

## *Momotus bahamensis* (Trinidad Motmot)

Family: Momotidae (Motmots)

Order: Coraciiformes (Kingfishers, Bee-eaters, and Motmots)

Class: Aves (Birds)



**Fig.1.** Trinidad motmot, *Momotus bahamensis*.

[[http://neotropical.birds.cornell.edu/portal/species/overview?pp\\_spp=7561016](http://neotropical.birds.cornell.edu/portal/species/overview?pp_spp=7561016), downloaded 14 October 2012]

**TRAITS.** This is one of the largest species of motmot (Skutch, 1983), with a conspicuous blue racquet tail and grey legs (Fig. 1). Formerly considered a subspecies of the blue-crowned motmot *M. momotus*, it is now a separate species *M. bahamensis* endemic to (only found in) Trinidad and Tobago. Total length males 46 cm, females also 46 cm (Schulenberg & Thomas, 2010). Short grey legs, its body tilted obliquely forward and its well developed tail extended back vertically (Styles & Skutch, 1989); males mean wing length 135 mm, females 138 mm (Schulenberg & Thomas 2010); 4-toed feet with a single toe facing the rear and the inner toe joined to the middle toe (Graham, 2012); mask-like head one-third in proportion to body and pointed bill (Schulenberg & Thomas 2010); saw-edged or serrated bill, used in crushing and cutting; well developed tactile bristles, two tail feathers that are central and much longer than the others (Graham, 2012). Colour: feathers green, head with a blue crown, a black colour around eyes in the shape of a mask with a border in various shades of green (Skutch, 1983); reddish brown

throat, belly and breast; broad basally dark blue racket-like tip (Schulenberg & Thomas, 2010); fledglings are similar to adult, but lack the black breast streak, have a sooty black mask and lack tail (Graham, 2012).

**ECOLOGY.** *Momotus momotus* is widespread in woodland and forest of Central America, Mexico, and northern and central South America, whereas *M. bahamensis* is restricted to Trinidad and Tobago. In Trinidad it is found in the interior of lowland evergreen forest. In Tobago, it can be found more commonly where cacao plantations and open habitats such as pastures that retain large trees are located. It forages actively separately from its partner during the day (Fig. 2). It is one of the less commonly seen arboreal birds. Occasionally it eats small lizards and snakes but mainly subsists on invertebrates such as insects, large spiders, mollusks and earthworms found among leaves on the ground whenever available (Madrigal & Barrantes, 2004). In the ecosystem of Tobago, it consumes mainly fruits during the middle of the wet and dry season; during the rainy season, *Momotus* eats more dung beetles and large cicadas. Overlap does occur extensively in terms of the diet and habitat with kingfishers and trogons. Motmots are often found and hunt in pairs or singly and do not feed with other species. It seems that it prefers to occupy areas where kingfishers and trogons are rarely found (Skutch, 1983).

**SOCIAL ORGANIZATION.** Live in pairs all season instead of in a flock, arboreal, territorial. They can be seen around Castara sitting quietly in the trees or coffee plantations at the margins of the rainforest. They choose less obvious sites to build their burrows so that they are far less obvious to discover (Skutch, 1983). They dig or seek burrows that are located at the side of a pit or hollow in the ground. *Momotus* may dig its own dens but prefers an abandoned hole dug by humans or den of a burrowing animal (Skutch, 1983). They rarely visit it and do not use it for sleeping (Skutch, 1964). In the sightings of Trinidad motmot in Castara the same pair of individuals always nested together (Skutch, 1983). In some sightings of Trinidad motmot members of a pair forage separately but associate more closely later in the evening. They were repeatedly seen resting 6 inches from each other but never made contact (Skutch, 1983). They dig their nests in the previous fall for the spring therefore they stay with the same mate throughout the year. Competition between the males and females was not observed and they did not fight (Skutch, 1983). Fledglings begin foraging alone after leaving the nest.

**ACTIVITY.** Arboreal, most active in the late afternoon and early morning, usually resting the remainder of the day (Skutch, 1983). Trinidad motmots fly out from their burrows silently between 5:21 to 5:34 at sunrise, when it is just too dim to distinguish its colours through the binoculars, and returned to the burrow after an interval of 13-24 minutes before sunrise (Skutch, 1983). One partner was seen more in the open in the morning if it heard the familiar notes of its mate as they approached from the woods. The partner continued foraging on the bank only about 10 yards away until the other partner in the burrow apparently identified its wing beats and flew out of the burrow. The partner originally on the outside then flew in and stayed with the eggs for up to 16 hours (Skutch, 1983).

**FORAGING BEHAVIOUR.** It devotes almost all the time spent outside of the burrow to seeking for food. It perches on a low limb, watches intently at the ground then will suddenly descend to capture its prey. They hunt in the same location, holding their bodies still while they scan for prey. When prey is identified, *Momotus* will quickly fly out and seize the animal, beating it on a tree branch before swallowing it whole (Fig. 3). It occasionally accompanies and follows a swarm of army ants and small birds which enables it to locate and catch spiders,

insects and other organism that are driven from concealment in the ground litter (Skutch, 1983). The Trinidad motmot occasionally kills and eats small reptiles and fledgling birds (Madrigal and Barrantes, 2004).

**COMMUNICATION.** Visual communication: tail is moved back and forth in a wag-like display that commonly draws attention to its hiding place when it is excited. This display may attract unwanted predators. Both the *Momotus* and predator benefit from this interspecific pursuit-deterrent signal (General Books LLC, 2010). This signal indicates to the predator that it would not be profitable for it to pursue the *Momotus* which is already prepared to escape.

Vocal communication: monosyllabic and repetitive. Mimics the sound of some species call. Makes several low, husky sounds like “coot-coot” or “whoo-whoo-hoot” only in pairs or alone near their burrows (Skutch, 1983). When approaching their nests the voice may get lower to a “whoo-whoo-o-o-o-o” with a distinct rippling effect to express caution or slight anxiety (Skutch, 1983). To assemble the small feeding and foraging family based groups a loud clucking noise similar to "kla-kla-kla-kla" is made (Skutch, 1983). This vocalization varies in intensity and can last from 2-5 minutes in length (Skutch, 1983). Upon entering the burrow to feed the chicks the parents will make ruffling sounds with their feathers and utter soft vocalizations. In response to the call by the parents the chicks will make begging vocalizations. After birth the hatchlings are quiet in the nest tunnel, but as they grow and mature their vocalizations increase in duration and strength. From 30-50 m from the nest entrance vocalizations can be heard about ten days after birth (Graham, 2012).

**SEXUAL BEHAVIOUR.** Information about reproduction in this species is limited. It only lays three or four small eggs. Reproduction begins months in advance, during the rainy season. They stay with the same mate throughout the year and are therefore monogamous. Both sexes incubate the eggs. The female usually incubates at night. During the breeding season the motmots vocalize frequently to attract a mate, pair bonding and courtship. Just prior to dawn and at dusk they vocalize more frequently. The vocalizations during this time are done for settlement of territory (Skutch, 1983). The males advertise themselves by making a “hoot-hoot” double note which has a low frequency. It can be extended up to a series of eight notes. The female generally replies to the sounds of the male by making a “hoot” single note response. During courtship the male offers twigs, leaves, flowers and grass to the female (Graham, 2012).

**JUVENILE BEHAVIOUR.** The young are born in a burrow with eyes closed. They refuse more and consume less and less food as they continue to develop pin feathers up to 25 days after birth. Fledglings forage independently once they leave the burrow. Interaction away from the burrow occurs rarely between mother and fledgling (Skutch, 1983). Neither parents nor nestlings sleep in the burrow after the fledglings depart (Graham, 2012).

**ANTIPREDATOR BEHAVIOUR.** When disturbed while foraging a Trinidad motmot’s initial reaction is to give an alarm sound. When under attack it gives a “wac-wac” or cackling sound at a highest pitch and vocalizes dry notes when small snakes are detected (Skutch, 1983). Vocalizations during aggressive interactions or territorial defence may include a hoarse, dry, coughing sound. This may be repeated in a series of long chattering and penduluming (or swinging of the tail) increases in frequency, duration and speed when the birds are excited (Fig. 4). They conceal the nest entrance by using overhanging vegetation or root masses (Graham,

2012). Each parent undertakes incubation bouts which may be extended from 3-8 hours which limits any excessive activity that may take place at the nest tunnel entrance. Only twice a day at dawn and at dusk, they relieve each other of incubation duties. It may mistake an object for prey and become preyed upon by the animal it is attacking such as a *Boa constrictor* (Fig. 5).

## REFERENCES

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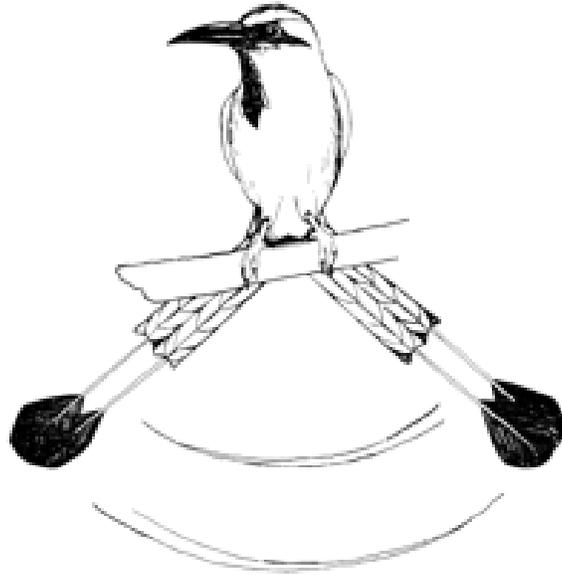
**Fig. 2.** Trinidad motmot active during the day.

[<http://1.bp.blogspot.com/pFtskOqZOVc/TwihjsoMnI/AAAAAAAAABVA/i9muvE5MkXo/s1600/cpbvk-trick.JPG>, downloaded 6 November 2012]



**Fig. 3.** Trinidad motmot beating prey on a tree branch before swallowing it whole.

[Fig. 31 of Burton & Burton (1969)]



**Fig. 4.** Trinidad motmot penduluming the tail.

[<http://beheco.oxfordjournals.org/content/17/4/547/F1.small.gif>, downloaded 8 November 2012]



**Fig. 5.** Trinidad motmot attacked by a *Boa constrictor*.

[[http://www.trinidadbirding.com/trips/2007\\_TT\\_Oct/Blair%2840%29.JPG](http://www.trinidadbirding.com/trips/2007_TT_Oct/Blair%2840%29.JPG), downloaded 8 November 2012]