

SORA - PORZANA CAROLINA

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Gruiformes Family: Rallidae Genus: Porzana Species: P. carolina

Habitat:

Biomes: Soras spend most of the year in freshwater and brackish wetlands with cattail, sedges, and rushes. During migration and winter, they also use wet pastures, ditches, impoundments, and flooded fields.

Distribution:

In US: The sora's breeding habitat is marshes throughout much of North America. They migrate to the southern United States and northern South America. Sora is a very rare vagrant to western Europe, where it can be confused with spotted crane. However, the latter species always has spotting on the breast, a streaked crown stripe, and a different wing pattern.

In Other Countries: ^^^^^^^

Holistic Description: A descending whinny emanates from the depths of cattails and rushes, but the source of this sound rarely shows itself. This secretive brown-and-gray marsh bird is a Sora, but drab it is not. When it finally pokes its head out of the reeds its bright yellow bill might have you thinking about Halloween candy corns. The Sora walks slowly through shallow wetlands a bit like a chicken that has had too much coffee, nervously flicking its tail and exposing the white feathers below.

Species Richness: NO SUBSPECIES

Population Dynamic: Few data are available on the survival of soras. Radio-marked soras in Arizona had a nonbreeding survival probability of 0.308. The authors suggest the low survival rate may be due to increased mortality of radio-marked birds. Likely causes of mortality are predation and human-caused sources such as road kill.

Evolution and Systematics:

Evolution: A Pleistocene record from Marion Co., Florida, and late Pleistocene record from the Bahamas. A slightly larger congener, Porzana auffenbergi, apparently became extinct during the Pleistocene.

Systematics: The avian order Gruiformes, which includes the rails, coots, and gallinules (Rallidae), long included a host of oddball taxa, many in their own taxonomic families but all united by a distinctive morphology of the leg bones. Yet the traditional Gruiformes apparently is not monophyletic, although the Rallidae clearly are part of a well-supported core clade of gruiform birds.

Number of Species: NO SUBSPECIES

Number of Genera: NO SUBSPECIES

Physical Characteristics:

Size and Length: Length: 7.9-9.8 in (20-25 cm) Weight: 1.7-4.0 oz (49-112 g)

Wingspan: 30-37 cm (12-14.5 in)

Coloration: Soras are mottled gray and brown with white-edged feathers, but the feature that stands out the most is their yellow candy-corn bill. Other notable features include a black mask and throat patch, vertical white lines on the sides, and a white patch under the tail. Females tend to be less brightly colored than males and have less black on the face and throat. Juveniles also lack the black mask.

General Body Features: Soras are small, chubby, chickenlike birds with long toes. They have a stubby bill unlike other rails in the United States and Canada, which have longer bills. They frequently hold their short tail cocked up.

Special Features of the Body: Their extremely woody coloration helps them blend in with their habitat with marshes, etc.

Special Features of the Head and Sensory Organs: NONE

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Morphological adaptations with the legs allow it to catch and disperse prey. They rake plants with their long toes in order to search for food.

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: Adults of both sexes have similar plumage, although females (slightly smaller) average less black on the face and throat, and usually have duskier bills.

Differences Between Juvenile Stage and Adult: Sexes are similar, but young soras lack the black facial markings and have a whitish face and buff breast.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Soras flick their tail as they walk slowly along the muddy edges of wetlands pecking at the surface for seeds, but they can also run with lightning speed and disappear from view in a flash. They often stay hidden in dense vegetation, but

forage in the open and swim across open water on occasion. Soras tend toward secrecy, but they aggressively defend their territories from other Soras. Their threat display includes neck stretching, bowing, and tail and wing spreading. If displaying fails to warn off an intruder, the territory owner gives chase. Males and females form monogamous bonds during the breeding season. Pairs court each other with a 15–30-minute stare-down followed by preening.

Locomotion: Soras move primarily by walking or running through and over wetland vegetation and debris. Reluctant to fly and difficult to flush, but flies more readily than Virginia or Yellow rails. Appears to be stronger flier during migration than when flushed from wetlands. Readily swims and dives. Sometimes submerges with only bill and eyes protruding.

Communication and Perception: The most commonly heard call is a descending whinny that lasts 2–3 seconds. The loud and boisterous whinny echoes across wetlands from spring through summer. Males and females whinny to defend their territory and to keep in touch with each other. They also give a 2-noted ker-wee or sor-ah where the second note rises in pitch, either singly or before giving a descending whinny.

Home Range: Mean distance between 46 Sora nests in Minnesota 9 m, range 1.2-30; closest active nests 3 m apart.

Degree of Sociality: Degree of sociality with conspecifics after breeding season unknown. Soras vigorously defend territories against Virginia Rails during breeding season.

Level of Aggression: Aggressively defends territories against conspecifics. Threat displays include assuming an extended upright posture, stretching the head toward the opponent, pecking the substrate, and Swanning. Swanning Displays are usually given by opposing males at territorial boundaries, and usually involve variations of bending down and forward while lifting wing feathers and spreading undertail-coverts. Black facial mask contrasting with bright yellow bill appears to reinforce frontal threat displays. Facial coloration is heightened during breeding season.

Migration: Long-distance migrant. Migrates at night to wintering grounds in the southern United States, Mexico, and Central and South America.

Predators:

Predators: Sora eggs are eaten by several species including American minks, skunks, coyotes, grackles, crows, and herons. Predation of adult soras by American minks, coyotes, hawks and owls have been reported.

Anti-Predator Defenses: CHECK AGGRESSION

Diet and Nutrition:

Adult Diet: Soras primarily eat seeds from wetland plants, but also eat aquatic invertebrates. They rake floating vegetation with their long toes in search of sedge, bulrush, grass, rice, and smartweed seeds. They also peck at the water's surface for seeds and aquatic insects such as snails, dragonflies, flies, and beetles.

Juvenile Diet: Parents feed invertebrates to chicks for 2-3 w.

Special Adaptations for Getting Prey: CHECK FEATURES

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Generally thought to be monogamous. Pospichal and Marshal reported male:female ratio of 1.9:1.0 and 1.8:1.0 in samples of 20 and 39 spring migrants in Minnesota, suggesting differential migration or inaccurate sexing. No evidence from studies on breeding grounds of polygamy or of a significant nonbreeding component of population.

Mating Season: March to July

Courtship: n first stages of pair formation, male and female stand immobile within sight of each other from a few minutes up to 15-30 min. After 2-4 wk they begin to bathe, feed, and preen near each other. Mated pairs preen each other, while bowing and facing toward or away from other member of pair. Before incubation, nearly every meeting of the pair begins with preening and ends with attempted copulation.

Territoriality: Chasing appears to be the most important method of establishing and maintaining territories. Sparring consists of jumping up and down while facing each other, but not actually fighting. Fighting includes jumping up and simultaneously pecking and clawing opponent, or clawing opponent while lying backward supported on wings. Fighting is most frequent between males, but occasionally occurs between females. Captive Soras chase throughout daylight hours and even at night.

Mating: Pair usually preens before copulation. Male approaches female in Precopulatory Chase with head held rigid and elevated, softly cooing. Receptivity of female increases as time of egg-laying approaches. Male mounts from behind and female lowers her head to substrate or water. Copulation lasts only a few seconds, then male dismounts or female runs out from underneath male. During copulation, male flaps wings, apparently to maintain balance. Postcopulatory Displays include head-bowing and elevating of wing- and tail feathers in male, and "body shake" in female.

Nesting: Soras nest at the edges of shallow wetlands in dense patches of cattails and sedges. They build a nest either on top of mounds of vegetation or attached to plant stems above the surface of the water. Females loosely weave together a shallow basket with cattails and sedges that is approximately 6 inches wide. Females build the nest, but males often bring them

vegetation for the nest. The female starts laying eggs as soon as she completes the foundation and continues to add material to the nest while laying. Females also bend down the vegetation above the nest, tucking the ends into the rim to provide additional cover.

Egg-Laying: Egg Shape: Ovate Egg Length: 32.01 mm Egg Width: 22.38 mm Egg Mass: 8.36g Egg Color: Glossy, ground rich buff, usually cinnamon, cream, or pale olive. Irregularly spotted with brown and russet. Sora eggs are darker buff, and spots are usually larger, with more even outlines than those of Virginia Rail. Egg Texture: Smooth and Glossy Clutch Size: 8-11 eggs.

Hatching and Incubation/Gestation: Covered in black down with orange tufts at the base of the lower bill. Nestlings are precocial and are capable of walking and swimming short distances (< 3 ft (0.91 m)) by the end of their first day. Young soras are independent by about 4 weeks of age. Soras brood once per season. Some late broods may be second nesting attempts, but there is only one report in the literature of a second brood attempt after a successful nest.

Development: NONE

Parental Care: Newly hatched young may be brooded by 1 parent near nest, even in shallow (15 cm) water, while other parent incubates remaining eggs. Young chicks are fed at first entirely by parents. At 2–3 d after hatching, chicks begin leaving nest to feed nearby. However, chicks continue to receive food items from parents for 2–3 wk. Food items brought by adults are presumably important in influencing chicks' ability to recognize food.

Lifespan: Around 5-6 years.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Soras are common and the most abundant rail species in North America. Their population was stable between 1966 and 2015, according to the North American Breeding Bird Survey. Partners in Flight rates Sora a 9 out of 20 on the Continental Concern Score, which means it is not on the Partners in Flight Watch List. Although Sora populations are stable, they rely on wetland habitat that is dwindling due to urban and agricultural development. Soras migrate at night and frequently collide with lighted towers during migration, which could potentially affect the population. Sora hunting is legal in 31 states and in Manitoba and Ontario, Canada, but the popularity of hunting Sora has declined in recent years and it is unclear if hunting has any significant impacts.

Conservation Efforts: ^^^^^

Extra Facts:

1. It may not seem like it, because seeing a Sora takes some effort, but the Sora is the most abundant and widespread rail in North America.
2. Soras have earned several nicknames including Carolina rail, soree, meadow chicken, and ortolan. The name ortolan was probably given to them by hunters keen on eating the small bird, much like the actual ortolan, which is a bunting from Europe that is a delicacy in France, although an illegal one.
3. Soras might not look like they can fly long distances with their stubby wings and chubby bodies, but they fly hundreds of miles each spring and fall to wetlands in Central and South America.
4. Loud noises sometimes give Soras a start, but instead of jumping like we might do they give a whinny call. Even the slamming of a car door may startle a Sora into calling.

Notable Species: NONE