

Trogon viridis (Green-backed Trogon)

Family: Trogonidae (Trogons)

Order: Trogoniformes (Trogons)

Class: Aves (Birds)



Fig. 1. Green-backed trogon, *Trogon viridis*.

[<http://asawright.org/wp-content/uploads/2011/12/GreenbackTrogon.jpg>, downloaded 7 November 2015]

TRAITS. The green-backed trogon was formerly called the white-tailed trogon but recently the two species have been split. The green-backed trogon now exists as one species under the scientific name *Trogon viridis* while the white-tailed trogon exists as another species under the scientific name *Trogon chionurus* (Ffrench, 1991). The two species are often still mistaken since one of the common names for the green-backed is the Amazonian white-tailed trogon. This is a

large trogon, growing up to 28-30 cm, and is sexually dimorphic. Males have a dark blue head and upper breast with a green back, and their lower underparts are a bright orange-yellow (Fig. 1, left, Fig. 2). Wings and tail are black with irregularly shaped white lines, while under the tail is white with irregular black lines, and the eye ring is a pale blue (BirdLife International, 2013). Females resemble males but colours appear duller, with grey backs, heads and breasts and the outer webs of their tail having black and white barring (Fig. 1, right). Characteristic of trogons, the green-backed has short legs, stout bodies, short necks, large square-tipped tails and a bluish-white, short beak (Remsen, 2008).

ECOLOGY. The green-backed trogon is found in a variety of humid, tropical forests and woodland habitats in South America. They are found in the Amazon, Orinoco Basins, the Guiana, Trinidad and Tobago, and there is a disjunct population in the Atlantic Forest in Brazil (Hilty, 2003). Their nests are usually excavated out of a termite nest in a tree or a cavity in the trunk of a rotten tree. The nests are almost always built by the female but the male too sometimes plays a role. The nest architecture includes an upward-sloping tunnel through the trunk of the tree, with a channel used for breeding at the end. In June the green-backed begin their nesting season, which lasts until the ending of summer in August. However, their breeding condition periods vary in different literature (Hilty, 2003). These tropical forests and woodland habitats provide sufficient small fruits, berries and insects on which the green-backed feeds. During the dry season with fruits usually being scarce, they feed on arthropods. Despite this, green-backed are considered the most frugivorous among all trogons in its range, meaning that they feed on fruits more than any other trogon species (Pizo, 2007).

SOCIAL BEHAVIOUR. Solitary, territorial. According to Ffrench (1991) the green-backed are either alone or in pairs where they will nest and feed in their cavities in tree trunks. Green-backed are one of the tamest species of trogons and are relatively confiding species. They are therefore least likely to be seen attending mixed-species feeding flocks than other trogons. Apart from their infrequent feeding flight, they are a comparatively inactive species. However, that does not stop them from being territorial. Males use their accelerated song to proclaim the possession of their territory. They also respond quickly to playbacks of their calls. They also repel other members and species from their nesting site (Dubois, 2011). Green-backed trogons are a rather solitary set of birds and they do not remain in pairs throughout the year. They are never found in flocks and because of this, they do not have dominance hierarchy nor do they display any physical behavioural acts indicating social standing, ownership or strength (Dubois, 2011).

FORAGING BEHAVIOUR. Green-backed trogons are said to have a heterogeneous diet because it consists of a variety of fruit and insects (arthropods) (Dubois, 2011) with frugivory levels increasing with body mass (Pizo, 2007). A study with almost 30 green-backed trogons conducted by Wetmore confirmed that the green-backed has a mixed diet with 41% containing arthropods only in their stomachs, 38% containing only fruit and 21% containing both fruit and arthropods (Dubois, 2011). The green-backed consume fruits and berries from the families of Myrtaceae which includes fruits such as guavas, tamarinds, rose apples and passion fruits and the family of Annonaceae which contains edible fruits that form the custard apple family. Arthropods that serve as food sources for the green-backed trogons (Fig. 3) include beetles (lampirids), orthopterans (including grasshoppers), large green caterpillars, large ants, stick

insects and lizards (Dubois, 2011). Green-backed like most trogons tend to be sub canopy or middle strata hunters. They perch upright on horizontal branches between foliage and trunk and sit quietly for extended periods of time. They then search for food in the typical manner of trogons, turning their head slowly from side to side in complete 180° turns scanning and searching the vegetation (Miller and Fowler, 2012). When a meal is successfully located, they make a foraging attack, that is, a flight-powered manoeuvre. Although the exact speed is unknown, green backed are known to fly relatively fast in short distances. This common feeding behaviour is termed “perch and pounce” or “sally-gleaning” (Pizo, 2007).

COMMUNICATION. Vocal communication. “On a trek through the forest, one can hear the “coo-coo-coo-coo” of the green backed trogons” explains Ffrench (1991) in his short description of the green-backed. These trogons are sometimes referred to as the ventriloquists of the forest often deceiving humans into thinking that they are somewhere, when they are not. They play a series of notes between 6-15 times softly, convincing persons that they are far away (Ffrench, 1991). The trogon is often heard singing up to 16 soft, brisk “cow cow” notes or “kyoh” notes usually becoming louder as the notes progress. The intensity of these “cow cow” notes tells its meaning (Thorpe, 1964). Between 4-6 calls exists in the vocal repertoire of *Trogon viridis*. Moderate intensity of these “cow” notes are usually a social contact call and are used to locate mates in the deep forests. If these “cow” notes are produced in high intensity however, and is sang continuously, this is referred to as a territorial call, and this means that the green-backed is claiming its territory. Less often, they may “cluck” or “churr”. This call has been identified as the alarm call, especially is it is followed by aggressive display like flapping their wings. If it is not followed by aggressive display, these “clucks” or “churrs” may simply be indicating roosting, when the green-backed is at rest (Thorpe, 1964).

NEST BUILDING. Green-backed trogons build nests in arboreal termitaria (termite nests in trees) and in cavities of dead palms. Both males and females share in excavation, incubation and brooding duties. To begin building their nest, the male and female bite instead of chisel away at the wood. They carve diagonally into the soft wood for the entrance. The sexes alternate at working. While one chisels away, the other utters soft beautiful notes. The whole process is rather quick and is usually completed in an hour (Skutch, 1962). Most members of the trogon family have difficulty in finding a tree that is already dead, can be easily carved but not too soft that it will not endure the shape they prefer for their chamber. Green-backed are no exception and continuously try to find the perfect wood of the right firmness. After finding the proper firmness and excavating the nest cavity, the completed nest is ellipsoidal in shape and has rounded walls. The entrance is approximately 18cm long and 8cm wide. The bottom is covered with pieces of wood resulting from the trogon’s carving. Soft material is not carried in (Skutch, 1962).

SEXUAL BEHAVIOUR. The breeding period differs for green-backed across South America. Some individuals are in breeding condition from March to July others from January to June and some in the months of June to August. The clutch size is 2-3 eggs laid in two day intervals. They are white with a slight shine and their narrower end may be either blunt or rather sharp. (Skutch, 1962). Both parents share the incubation duties and the eggs are constantly incubated. The parents alternate sitting duties with the male beginning at sunrise and the female incubating through the night. The incubation period lasts 16-17 days (Skutch, 1962). The nestlings hatch

with naked pink skin and closed eyes. They utter hoarse little grunts. Parents share in the feeding duties which occur rather infrequently. However, feeding always consists of substantial portions which usually include insects of large sizes. Both parents aid in the brooding of the nestlings in the first days after hatching. Daytime brooding ends before the nestlings are feathered. The female continues to brood them at night until they are 11 days old. Waste matter is never removed from the nest, which indicates no nest sanitation (Skutch, 1962).

JUVENILE BEHAVIOUR. The upper mandible of the newly hatched young is dark grey and the lower mandible, legs, and toes are pink. The two inner toes are already turned backwards. They have a papillate heel pad which protects them from abrasion in their unlined nest cavity. At only 2 days old, the nestling's flight feathers and tail feathers project from the skin. At 4 days, contour feather buds are visible and the upper and lower mandibles have become darker. Pinfeathers begin to sprout and after a week, the remiges are notably long. Their eyes are half open at 9 days old and become fully open a day later. More feathers begin to bristle and the plumage expands after only 13 days in the nestlings' life. Two days later, the nestling is completely covered in dark plumage. Young trogons use their voice frequently when in the nest. They begin by uttering little grunts but then progress to the low soft "cow cow" notes that are heard in adults. When taking food, they have a sizzling sound and when hungry, older nestlings call rhythmically. They rate of the hunger call is about 34 times per minute. Nestlings remain in the nest until they are 25 days old (Skutch, 1962).

ANTIPREDATOR BEHAVIOUR. As it was previously stated green-backed trogons remain alone most of their lives. It is never found in flocks. The inactivity of trogons may be a defense against predators. Trogons also protect themselves by constantly shifting on branches so their less brightly coloured backs are what are visible to observers. Their heads can rotate 180 degrees so that they are still able to keep track of their watchers. Predators of these trogons are hawks and predatory mammals (Skutch, 1962).

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Fig. 2. Colour pattern of male *Trogon viridis*.

<http://www.flickrriver.com/groups/triniphotography/pool/>, downloaded 7 November 2015]



Fig. 3. Green-backed trogon feeding on an arthropod.

<http://www.oiseaux.net/photos/michel.giraud-audine/green-backed.trogon.5.html>, downloaded 7 November 2015]

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