

BLACK-CROWNED NIGHT-HERON - NYCTICORAX NYCTICORAX

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Pelecaniformes Family: Ardeidae Genus: Nycticorax
Species: N. nycticorax

Habitat:

Biomes: Black-crowned Night-Herons are common in wetlands across North America, including saltmarshes, freshwater marshes, swamps, streams, rivers, lakes, ponds, lagoons, tidal mudflats, canals, reservoirs, and wet agricultural fields. They require aquatic habitat for foraging and terrestrial vegetation for cover. They spend the winter in southern and coastal portions of their breeding range as well as across Mexico and Central America, where they use mangroves, marshes, swamps, lagoons, and flooded rice fields.

Distribution:

In US: The breeding habitat is fresh and salt-water wetlands throughout much of the world. The subspecies N. n. hoactli breeds in North and South America from Canada as far south as northern Argentina and Chile, N. n. obscurus in southernmost South America, N. n. falklandicus in the Falkland Islands, and the nominate race N. n. nycticorax in Europe, Asia and Africa. Black-crowned night herons nest in colonies on platforms of sticks in a group of trees, or on the ground in protected locations such as islands or reedbeds. Three to eight eggs are laid. This heron is migratory in the northernmost part of its range, but otherwise resident (even in the cold Patagonia). The North American population winters in Mexico, the southern United States, Central America, and the West Indies, and the Old World birds winter in tropical Africa and southern Asia. A colony of the herons has regularly summered at the National Zoo in Washington, D.C. for more than a century.

In Other Countries: Great Britain, ^^^^^

Holistic Description: Black-crowned Night-Herons are stocky birds compared to many of their long-limbed heron relatives. They're most active at night or at dusk, when you may see their ghostly forms flapping out from daytime roosts to forage in wetlands. In the light of day adults are striking in gray-and-black plumage and long white head plumes. These social birds breed in colonies of stick nests usually built over water. They live in fresh, salt, and brackish wetlands and are the most widespread heron in the world.

Species Richness: FOUR SUBSPECIES

Population Dynamic: NONE

Evolution and Systematics:

Evolution: Late Pleistocene and prehistoric records for this species are from California, Florida, South Dakota, Utah, and Mexico.

Systematics: For a species with a near-cosmopolitan distribution, geographic variation is relatively slight. Body size is large across the Americas (excluding the Falkland Islands) but smaller across Eurasia and Africa, with body size larger in temperate versus tropical regions in the Americas. Ventral plumage is generally pale, with the palest birds in the Americas, but birds in southern South America (including the Falklands) are dark, with insular forms being dimorphic. Width and shade of supercilium also varies in concert with ventral color. Leg color of breeding birds is deep red in the Old World, salmon pink in the New World. FOUR SUBSPECIES.

Number of Species: FOUR SUBSPECIES

Number of Genera: FOUR SUBSPECIES

Physical Characteristics:

Size and Length: Length: 22.8-26.0 in (58-66 cm) Weight: 25.6-35.8 oz (727-1014 g)

Wingspan: 45.3-46.5 in (115-118 cm)

Coloration: They have a black crown and back with the remainder of the body white or grey, red eyes, and short yellow legs. They have pale grey wings and white under parts. Two or three long white plumes, erected in greeting and courtship displays, extend from the back of the head. The sexes are similar in appearance although the males are slightly larger. Black-crowned night herons do not fit the typical body form of the heron family. They are relatively stocky with shorter bills, legs, and necks than their more familiar cousins, the egrets and "day" herons. Their resting posture is normally somewhat hunched but when hunting they extend their necks and look more like other wading birds. Immature birds have dull grey-brown plumage on their heads, wings, and backs, with numerous pale spots. Their underparts are paler and streaked with brown. The young birds have orange eyes and duller yellowish-green legs. They are very noisy birds in their nesting colonies, with calls that are commonly transcribed as quok or woc. Adults are light-gray birds with a neatly defined black back and black crown. Immatures are brown with large white spots on the wings and blurry streaks on the underparts. Adults have all-black bills; immatures have yellow-and-black bills.

General Body Features: Black-crowned Night-Herons are small herons with rather squat, thick proportions. They have thick necks, large, flat heads, and heavy, pointed bills. The legs are short and, in flight, barely reach the end of the tail. The wings are broad and rounded.

Special Features of the Body: Herons have large wing spans, also used in hunting. Flicking the wings back and forth, extending and retracting, and raising and lowering the wings stir prey into activity. Wings are obviously used in low flight forays, catching insects and hovering and diving. Other adaptations of the heron in hunting are its large eyes, which give it binocular vision and its S-shaped neck for greater striking strength. These traits have given the heron its graceful appearance and efficient hunting capabilities.

Special Features of the Head and Sensory Organs: The heron's long, thin bill is used to quickly grasp the fish it will consume. Certain physical adaptations contribute to the heron's hunting success. All herons have large beaks with sharp points for spearing fish. Beaks are also utilized to stir the water and attract fish via an opening and closing movement. Flying insects can be snatched from the air with the beak or used in prodding debris. Diving into the water to stab at food is made easier by the aerodynamic shape of the beak.

Dentition: Beak/Lamellae/Gizzard

Special Features of the Limbs and Digits: The long legs of a heron keep it elevated above the water as it wades looking for fish. The toes are long and flexible to help the bird keep its balance on slippery or unsteady surfaces.

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: The sexes are similar in appearance although the males are slightly larger.

Differences Between Juvenile Stage and Adult: Adults are light-gray birds with a neatly defined black back and black crown. Immatures are brown with large white spots on the wings and blurry streaks on the underparts. Adults have all-black bills; immature have yellow-and-black bills.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal w/ **Nocturnal** feeding habits.

Activity: Black-crowned Night-Herons nest colonially and behave socially all year long. Both males and females vigorously defend feeding and nesting territories, sometimes striking with their bills and grabbing each other's bills or wings. Night-herons are probably monogamous. The male advertises for a mate with displays that involve bowing and raising the long plume on his head. Both the male and the female incubate the eggs and brood the chicks, greeting each other with calls and raised feathers when switching over duties. The young leave the nest at the age of 1 month and move through the vegetation on foot, forming nocturnal flocks in feeding areas. They learn to fly when they are 6 weeks old, and then disperse widely.

Locomotion: Slow and deliberate when foraging. Head and neck usually lowered when walking, rarely runs. Individuals often look about before taking off. Flight is more labored than that of day herons, and wings beat slightly faster. Sometimes night-herons glide during sustained flight and against moderate wind. After takeoff, feet are brought together and project rearward as wing beat slows during transition to sustained flight. The head is held back during flight but not folded back, and they sometimes soar. When feeding, the night-heron dives (alights on water) feet-first, or plunges (dives headfirst from the air); can also swim or float on the surface of the water, resting or swimming actively.

Communication and Perception: Black-crowned Night-Herons give a barking squawk when disturbed. Males give a hissing plup to attract females. When parents arrive at the nest with food they give a series of guttural notes followed by a raspy woc-a-woc call. They also give harsh screams and hoarse clucks. While greeting their mates or mating, Black-crowned Night-Herons sometimes rattle their bills.

Home Range: Adults defend feeding territories; young birds develop territorial reaction when they become independent. Tenacity of defense gets stronger as individual nears the center of its territory, and predominance of territoriality inhibits dominance hierarchy formation. Fasola concluded that feeding territories in herons were no larger than the immediate foraging site. In flocks of foraging birds, night-herons and Grey Herons spaced themselves equally from conspecifics and each other, whereas night-herons and Little Egrets were spaced further from each other than from conspecifics.

Degree of Sociality: Gregarious during all seasons; a colonial nester; often with more than a dozen nests in a tree. May also share nesting habitats with most North American day herons and several species of ibises.; form communal roosts in winter. Usually solitary foragers; often supplanted or driven off by day herons during the breeding season. More data are needed, however, on both intra- and inter-specific nest site competition and aggression at breeding colonies.

Level of Aggression: Birds defend both feeding and nesting territories, and may fight, striking with bill from low horizontal crouch, or grabbing each other's bills or wings; group fighting may occur at the beginning of the nesting season. Birds may chase conspecifics from foraging areas or crows (*Corvus brachyrhynchos*) from near nests.

Migration: Resident to medium-distance migrant. Some populations stay in one place year-round, while others disperse short distances of 5–60 miles. Others migrate farther, such as from Massachusetts to Florida and the Caribbean, or from Alberta to Mexico and Cuba. Migrants follow the coast or the Mississippi River flyway.

Predators:

Predators: Raccoons, Muskrats, Red Fox, Horned Owl, Ring-Billed Gulls, Fish Crows, Boat-Tailed Grackles, American Crows, Blue Jays, Common Ravens.

Anti-Predator Defenses: Occasionally night-herons chase and mob crows. Human disturbance at nests was found to increase the likelihood of predation, possibly resulting from nest abandonment, in colonies in Quebec.

Diet and Nutrition:

Adult Diet: Black-crowned Night-Herons are opportunistic feeders that eat many kinds of terrestrial, freshwater, and marine animals. Their diet includes leeches, earthworms, insects, crayfish, clams, mussels, fish, amphibians, lizards, snakes, turtles, rodents, birds, and eggs. They also eat carrion, plant materials, and garbage from landfills. Rather than stabbing their prey, they grasp it in their bills. Black-crowned Night-Herons normally feed between evening and early morning, avoiding competition with other heron species that use the same habitat during the day. They may feed during the day in the breeding season, when they need extra energy for nesting.

Juvenile Diet: Mostly Fish.

Special Adaptations for Getting Prey: CHECK ADAPTATIONS. Prey is grasped with bill, not stabbed.

Reproduction:

Mode of Reproduction: Presumed monogamous.

Mating System: Presumed monogamous.

Mating Season: November to May

Courtship: Meyerriecks describes the beginning of pair formation with males becoming aggressive, performing Snap Displays, in which they walk about in a crouch with the head and neck lowered and extended. The feathers of the head, neck, and back are somewhat erect, and males snap their mandibles together or grasp a twig. Males then select the nest site and begin Advertisement Display to attract females. In this display, variously called reversed “Stretch” display, “Snap-hiss” display, and “Song and dance”, the male stretches its head up and forward, and treads raising legs and feet, brings extended head and neck forward and down, feathers of the back, crown, neck, and breast are raised, plumes fully erect, and the eyes protrude from their sockets appearing more red than usual. When the bill is at the level of the feet, it gives a Snap-hiss or Plup-buzz vocalization. Twig shaking and preening may be interspersed between songs; Allen and Mangels observed that one series of songs lasted 36 min.

Territoriality: HOME RANGE

Mating: Usually takes place on or near the nest: no set ceremony, but copulation may occur following a greeting ceremony when one bird returns to nest or after male presents female with a twig; sometimes preceded by allopreening. Although copulation may be followed by feather shaking, preening, it is usually followed by quiescence. Copulation usually begins the first or second day after pair formation, with individual bouts lasting 8–17 s, averaging 12 s. The female stoops and male mounts, grasping female by shoulders or head and bringing tail down sharply.

Nesting: The male chooses a nest site in a tree or in cattails—usually in a habitat safe from predators such as on an island, in a swamp, or over water—and then advertises for a female. Black-crowned Night-Herons nest colonially, often with a dozen nests in a single tree. Colonies sometimes last for 50 years or more. The male starts building the nest, a platform of sticks, twigs, and other woody vegetation which he collects from the ground (or breaks right off of the trees). Once he has found a mate, the male continues collecting material but passes it to the female, who works it into the nest. Some nests are sturdy, while others are flimsy. They measure 12–18 inches across and 8–12 inches high.

Egg-Laying: Clutch Size: 3-5 eggs Egg Length: 2.0-2.2 in (5-5.6 cm) Egg Width: 1.4-1.5 in (3.6-3.9 cm) Incubation Period: 24-26 days Nestling Period: 29-34 days Egg Description: Greenish-blue.

Hatching and Incubation/Gestation: Mostly helpless, covered with gray and white down, with open eyes. Semi-altricial and nidicolous hatch with eyes open but eyes closed most of hatching day, with no reaction to outside stimuli.

Development: NONE

Parental Care: Nestlings are brooded nearly constantly for the first 10 d after hatching, although chicks have some control of body temperature by day 6. Food is delivered to chicks by both parents. Chicks grasp the adult's bill, which stimulates the parent to regurgitate a bolus. Young birds grasp adult's bill, upper mandible first, at a 65° angle, with the adult's head and neck feathers erect. Food is fed directly to young chicks, but later may be dumped into the nest. Chicks swallow fish whole, and may have the tail of the fish protruding from the mouth. However, during one observation, a 25-cm goldfish was regurgitated by an adult onto the nest floor for 5–6-d-old chicks, which, because of the size of the fish, could not swallow it.

The adult then re-swallowed the fish, regurgitated it again later, and because the chicks still could not swallow the fish, the adult swallowed it again.

Lifespan: Up to 15 years to 21 years.

Conservation:

Official Federal Status: Least Concern

Special Statutes in Individual States: NONE

Threats: Black-crowned Night-Herons are fairly common, but numbers appear to have slightly decreased between 1966 and 2014, according to the North American Breeding Bird Survey - although their clumped distributions make it hard to estimate trends precisely. The North American Waterbird Conservation Plan estimates a population of over 50,000 individuals on the continent, rates them an 13 out of 20 on the Continental Concern Score, and lists them as a Species of Moderate Concern. They are not on the 2014 State of the Birds Watch List. Threats include draining and development of their wetland habitat, and reduced water quality due to contaminated runoff. They are susceptible to accumulating pollutants such as persistent organochlorine pesticides, PCBs, and heavy metals. Colonies of Black-crowned Night-Herons can provide good indications of overall environmental quality, because night-herons forage at the top of food chain, nest in colonies (where they are fairly easy to study), and have a wide distribution. They tolerate disturbances such as traffic, so they are especially useful in revealing environmental deterioration in urban environments.

Conservation Efforts: ^^^^^

Extra Facts:

1. Scientists find it easy, if a bit smelly and messy, to study the diet of young Black-crowned Night-Herons—the nestlings often disgorge their stomach contents when approached.
2. Black-crowned Night Heron nest in groups that often include other species, including herons, egrets, and ibises.
3. A breeding Black-crowned Night-Heron will brood any chick that is placed in its nest. The herons apparently don't distinguish between their own offspring and nestlings from other parents.
4. Young Black-crowned Night-Herons leave the nest at the age of 1 month but cannot fly until they are 6 weeks old. They move through the vegetation on foot, joining up in foraging flocks at night.
5. The familiar evening sight and sound of the Black-crowned Night-Heron was captured in this description from Arthur Bent's Life Histories of North American Marsh Birds: "How often, in the gathering dusk of evening, have we heard its loud, choking squawk and, looking up, have seen its stocky form, dimly outlined against the gray sky and propelled by steady wing beats, as it wings its way high in the air toward its evening feeding place in some distant pond or marsh!"
6. The oldest Black-crowned Night-Heron on record was a female who was at least 21 years, 5 month old.

Notable Species:

1. N. n. nycticorax
2. N. n. hoactli
3. N. n. obscurus
4. N. n. falklandicus