

# Liberty Wildlife Rehabilitation Foundation



## Education Program's Natural History



## Birds of the Education Aviary

## Gambel's Quail

**Habitat:** Gambel's Quail live in thorny and brushy vegetation throughout the Sonoran, Chihuahuan, and Mojave deserts as well as parts of the Great Basin, up to a mile high in the easternmost part of their range. Look for them along river valleys and creeks, in washes and arroyos, at springs and seeps, and in the chaparral and oak woodlands of high desert settings. In agricultural areas they seek out irrigation ditches, brush-lined river channels, and brushy fence lines edging irrigated fields. In Arizona the bird's range overlaps almost exactly with that of the western honey mesquite, which supports large numbers of quail. Other plants that make for productive Gambel's Quail habitat include desert hackberry, catclaw acacia, yuccas, saguaro, and prickly pear cactus. In washes and riparian settings in the eastern and westernmost parts of their range, they occur near dense thickets of saltbush, saltcedar, arrowwood, and screwbean mesquite.



**Diet:** Gambel's Quail eat mostly plants. They eat seeds of grasses, shrubs, trees, and cactus, and will pick mesquite seeds from cattle and coyote droppings. They also eat leaves and grass blades. From summer into fall, berries and cactus fruit, including cholla, saguaro, and prickly pear become an important part of the diet. Gambel's Quail also eat insects, especially in spring and through the peak of nesting season. Chicks eat only animal matter for the first few days after hatching, including beetles, small worms, moth caterpillars, and grasshoppers.

### Nesting info:

Clutch Size:	5-15 eggs
Number of Broods:	1-2 broods
Egg Length:	1.1-1.3 in (2.8-3.4 cm)
Egg Width:	0.9-1.0 in (2.3-2.6 cm)
Incubation Period:	21-31 days
Egg Description:	Dull white to buff with irregular, cinnamon-brown splotches.
Condition at Hatching:	Covered in dense down, and immediately able to leave the nest and follow parents.

*Courtesy of [allaboutbirds.org](http://allaboutbirds.org)*

**Lifespan:** Average life expectancy for a wild quail is 1.5 years although on occasion they may live for up to four years or longer.

*Courtesy of [desertmuseum.org](http://desertmuseum.org)*

**Other Facts:**

- Like many desert-dwelling species, Gambel's Quail populations undergo a "boom-and-bust" cycle. A year with ample winter-spring rainfall that generates lots of green vegetation will yield larger clutches and an abundance of chicks. Dry winters mean less food and lower productivity.
- Just before her eggs hatch, the female Gambel's Quail calls to the chicks, who cheep to each other from inside the eggs. The eggs hatch in synchrony, with the chick cutting a neat hole in the largest part of the shell and leaving an intact piece of membrane to serve as a hinge—the chick pushes on the shell and opens the door that it has created.

**Quincy**

Quincy came to us as a surrendered illegal pet in the summer of 2021. Having been taken from the wild at a very young age, Quincy is completely imprinted and cannot survive on his own. We believe he came to Liberty when he was about 2 ½ years old.

**Chloe**

Chloe came to us in 2022 as a young imprinted quail. She is bonded with Quincy and will often get on your arm with him.

**Clementine**

Clementine came to Liberty in 2023 as a young imprinted quail. After spending many weeks on the rehab side, we tried to release into the local wild covey around Liberty. Each time she returned to the enclosure within a day.

# Northern Cardinal

**Habitat:** Look for Northern Cardinals in dense shrubby areas such as forest edges, overgrown fields, hedgerows, backyards, marshy thickets, mesquite, regrowing forest, and ornamental landscaping. Cardinals nest in dense foliage and look for conspicuous, fairly high perches for singing. Growth of towns and suburbs across eastern North America has helped the cardinal expand its range northward.

**Diet:** Northern Cardinals eat mainly seeds and fruit, supplementing these with insects (and feeding nestlings mostly insects). Common fruits and seeds include dogwood, wild grape, buckwheat, grasses, sedges, mulberry, hackberry, blackberry, sumac, tulip-tree, and corn. Cardinals eat many kinds of birdseed, particularly black oil sunflower seed. They also eat beetles, crickets, katydids, leafhoppers, cicadas, flies, centipedes, spiders, butterflies, and moths.

**Nests:** A week or two before the female starts building, she starts to visit possible nest sites with the male following along. The pair call back and forth and hold nesting material in their bills as they assess each site. Nests tend to be wedged into a fork of small branches in a sapling, shrub, or vine tangle, 1-15 feet high and hidden in dense foliage. They use many kinds of trees and shrubs, including dogwood, honeysuckle, hawthorn, grape, redcedar, spruce, pines, hemlock, rose bushes, blackberry brambles, elms, sugar maples, and box elders.

Clutch Size:	2-5 eggs
Number of Broods:	1-2 broods
Egg Length:	0.9-1.1 in (2.2-2.7 cm)
Egg Width:	0.7-0.8 in (1.7-2 cm)
Incubation Period:	11-13 days
Nestling Period:	7-13 days
Egg Description:	Grayish white, buffy white, or greenish white speckled with pale gray to brown.
Condition at Hatching:	Naked except for sparse tufts of grayish down, eyes closed, clumsy.

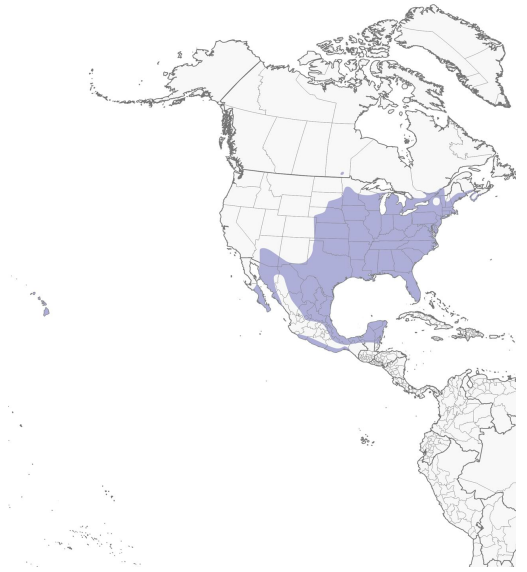
*Courtesy of [allaboutbirds.org](http://allaboutbirds.org)*

**Lifespan:** On average, northern cardinals live for 3 years in the wild although several individuals have had life spans of 13 to 15 years. The longevity record for a captive northern cardinal is 28 ½ years!

*Courtesy of Penn State New Kensington*

## Other Facts:

- Only a few female North American songbirds sing, but the female Northern Cardinal does, and often while sitting on the nest. This may give the male information about when to bring food to the nest. A



mated pair shares song phrases, but the female may sing a longer and slightly more complex song than the male.

- The male cardinal fiercely defends its breeding territory from other males. When a male sees its reflection in glass surfaces, it frequently will spend hours fighting the imaginary intruder.

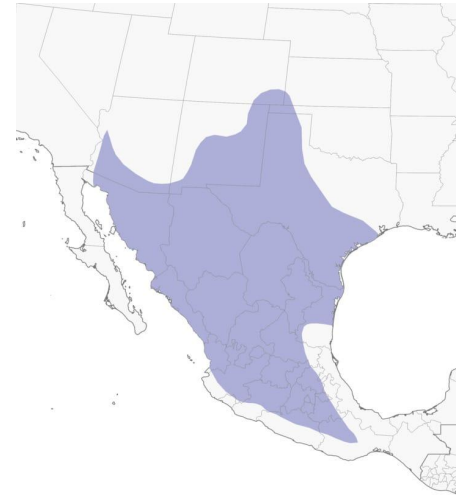


### **Cardi B**

Cardi B came to Liberty as a young imprinted Cardinal in 2021. She strongly associates people with food, and it would be unlikely that she could survive in the wild.

## Curve-billed Thrasher

**Habitat:** Curve-billed Thrashers in the eastern part of the range (*curvirostre* group) dwell in open country of many kinds, including brushlands, thorn scrub with mesquite, thickets bordering woodlands, pinyon-oak woods, and desert flats with prickly pear, yucca, and cholla cactus. To the west, the Sonoran Desert population (*palmeri* group) favors similar habitats that usually hold creosote bush, saguaro, palo verde, and cholla. Farther north, in the plains of Colorado, grasslands with cholla provide habitat.



**Diet:** Curve-billed Thrashers eat a variety of insects, spiders, and snails, along with fruit and seeds. They forage on the ground, using the bill to sweep back and forth through leaf litter and soil. They toss large pieces of vegetation—even “flipping cow chips”—to one side to uncover insect prey. Curve-billed Thrashers do not use their strong legs for scratching in leaves, as some thrashers do; rather, the legs provide leverage, and the tail is also used as a support. They pluck ripe berries from perches in trees or bushes and sometimes eat flowers, such as of the agave plant. They also eat seeds of saguaro and other cactus, and it is likely that cactus fruit supplies much-needed water during the warm spring and early summer, before the late-summer rains arrive.

**Nests:** Most nests are constructed 3–5 feet above ground in shrubs, small oaks, acacia, mesquite, cholla, prickly pear, nopalo, mistletoe, and yucca, though some as low as 1 foot and as high as 9 feet have been reported. A few nests have even been discovered inside cavities in large saguaro and sycamore trees.

Clutch Size:	3-5 eggs
Number of Broods:	1-2 broods
Egg Length:	1.0-1.3 in (2.6-3.3 cm)
Egg Width:	0.7-0.9 in (1.8-2.2 cm)
Incubation Period:	12-15 days
Nestling Period:	11-16 days
Egg Description:	Light bluish-green to pale yellow with reddish-brown speckling
Condition at Hatching:	Nearly naked and helpless with sparse long gray down.

**Lifespan:** Usually between 1 and 4 years. The oldest recorded Curve-billed Thrasher was at least 10 years, 9 months old when it was found in Arizona in 1946. It had been banded in the same state in 1936.

*Courtesy of [allaboutbirds.org](http://allaboutbirds.org)*

### Other Facts:

- The Curve-billed Thrasher that lives in the Sonoran Desert of Arizona and northwestern Mexico looks different than the form that lives in the Chihuahuan Desert of Texas and central Mexico, and they may be separate species. The Texas and eastern bird has a lighter breast, more contrasting spots, pale

wingbars, and white tail corners. The more western form has a grayer breast with less obvious spots, inconspicuous wingbars, and smaller, more grayish tail corners.

- Thrashers have impressive bills, but the Curve-billed's is actually straighter and shorter than relatives such as LeConte's, Crissal, and California Thrashers. That's because when famed English naturalist William John Swainson first described Curve-billed Thrasher, from a Mexican specimen in 1827, he had not yet seen these other three species.
- The oldest recorded Curve-billed Thrasher was at least 10 years, 9 months old when it was found in Arizona in 1946. It had been banded in the same state in 1936.

### **Pico**

Pico came into Liberty in 2020 as a young thrasher who had sustained an extreme injury to its beak with the majority of it missing. Depending on the severity of the injury, beaks may grow back, but unfortunately, Pico's did not.

## Inca Dove

**Habitat:** Inca Doves use farmlands, parks, suburbs, and urban areas with open ground and scattered trees and shrubs such as palo verde and oak in dry areas of the Southwest. They generally avoid forested areas, seeking bare ground with short vegetation instead.

**Diet:** Inca Doves eat almost exclusively seeds. They walk along the ground picking at seeds from grasses, flowers, and shrubs. They also eat grains and seeds from bird feeders including black oil sunflower seeds, cracked corn, millet, and nyjer seeds.

**Nests:** Inca Doves nest in trees and shrubs as well as on utility poles, houses, and other structures. Nest height ranges from half a foot to 50 feet above the ground. The male gathers grasses and twigs for the female. He walks up to her with pieces of nesting material in his mouth, climbs up her back, and passes it to her or lays it by her side. She then arranges the grasses and twigs into a nest and occasionally collects nesting material herself. Males and females work together to build a rough and flimsy platform of twigs, grass, leaves, rootlets, and strips of bark. Construction takes about 3 days. The nest usually has no lining, but sometimes they put a bit of grass or a few feathers in the nest. Inca Doves often nest several times in the same year, and they frequently reuse the same nest for each attempt. Over time the nest becomes cemented with excrement left from nestlings. The nest is about 2 inches across and 1 inch high. Though they usually build their own nests they also reuse old nests built by Mourning Doves, Northern Mockingbirds, Cactus Wrens, or Northern Cardinals.



Number of Broods:	2-5 broods
Egg Length:	0.8-1.0 in (2-2.5 cm)
Egg Width:	0.6-0.7 in (1.5-1.8 cm)
Incubation Period:	13-15 days
Nestling Period:	12-16 days
Egg Description:	White and unmarked.
Condition at Hatching:	Naked with sparse down.

*Courtesy of [allaboutbirds.org](http://allaboutbirds.org)*

**Lifespan:** In the wild it is believed they will live up to 7 years, in captivity: 13 years.

### Rust

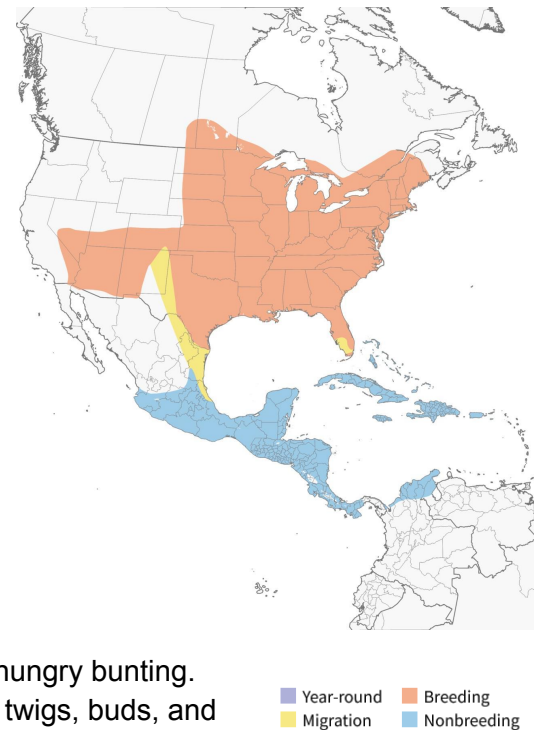
Rust came to Liberty in 2022 with a shoulder injury. You can often spot him hanging out in the upper corner near the heat lamp.



## Indigo Bunting

**Habitat:** Indigo Buntings breed in brushy and weedy areas. They're common on the edges of woods and fields; along roads, streams, rivers, and powerline cuts; in logged forest plots, brushy canyons, and abandoned fields where shrubby growth is returning. While migrating and in winter, Indigo Buntings forage in fields, lawns, grasslands, rice fields, as well as in shrubs, and trees.

**Diet:** Indigo Buntings eat small seeds, berries, buds, and insects. Common seed forage includes thistles, dandelions, goldenrods, and grain such as oats; berries eaten include blueberries, strawberries, blackberries, serviceberries, and elderberries. Spiders and insect prey, which form the majority of their diet during summer months, may include caterpillars, grasshoppers, aphids, cicadas and beetles such as canker worms, click beetles, and weevils. The brown-tail moth caterpillar, which is covered with noxious hairs that cause nasty rashes and respiratory problems in people, presents no obstacle to a hungry bunting. On arrival to breeding grounds in spring, Indigo Buntings may feed on twigs, buds, and leaves of trees including aspen, cottonwood, oaks, beech, elm, maple, and hickory.



**Nests:** The female Indigo Bunting builds the nest alone—a process that takes up to 8 days early in the season and as little as 2 days later in the summer. The male may watch but does not participate. The nest is an open cup woven of leaves, grasses, stems, and bark, and wrapped with spider web. The inside of the cup is lined with slender grasses, tiny roots, strips of thin bark, thistle down, and sometimes deer hair. The cup is about 1.5 inches deep inside, with an outside diameter of 3 inches and an inside diameter of two inches.

*Courtesy of allaboutbirds.org*

Clutch Size:	3-4 eggs
Number of Broods:	1-3 broods
Egg Length:	0.7-0.8 in (1.7-2.1 cm)
Egg Width:	0.5-0.6 in (1.3-1.5 cm)
Incubation Period:	11-14 days
Nestling Period:	8-14 days
Egg Description:	Unmarked white; a few have brownish spots.
Condition at Hatching:	Naked except for sparse down; eyes closed; helpless.

**Lifespan:** Up to ten years

### Indigo Buntings

Our buntings here at Liberty were acquired by authorities through a federal investigation and were "evidence" in a trial. We did not have any further details on the case. We do not know how old the buntings

were when they arrived in 2022, but we believe we currently have 2-4 of them.

## European Starling

**Habitat:** Starlings typically live around people, using mowed lawns, city streets, and agricultural fields for feeding; and trees, buildings, and other structures for nesting. Their main requirements are open, grassy areas in which to forage, a water source, and trees or buildings that contain suitable cavities or niches for nesting. They avoid large, unbroken stretches of forest, chaparral, and desert.

**Diet:** Starlings will eat nearly anything, but they focus on insects and other invertebrates when they're available. Common prey include grasshoppers, beetles, flies, caterpillars, snails, earthworms, millipedes, and spiders. They also eat fruits including wild and cultivated cherries, holly berries, hackberries, mulberries, tupelo, Virginia creeper, sumac, and blackberries; as well as grains, seeds, nectar, livestock feed, and garbage.

**Nests:** Males choose the nest site and use it to attract females. The nests are virtually always in a cavity, typically in a building or other structure (look for them in streetlights and traffic signal supports), an old woodpecker hole, or a nest box. Starlings also occasionally nest in burrows and cliffs. Nest holes are typically 10-25 feet off the ground but can be up to 60 feet high.

Male starlings begin building the nest before mating takes place, filling the cavity with grass and pine needles, along with feathers, trash, cloth, and string. There's a depression near the back of the cavity where the cup is built and lined with feathers, fine bark, leaves, and grass. Females oversee the final arrangements and may discard some of the material the male added. Starlings also add fresh green plants to the nest throughout the nesting period, particularly during laying and incubation. Nests can be built in as little as 1-3 days. Both sexes incubate the eggs.

Clutch Size: 3-6 eggs

Number of Broods: 1-2 broods

Egg Length: 1.1-1.3 in (2.7-3.2 cm)

Egg Width: 0.8-0.9 in (1.9-2.3 cm)

Incubation Period: 12 days

Nestling Period: 21-23 days

Egg Description: Bluish or greenish white.

Condition at Hatching: Helpless, with sparse grayish down. Newly hatched starlings weigh about 6.4 grams. The eyes stay closed for 6-7 days.



**Lifespan:** 2-3 years in the wild, up to 20 years in captivity.

**Other Facts:**

- All the European Starlings in North America descended from 100 birds set loose in New York's Central Park in the early 1890s. The birds were intentionally released by a group who wanted America to have all the birds that Shakespeare ever mentioned. It took several tries, but eventually the population took off. Today, more than 200 million European Starlings range from Alaska to Mexico, and many people consider them pests.
- Because of their recent arrival in North America, all of our starlings are closely related. Genetically, individuals from Virginia are nearly indistinguishable from starlings sampled in California, 3,000 miles away. Such little genetic variation often spells trouble for rare species, but seems to offer no ill effects to starlings so far.
- Starlings are great vocal mimics: individuals can learn the calls of up to 20 different species. Birds whose songs starlings often copy include the Eastern Wood-Pewee, Killdeer, meadowlarks, Northern Bobwhite, Wood Thrush, Red-tailed Hawk, American Robin, Northern Flicker, and many others.
- Starlings turn from spotted and white to glossy and dark each year without shedding their feathers. The new feathers they grow in fall have bold white tips – that's what gives them their spots. By spring, these tips have worn away, and the rest of the feather is dark and iridescent brown. It's an unusual changing act that scientists term "wear molt."
- Starlings are strong fliers that can get up to speeds of 48 mph.
- In studies of starlings' sense of taste, scientists have discovered that they can taste salt, sugars, citric acid, and tannins (bitter compounds that occur in many fruits, including acorns and grapes). They can tell the difference between sucrose (table sugar) and other kinds of sugars – helpful since starlings lack the ability to digest sucrose.
- A female European Starling may try to lay an egg in the nest of another female. A female that tries this parasitic tactic often is one that could not get a mate early in the breeding season. The best females find mates and start laying early. The longer it takes to get started, the lower the probability of a nest's success. Those parasitic females may be trying to enhance their own breeding efforts during the time that they cannot breed on their own.

Named after the twins of Greek Mythology, Castor and Pollux were nestmates that arrived at Liberty in 2023.