

## *Ciccaba virgata* (Mottled Owl)

Family: Strigidae (Typical Owls)

Order: Strigiformes (Owls)

Class: Aves (Birds)



**Fig. 1.** Mottled owl, *Ciccaba virgata*.

[<http://www.owling.com/mottled13.htm>, downloaded 12 November 2016]

**TRAITS.** *Ciccaba virgata*, more commonly known as the mottled owl, is a neotropical bird found in Central and South America as well as Trinidad and Tobago. These owls can range from 35-41cm in length, and can weigh from 175-320g. This species of owl has a rounded head with no ear-tufts. They have white eyebrows with black spots, face outlined with a white border and the upper part of the owl is usually dark brown (Restall, 2007). The underparts are brown and boldly streaked with dark brown, the tail is long and also dark brown with many white bars. Mottled owls have a distinct yellow-orange bill, with brown eyes (Fig. 1). There are generally two colour phases of these owls; dark and light (ffrench, 2012). This species of owl displays the largest degree of sexual dimorphism of any owl species; female mottled owls are larger and heavier than the males.

**ECOLOGY.** This species is usually found in tropical to subtropical zones which include Colombia, Venezuela, Argentina, and Trinidad (Fig. 2). These owls reside in humid forests, woodlands, and the outskirts of forests near partially settled areas (Gwynne and Tudor, 2003). The mottled owl has been recorded in parts of Trinidad in areas such as the Bush Bush Forest, and the Northern Range (Buchanan, 1971). These owls inhabit terrestrial regions usually between sea level and 2500m, perched on branches to easily identify prey. *Ciccaba virgata* are carnivorous birds that prey on mammals, amphibians, reptiles and insects. Keen vision, impeccable hearing and manoeuvrable flight are among some of the skillsets used by this species of owl to hunt their prey. These birds can pinpoint sound sources even in total darkness. They have specially adapted wing feathers that dampen sound, which improve their stealth when hunting prey (Animal diversity, 2016).

**SOCIAL ORGANIZATION.** Mottled owls are usually solitary individuals, and strictly nocturnal; however during the day, owls may roost together. This species is monogamous and rarely interacts with other individuals besides their mates (Gwynne and Tudor, 2003). It was observed that they usually spend the day within 2m of the forest floor, females roosting with their mates. Family groups also roosted together, often within 1m of each other. In one study, 11 pairs of adults were found in an area of 2.5km<sup>2</sup> (Gerhardt et al., 1994). Young owls usually remain close to their parents, but never return back to the nest.

**ACTIVITY.** Since owls are nocturnal, they tend to roost during the day in dense vegetation, and can also be found in natural holes within tree trunks. They usually become active at dusk, and spend most of the night hours hunting and preening themselves. Mottled owls typically hunt in dense climax forests and use low perches to easily identify small rodents and other prey (Gerhardt et al., 1994). They remain perched and listen for any sudden noises or movements, then using their keen senses, they swoop down and grab the prey with their sharp talons (Fig. 3). During nesting periods, the female owl incubates the eggs, while the male continues to forage in order to provide food for his mate, as well as for the young hatchlings.

**FORAGING BEHAVIOUR.** *Ciccaba virgata* are carnivores at the top of the food chain, due to their nocturnal nature most of their hunting is done at night from low perches. These owls usually hunt individually inside forested areas or along a forest edge. Their diet is mainly composed of small rodents, snakes, insects and even birds (Ffrench, 2012). Examination of mottled owl pellets showed the remains of the cotton rat, lizards, coleopterans (beetles), cockroaches and grasshoppers (Gerhardt et al., 1994). This species lacks colour vision, but makes up for that with their keen sense of hearing, sight, and the ability to rotate their heads in different directions in order to locate prey. Owls use their sharp talons and bills to kill prey (Fig. 4), and due to their flight ability, can sometimes even catch prey mid-air.

**COMMUNICATION.** Communication occurs primarily by vocalizations to announce territory and for mating purposes. The territorial call comprises of a variety of deep hoots that sound like “bru bru” and “bu bu bu”. When these owls feel threatened, they produce a clicking noise with their tongues (Gerhardt, 1991). This species generally has a deep guttural hoot that is repeated every 2 seconds about 2 or 3 times. The male owls have lower pitched hoots compared to the females, and is sometimes described as a “whistled screech” (Buchanan, 1971).

**SEXUAL BEHAVIOUR.** This species of owl is strictly monogamous, which means that the male owls only interact with their mate and vice versa. In an attempt to attract mates, these owls are able to clap their wings together during flight and use various mating calls. Mottled owls only breed once a year, between February and May. The female owls usually lay 1 or 2 eggs per year, and nests in the holes of trees about 13m above ground (Encyclopaedia of Life, 2016). The clutch is 1-2 white eggs about 39.2 x 32.0mm in size (ffrench, 2012). Incubation begins upon laying of the first egg by the female owl, and the eggs hatch after a minimum of 28 days. The male owls are responsible for hunting and providing food but once the eggs hatch, the males also help nurture the hatchlings (Gerhardt et al., 1994).

**JUVENILE BEHAVIOUR.** Upon hatching, new born owls have closed protruding eyes and swollen abdomens. After about 10 days, the young owls begin to open their eyes and make noises with their tongue, feathers begin to thicken. Young owls fledge after about 27-30 days after hatching but are unable to fly for long periods of time (Fig. 5). They remain close to the home range, roosting and being fed by their parents (Gerhardt et al., 1994).

**ANTIPREDATOR BEHAVIOUR.** Mottled owls are apex predators and rarely have any major threats (Encyclopaedia of Life, 2016). These owls however can make specialized vocalizations if they feel threatened, to warn any other owls in the area, by making clicking noises with their tongues. This owl species roosts in densely forested areas so that they can remain hidden from other animals. They are most vulnerable as eggs or when they have recently hatched. Sometimes the nests may be preyed upon by large mammals. One study observed that the nest of an owl was attacked, and one of the two eggs was taken by the attacker; the female owl was found with porcupine needles stuck in her body which implied that the nest was attacked by a tree porcupine.

## REFERENCES

- Animal Diversity. (2016). *Strix virgata* Mottled Owl, [http://animaldiversity.org/accounts/Strix\\_virgata/](http://animaldiversity.org/accounts/Strix_virgata/).
- Buchanan, O.M. (1971). The Mottled Owl *Ciccaba virgata* in Trinidad. *Ibis*. **113**:105-106.
- Encyclopaedia of Life. (2016). *Ciccaba virgata* Mottled Owl, <http://eol.org/pages/1178572/details>.
- ffrench, R (2012). A Guide To The Birds of Trinidad And Tobago. New York: Cornell University Press.
- Gerhardt, R. P. (1991). Response of Mottled Owls (*Ciccaba virgata*) to Broadcast of Conspecific Call. *Journal of Field Ornithology*.**62**:239-244.
- Gerhardt, R. P., Gonzalez, N. B., Gerhardt, D. M. and Flatten, C. J. (1994). Breeding Biology and Home Range of Two *Ciccaba* Owls. *The Wilson Bulletin*. **106**:629-639.
- Gerhardt, R. P., Gerhardt, D. M., Flatten, C. J., and Gonzalez, N. B. (1994). The Food Habits of Sympatric *Ciccaba* Owls in Northern Guatemala. *Journal of Field Ornithology*.**65**:258-264.
- Gwynne, J. A., and Tudor, G (2003). Birds of Venezuela Second Edition. New Jersey: Princeton University Press.
- Restall, R. (2007). Birds of Northern South America An Identification Guide. United Kingdom: A&C Black Publishers Ltd.

Author: Joshua T. R. Sirju

Posted online: 2016



**Fig. 2.** Mottled owl (*Ciccaba virgata*) geographic distribution.

[<http://www.owlpages.com/owls/species.php?s=1640>, downloaded 12 November 2016]



**Fig. 3.** The mottled owl's sharp talons.

[<http://www.chrisjimenez.net/owls-of-costa-rica-photography/>, downloaded 12 November 2016]





**Fig. 4.** Mottled owl hunting a small rodent.

[<http://www.chrisjimenez.net/portfolio/mottled-owl/>, downloaded 12 November 2016]



**Fig. 5.** Juvenile *Ciccaba virgata*.

[<https://500px.com/photo/70652781/mottled-owl-ciccaba-virgata-juvenile-perched-on-a-branch-by-chris-jimenez>, downloaded 12 November 2016]