

Butorides virescens (Green Heron)

Family: Ardeidae (Hérons and Egrets)

Order: Ciconiiformes (Storks, Herons and Ibises)

Class: Aves (Birds)



Fig. 1. Green heron, *Butorides virescens*.

[<http://fineartamerica.com/featured/green-heron-breeding-larry-nieland.html>, downloaded 17/10/14]

TRAITS. An adult green heron is approximately 44cm and weighs 135-250g, making it a fairly small heron. It has a characteristic shiny, greenish-black crown, while its wings may range from greenish-grey to blueish-grey (Fig. 1). Their rust-coloured neck has a white streak at the front, while their underside is grey (Kaiser and Reid, 1987). Green herons have orange or yellow legs. Their bill is long, sharp and is dark coloured. Females can be distinguished from males, as females often have a duller and lighter plumage, especially in the breeding season. Another distinguishing characteristic is that females are usually smaller than males (Hancock, 1999). Both males and females have expansive, curved wings and an elongated, dagger-like bill. Juveniles are also characteristically different, having duller and differently coloured plumage

than adults, as well as greenish-yellow bill and legs (Fig. 2). Its head, sides, neck and underside are lined with brown and white, while its back and wing coverts are tan-splotted. Hatchlings are grey, with its underside being white and covered in down feathers. The plumage colour characteristic of juvenile and mature green herons make them hard to spot in thick vegetation. Green herons, compared to other species of herons are short and stout, with short legs and thick necks. Often, their crown feathers are raised into a short crest.

ECOLOGY. Habitats of green herons must consist of water for foraging and dry wood and tree materials for building their nests. Therefore typical habitats of green herons would include freshwater or brackish water marshes, lakes, ponds or swamps, with several trees, shrubs, dry wood or orchards (Kaiser and Reid, 1987). Migrations of green herons occur during the winter, as they migrate to coastline regions, freshwater and marine habitats that are south of their range, as well as parts of Central America and Mexico (Kaiser and Reid, 1987). They are common residents of both Trinidad and Tobago. The diet of the green heron consists of mainly small aquatic animals such as fish and prawns. Green herons also feed on insects, reptiles, amphibians and spiders. They feed at the edge of the water using several sophisticated methods of hunting.

SOCIAL ORGANIZATION. The male green heron utilizes a range of displays to attract a mate, including visual displays of his nest. Before the male green heron chooses a mate, he firstly chooses a nesting site. He begins to build this nest to attract a female for breeding, however after mating the construction of the nest is completed by the female. The nest site may consist of a large bush or fork of tree with branches used to conceal the nest. Instead of constructing an entirely new nest, green herons sometimes renovate old nests of other species of herons such as previously used nests of black-crowned night-herons. Nests contain no lining, and can be situated above water or up to 1 km away and as high as 10m above ground level (Kaiser and Reid, 1987). The location of the nest can be isolated within the male's territory, or they can nest socially in loose aggregations, or in colonies by joining a previously existing colony consisting of green herons or other species. However, when nesting in multi-species colonies, they maintain a significant distance from the other species (Davis and Kushlan, 1994). Males defend their nest before and after mating by driving away birds that may be too close to nest or prey on their nests. Predators of their nest also include snakes and raccoons. The juveniles are fed and brooded by male and female mates. The young heron stays with its parents for a little more than four weeks, even beyond fledging, while learning to forage.

ACTIVITY. Green herons are diurnal (active throughout the day) but also at night, it is more useful to hunt since they can be more inconspicuous from its prey (Davis and Kushlan 1994). When the nesting season is over, green herons then wander outside of breeding range with the aim of finding a suitable feeding habitat. These wandering herons may stay fairly closely to breeding range or travel long distances, with some nomadic individuals wandering as far as Western Europe. Wandering is a trait also observed in other species of herons. Green herons are unsocial birds and feed either in isolation or in pairs. When this species is startled, it erects its short crest, flicks its tail, straightens its neck and flies off with a loud, sharp call.

FORAGING BEHAVIOUR. This species commonly forages within dense vegetation in shallow waterways, usually less than 15cm of depth. They often wander across their range looking for advantageous foraging sites. Green herons are nocturnal more than diurnal, choosing to stay in covered areas during the day. They hunt during both day and night in creeks, marshes,

ponds or mangroves and are characterized by their sophisticated methods of hunting fish which has caused them to be ranked among the world's most intelligent birds (Davis and Kushlan, 1994). These hunting methods include herons patiently squatting or walking slowly in shallow water, to snatch an unsuspecting fish using their heavy, sharp bill. They even utilize tools such as twigs or insects as bait, to easily catch fish at the water's surface. In deeper waters, they are able to hunt by plunging downwards on prey from above.

COMMUNICATION. The green heron exhibits a variety of multi-purpose calls including calls used for courting, warning (when disturbed by a predator), territorial displays and simply for communicating with each other. The calls made by the green herons are usually loud, harsh, high-pitched and unpleasant. The characteristic call of a green heron is an explosive, sudden 'kyow' and a series of more downcast 'kuk' calls (Davis and Kushlan, 1994). During the breeding season, the male green heron exhibits a wide range communication tactics to attract the female. During courtship, the male opens its bill widely and produces a 'rah-rah' call, it produces an 'aro-aro' sound while sitting, and during flight, it produces loud wing-beats and calls 'whoom-whoom' or 'roo-roo' to the female before landing (Hancock and Kushlan, 1984). These birds use their acute vision, touch and hearing to detect predators and prey and to explore their environment. In the presence of a predator or if their nest is disturbed, a series of hoarse 'clucks' or grating screams or harsh, extremely loud 'skeow' call are produced. This skeow call is also a characteristic sound of wetlands and is also done when they are rested or during flight (Hancock, 1999). When communicating with other green herons, body postures along with several calls are used.

SEXUAL BEHAVIOUR. Green herons, both male and female, become sexually mature at the age of one year, and form one mating pair per breeding season. Courtship displays are usually intricate since it consists of a specific series of displays, with most of the effort and actions done by the male. Males exhibit 'flying-around displays' which looks like natural flight, but occurs close to breeding sites and is accompanied by 'skow' calls (Davis and Kushlan, 1994). After this occurs, Pursuit Flight, Circle Flight and Forward displays are done, with simultaneous 'rah-rah' calls which shows their red mouth-lining. Following these, a Crooked-Neck Flight is displayed, which is then followed by a more intense Flap Flight Display. The crooked-neck flight display includes a slightly flexed neck with dangled legs and noisy wingbeats. The flap flight display includes the male launching through the air creating 'whoom-whoom' sounds with its wings, in a crooked neck, erected position, and giving a final 'roo-roo' call before landing (Davis and Kushlan, 1994). After landing, some non-flying displays occur. The Snap Display occurs where the male sits, arches its body and head downwards until its bill is parallel to its feet, then it opens and closes its mouth rapidly (snapping) producing a ticking noise while raising its plumage (Lockwood and Freeman, 2004). The Stretch Display may also occur before the female can enter the potential nest place. This display consists of the male arching its beak upwards by expanding its neckline and plunging in a backward direction until its crown nearly reaches its back with the shoulder plumage vertical and extended. Once the position is attained, its neck is swayed from side to side with all its feathers smoothed back, its eyes protruding, and its iris may turn from yellowish to dark orange simultaneously producing an 'aaro-aaro' sound (Oberholser, 1974). After this occurs, the female does a less dramatic stretch display which initiates the mating-bond, and causing displays by the male to cease. The mating-pair nibbles each other's feathers and snap their bills. These birds are capable of laying up to six eggs in a nest at two-day periods and incubate them for up to three weeks. The juvenile heron leaves the nest when it is a little older

than two weeks old and is no longer dependent at about a month. Green herons breed once per year during a breeding season that usually occurs from March to July, although breeding seasons may vary depending on geographical location.

JUVENILE BEHAVIOUR. Approximately 3-6 eggs are laid within the green heron's nest by the female. The eggs are incubated by both parents for about three weeks, after which they hatch (Fig. 3). Both parents regurgitate food in order to feed the young herons. These chicks poke at its parent bill at the nest in an effort to stimulate regurgitation (Telfair, 2002). After about 14 days, the chicks are able to move around the nest and eat small insects on their own. After about 21 days, the chicks fledge, and after 30-35 days, they become independent.

ANTIPREDATOR BEHAVIOUR. Common predators of green heron eggs include snakes, crows, and common grackles. Raccoons are predators of nestlings. Predators of adult green herons include large birds of prey such as diurnal birds of prey and American crows. However, green herons use their keen sense of sight, and hearing, as well as using their loud warning calls to protect themselves against predators.

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Author: Shantal Samaroo

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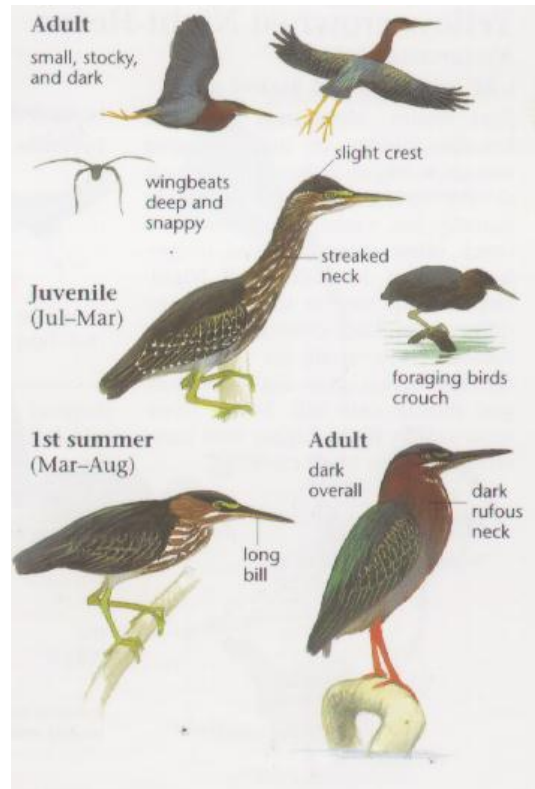


Fig. 2. Characteristics and behaviours of green herons.

[<http://www.swartzentover.com/cotor/Photos/Hiking/Birds/BirdPages/GreenHeron.html>, downloaded 17 October 2014]



Fig. 3. Nest of green heron with adult and juveniles.

[<http://www.pointinfocus.com/blog/photography/green-heron-chicks/>, downloaded 17 October 2014]

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