It has long, fluffy feathers that droop down over its tail and primaries. It has a dark bill. It has entirely gray plumage that often becomes stained with rust or brown about the back and wings. It has whitish cheeks and chin and a rust eye area.

- The sexes look alike with the male being slightly larger.
- They are normally long-lived and live up to twenty years.

#### habitat

Sandhill Cranes breed in open marshes or bogs, and in wet grasslands and meadows. They feed in marshes and grain fields.

## adaptations

Sandhill Cranes are great dancers. Both males and females dance year-round, but especially in breeding season. Often with some bowing, they perform a series of stiff-legged leaps to a height of 8-10 feet or more, passing beside or even over each other. While in the air, they may strike forward with their feet, wings raised or drooped, necks stretched out and bills elevated. A clamor of cruk-cruk sounds accompanies the dance.

- Mated pairs remain together for life, and migrate south as a group with their offspring.
- They fly with neck and legs fully extended. Often they travel in large, V-shaped flocks.
- Birds are usually heard before they are seen in flight. Their call is a deep, resonant rolling trumpet and rattling.

# food/feeding

Foods vary widely depending on what is available.

- Sandhill Cranes eat grains and seeds, shoots and tubers, some worms, crayfish, insects and other invertebrates, frogs, toads and snakes.
- Sometimes the Sandhill Cranes prey on Red-winged Blackbird young.
   Because of this, Red-winged Blackbirds will attack cranes on sight,
   even landing on the crane's back, or pecking it in flight.
- These birds are omnivorous, feeding on subsurface food by probing. They glean other seeds and foods on the surface of the ground. They feed on land or in shallow marshes with emergent vegetation.

# reproduction

Sandhill Cranes do not breed until they are two to seven years old.

- When they do breed, they nest from mid-May to mid-June.
- They lay two-egg clutches once a year but rarely raise more than one young to a fledgling.
- Their nest is a large mound of vegetation in water, either floating or attached to vegetation.
- Eggs are olive-splotched, irregularly marked with darker brown.
- Both parents incubate the eggs. They hatch in 29 to 32 days.
   Hatchlings are covered with down and are able to walk soon after hatching.
- A second hatching is often larger and healthier. The hatchlings feed themselves within one day. The young fly at about 50 days.

# key facts

Sandhill Cranes pair for life. They do not breed until they are two to seven years old. They usually lay 2-egg clutches, but only one or even none may survive to fledge. They live for up to twenty years.

- They are 47 inches long, with a wingspan of six and a half feet. They weigh seven and a half to ten pounds.
- Male and female Sandhill Cranes perform impressive dances together.
- They are omnivorous, feeding by probing under the surface of the ground or on top. They feed primarily on land or in shallow marshes with emergent vegetation.
- Numbers and breeding grounds for Sandhill Cranes are in general decline, but populations are not considered as endangered as is their relative, the Whooping Crane.

# Sora Rail (or simply Sora)

# description

The Sora Rail is a small, secretive bird. Like all rails, they are thin birds—from which the phrase, "thin as a rail" originates. They have a rather small head, a neck of moderate length. Their body is slender. They have long, strong, greenish legs with long claws. Their wings are short and broad. Their bill is yellow as the base and darker at the end. They have a broad, brownish-black band at the base of the bill and on the central crown, the chin and the neck. Their breast and abdomen are grayish-white; with sides barred with brownish-black and grayish-white. Their abdomen is reddish-yellow.

#### habitat

The Sora Rail likes fresh water marshes with abundant cattails, bulrushes, sedges, and grasses. They breed in shallow wetlands with lots of emergent vegetation, such as cattails, sedges and bulrushes.

#### adaptations

Like all rails, they are very thin.

- The Sora Rail frequently flicks its short stubby tail to distract prey into perceiving the tail to be the bird's head.
- They are prodigious egg layers. Clutches may contain as many as 18 eggs. Since their nine-inch bodies cannot cover so large a clutch for incubation, they must arrange them in two layers and frequently rearrange them beneath themselves in order to maintain suitable incubation temperatures.
- Their call is a long, high whinny. They also have a two-note cry, "sor-AH" with the second note higher. They are often heard in Spring.

# food/feeding

The Sora Rail gleans and probes vegetation and substrate for marsh plant seeds, plants, aquatic invertebrates and water snails.

# reproduction

The Sora Rail breeds in shallow wetlands with lots of emergent vegetation, such as cattails, sedges and bulrushes.

- They usually build their nests over water and underneath concealing vegetation.
- Their well-built basket nest is made of grass and aquatic vegetation and is built by both male and female.
- The female usually lays 8-12 eggs and both parents incubate them for 18-20 days.
- The Sora Rail's nest often contains eggs and young in various stages of development, perhaps partly due to uneven heating of so many eggs beneath so small a bird.
- The hatchlings are covered with black down. They leave the nest within a day, and are fed by both parents. They can fly at 21-25 days.

## key facts

Sora Rails are 8-10 inches long and weigh 2-4 ounces. They are thin birds, from which the phrase "thin as a rail" originates.

- Their distinctive descending call is easily heard from the depth of the cattails, but actually seeing the little marsh walker is more difficult.
- This bird flicks its stubby tail to distract prey into thinking the tail is the head.
- The Sora Rail lays more eggs (up to 18) than its thin body can cover for incubation. So, the male and female arrange them in layers and rearrange them frequently.
- They migrate at night, many for long distances, to South America.
- Populations have declined with loss of marsh habitat, but they are still common and widespread. The Sora Rail is the most widely distributed Rail in North America.

# White Pelican

## description

A wonderful bird is the pelican. His bill will hold more than his belican. Dixon Lanier Merritt

In the early breeding season, the bill and legs of the White Pelican are bright orange. The head has white plumes and there is a laterally flattened horn on the upper mandible of both sexes. Later, the leg color fades, the head darkens, and the plumes and horn are lost. Pelicans can live 25 years or more.

- White Pelicans are 50 to 65 inches long, have a wingspan of 6.5 to 9.5 feet, and weigh 12 to 20 pounds.
- The sexes look alike although males are heavier than females.

#### habitat

American White Pelicans (to distinguish this species from those of other continents) live in a variety of aquatic and wetland habitats, including rivers, lakes, reservoirs, estuaries, bays and marshes. These habitats are used variously for nesting, loafing, and feeding. They rest on islands and peninsulas as well as exposed rocks in rivers. Their nesting colonies are usually situated on islands or peninsulas in large lakes, where they are isolated from mammalian predators.

At the Great Salt Lake, the White Pelicans nest on Gunnison Island. It
is an official bird sanctuary. Some also nest on Cub and Hat Islands.
All three islands are closed to human use. These nesting grounds are
far from food sources, and the pelicans fly to Bear River Migratory
Bird Refuge, Farmington Bay, Utah Lake, Cutler Marsh and Willard
Bay State Park to find fish. Some fly as much as 200 miles round trip to
find food.

# adaptations

White Pelicans have brightly colored legs and bills and additional plumage for the breeding season.

• The bill is a naked skin pouch that holds 3-5 gallons of water that is squeezed out before eating. The bill also opens and the pouch pulsates for cooling.

- They are spectacular fliers. They take off by running on the water and beating their wings. Then they push off with both feet in unison. They fly with their head back on their shoulders and their bill resting on their folded neck. Flocks sometimes circle in unison high in the air or cruise with bellies barely an inch over the water surface.
- They waste little energy on unnecessary wing flapping, instead they ride the thermals in migration and between breeding and feeding grounds.
- They will hold their mouths open to catch rainwater.
- They feed cooperatively, often coordinating swimming groups to encircle fish or to drive them into the shallows where they can be more easily caught with synchronized bill dipping.

## food/feeding

The White Pelican's diet consists mainly of small fish. At the Great Salt Lake Preserve they eat minnows, carp, chub, and suckers. They also eat bullhead, crayfish and adult and larval tiger salamanders. The pelicans feed in freshwater marshes and rivers. From the Great Salt Lake they may fly 200 miles a day to feed, either to Utah Lake, Provo Bay, Farmington Bay, Bear River Migratory Bird Refuge or to Cache Valley.

- Breeding adults are expected to eat 20% to 30% of their body mass each day. This is about four pounds of food a day.
- Their body is buoyant and not built for diving like the Brown Pelican. Instead of diving, the White Pelican dips its head underwater to scoop up fish. Several pelicans may fish cooperatively.
- Cooperative foraging occurs when the White Pelicans form coordinated swimming groups to drive fish into the shallows or to encircle them.
- Nocturnal foraging is common during the breeding season but not in the winter. Fish are located by touch during frequent dipping of the bill. Typically the White Pelicans float and swim while dipping their bills. They will scoop prey into their pouch, then raise their bills above horizontal to swallow prey.
- The young shove their head, neck and upper body into the mouths and throats of their parents to feed on regurgitated fish. They are insatiable and sometimes so tenacious that a parent will violently terminate the feeding by whipping or snapping its head and neck to shake a youngster free. Afterwards, the young pelican appears exhausted, even dazed, and may sprawl out on the ground without

moving. It may have experienced oxygen deprivation while in its parent's throat. Sometimes a tantrum will ensue and the young bird will grovel on the ground and peck and bite at its own wings or body.

## reproduction

During courtship, the female White Pelican bows to the male while raising her breast, elevating folded wings, arching her neck and pointing her bill down against her breast. The male responds by a close approach. He extends his pouch and extends his neck over the female and sways his head. The pair performs a strutting walk and is often joined by others.

- At the Great Salt Lake, the White Pelicans nest on Gunnison Island. It
  is the official bird sanctuary. Some also nest on Cub and Hat Islands.
  All three islands are closed to human use. These nesting grounds are
  far from food sources, and the pelicans fly to Bear River Migratory
  Bird Refuge, Farmington Bay, Utah Lake, Cutler Marsh and Willard
  Bay State Park to find fish.
- Nesting is colonial. Nests are usually built in an open area, but near driftwood, vegetation, or large rocks. A nest scrape is made on the ground in slight depressions, or on mounds of earth and debris. The nest is either lined with pebbles and debris or is completely unlined. It is built by both sexes.
- The White Pelicans migrate from their winter homes in California, Nicaragua, and Mexico, arriving in Utah starting in mid-March each year. The earliest arrive about three weeks before pairing.
- From courtship to the onset of egg-laying is about a week. Egg-laying most often occurs before June in Utah. Clutch size is commonly two.
- The young are born naked and helpless. The first chick gets the most food. Rarely is more than one young fledged. Both adults incubate eggs and tend the young. The mortality of eggs and chicks is high, and the parents generally do not renest following the loss of the first clutch. The mean number of young per nesting pair is 0.51.
- The young leave the nest in about 17 to 28 days while still flightless, and form groups with other young in the colony. In most colonies, juveniles depart in late August when the young are about 10 to 11 weeks old, and one week after their first flights. Juveniles appear similar to adults but have dirty grayish markings on their head and backs. Pelicans reach sexual maturity at 3 years of age.

## key facts

The American White Pelican is 50 to 65 inches long, has a wingspan of 6.5 to 9.5 feet (the largest wingspan in North America) and weighs from 12 to 20 pounds.

- They migrate south for the winter to Mexico, California and Nicaragua returning to Utah in mid-March. Between 10,000 and 17,000 pelicans breed each year on Gunnison, Cub and Hat Islands, all of which are closed to human use.
- Their bill is a large, orange skin pouch that holds 3-5 gallons of water. The water is squeezed out before eating. The bill opens and the pouch pulsates for cooling.
- They feed in coordinated swimming groups to encircle fish or to drive them into shallow water to be caught by synchronized bill dipping.
- They require 3-4 pounds of food a day, mostly small fish. They will fly as far as 200 miles in a day for food sources.
- White Pelicans are spectacular fliers. They circle in unison high in the air or cruise low over the water surface. They conserve wing flapping by riding thermals.
- The Great Salt Lake is an ideal habitat for the pelicans. There are thousands of acres of adjacent shallow fisheries that are high in nutrients, warm quickly, and provide superior breeding, nursery, and foraging habitats. Excellent thermal systems are created by warm spring and summer days, and nearby mountains, islands, and promontories form late morning updrafts.
- The current total number of White Pelicans is thought to be 56,000. The second or third largest breeding population in the world, 10,000-17,000, is on Gunnison Island.