Psarocolius decumanus (Crested Oropendola or Cornbird)

Family: Icteridae (New World Blackbirds)
Order: Passeriformes (Perching Birds)
Class: Aves (Birds)

Fig. 1. Crested oropendola, *Psarocolius decumanus*.

[http://flickrhivemind.net/Tags/crestedoropendola/Interesting, downloaded 2 November 2012]

TRAITS. The crested oropendola is also known as the cornbird in Trinidad and Tobago. Generally medium-sized, the adult male is 46 cm in length and 300 g in weight. This species shows sexual dimorphism as the females are generally smaller in size with a length of 37 cm and weight of 180 g (Hilty and Meyer de Schauensee, 2003). Additionally, females are more brown-black in colour and lack a crest. As seen in Fig. 1, their large bills are ivory or creamy white and

eyes are bright blue (Page et al., 1987). Males also have a narrow, inconspicuous crest of 3-4 black feathers on the head (Hilty and Brown, 1986). This crest is made noticeable only when the bird is in a state of excitement (Jaramillo and Burke, 1999). The bird's body is mostly black, however, the rump, flanks and under tail feathers are chestnut, as can be seen in Fig. 1. The chestnut colour may be more difficult to see in the field (Hilty and Meyer de Schauensee, 2003). Black thighs also show slight hints of chestnut while the head and feet are black (Jaramillo and Burke, 1999). Its tail is bright yellow apart from the pair of tail feathers at the centre which are black and slightly shorter (Jaramillo and Burke, 1999).

ECOLOGY. These birds range from the eastern side of the Andes in South America, to Panama, Colombia, northern Argentina and Trinidad and Tobago (Fraga and Kreft, 2007). They live in forest edges and cleared areas near forests. They also inhabit plantation areas, jungles, grasslands, savannahs, marshes or thick bamboo bushes. Therefore, this species can live in varying types of habitats as long as there are very tall, isolated trees to hold their long, hanging nests (Tashian, 1957). They can also live in urban areas if necessary, although they prefer more humid environments (Hilty and Meyer de Schauensee, 2003). After the breeding season, they may decide to move to different locations. Being mainly frugivorous, they can be seen alone or in small flocks foraging in trees for fruits, nectar, seeds and large insects (Johann, 2009).

SOCIAL ORGANIZATION. These birds are very social colonial breeders which means that they breed together in groups. They live together in big flocks of about 100 birds each. These flocks split into smaller colonies in the breeding season; however, they remain close in proximity for protective purposes (Bouglouan, 2011). A tree housing a colony of crested oropendolas contains several nests, up to dozens in number, in one area of the isolated tree. This can be seen in Fig. 2. These colonies are sometimes found close to nesting colonies of other oropendolas. Each colony has a dominant male and subordinate males with territories in adjacent trees (Hilty and Meyer de Schauensee, 2003). Colonies may consist of one to four males and fifteen to thirty females. This species is highly polygamous which means that a one particular sex can have more than one mate at a time (Bouglouan, 2011). The dominant male mates with most of the females in the colony. This shows a form of polygamy called polygyny, meaning that the males have more than one mate at a time. Although described as very social animals by the majority of published literature, they have been considered to be more solitary than the other oropendolas as they are more frequently seen flying or foraging alone (Hilty and Meyer de Schauensee, 2003).

FORAGING BEHAVIOUR. Crested oropendolas have been reported to forage both singly or in small groups (Bouglouan, 2011). These groups may include individuals of the species itself, or mixed with caciques and oropendolas of different types (Hilty and Meyer de Schauensee, 2003). These birds feed on fruits, seeds, large insects and nectar. Most of the foraging occurs in the canopies or mid levels of trees but it may occur on the ground at forest borders also (Bouglouan, 2011). Finding insects to feed on is more difficult than feeding on fruits or seeds and therefore, the crested oropendolas may spend a lot of time searching for these insects (Hilty and Wolf, 2005). While looking for arthropods under leaves, crested oropendolas make strange acrobatic contortions of their bodies. They also feed on nectar from flowers and as a result are frequently seen in flowering trees such as the *Erythrina* tree (Hilty and Meyer de Schauensee, 2003).

COMMUNICATION. This bird utilises olfactory, vocal and visual communication. Olfacory communication is noted from the unpleasant, musty scent which the bird's plumage gives off. This smell is caused by the oils secreted from the preen gland which is used for self-grooming and is in turn necessary to attract females (Hilty and Meyer de Schauensee, 2003).

This bird is generally silent except when the male performs a courtship display to attract the females. Vocal communication is seen as the display is being performed. The male sings while doing the display starting with a loud "st-st-ee-ee-ee-EE-EE-EE-wooo" and ending with "chif-chif-chif" from the sound of its wings rustling as the bird regains its original position after completing the display (Hilty and Meyer de Schauensee, 2003).

Visual communication is also seen when the male courts the female with his display. The display is usually a complicated bowing performance, with many complex moves and contortions of the body. The male bows forward head-down on a branch and puts himself in an upside down position with wings spread apart, tail feathers sprawled out above and crest on the head erected, as seen in Fig. 3 (Bouglouan, 2011).

SEXUAL BEHAVIOUR. The breeding season of the crested oropendola is November to April. As mentioned previously, these birds are polygynous. Therefore one male, usually the dominant male, mates with more than one female. A colony has about five females for every one male (Bouglouan, 2011). Typically there is one dominant male that is surrounded by sub-ordinate males that hold lower quality territories. Thus, the females do not choose any male to be their mate; they need to be courted and make their choices based on a courtship display performed by the males (Hilty and Meyer de Schauensee, 2003). The display is a complicated bowing performance, with an array of complex moves and contortions of the body. It usually begins with the male perching himself on a branch and wrapping his claws around it tightly. He then starts bowing forward head-down and puts himself in an upside down position with wings spread apart, tail feathers sprawled out above and crest on the head erected, as seen in Fig. 3. This swinging movement may be a complete 360 degrees turn around the branch, or reverse motion, flipping back to the top (Bouglouan, 2011). While doing the display, he will also be singing in a strange, accelerating, babbling manner. The song begins as a loud "st-st-ee-ee-ee-EE-EE-EE-wooo" and ends with "chif-chif-chif" which is from the sound of its wings rustling as the bird regains its original position after completing the display (Hilty and Meyer de Schauensee, 2003). Copulation or sexual intercourse is usually performed at the nest or near to it. The female approaches the chosen male with her feathers pressed down on her body and raises her head and tail, flapping her wings simultaneously. The male responds by fluffing up its neck feathers, snapping its bill and flapping its wings. Mating is short and immediately after they groom themselves then fly away from each other (Bouglouan, 2011). The females lay 1 or 2 spotty, blue-grey eggs in the nests which are incubated for about 15-19 days (Tashian, 1957).

JUVENILE BEHAVIOUR. The young are altricial, meaning that they are practically helpless and need care from a parent for a period of time after hatching (Ehrlich et al., 1988). After their altricial stage which lasts a month or five weeks, the chicks are considered to be fledged, which means that they have been raised to an adult stage of life and their feathers and wings are well-developed. They are now free to leave their nests (Bouglouan, 2011). The juveniles are very similar to the females in appearance but are duller, slightly smaller and squatter in shape. Fig. 4 shows a juvenile with its distinguishably smaller sized bill which is slightly brown and very dark black eyes. From Fig. 4 one can also see the crest on the head is already developed. Brown or

chestnut-brown feathers are also present on the shoulders, back and underbelly feathers (Bouglouan, 2011).

ANTIPREDATOR BEHAVIOUR. The most important anti-predator behaviour of the crested oropendola is the building of their nests in such a manner that it does not give easy access to predators. These nests are large, long, extravagant, pendulous baskets that are carefully woven by females out of strips of bark, coconut fibres, palm fibres or roots. They are usually 3-6 feet in length. These nests prove to be very secure. When the female incubates eggs, extra security is enabled by the males that protect the nests (Bouglouan, 2011). Additonally, they are built in large colonies which also provide more safety from predators. The more males in the colony, sub-ordinates and dominant, the more protection will be provided. Thus, the larger the colony, the higher is the level of defence against predators. They also build their nests very high up (25-30 m above ground) in isolated trees with canopies that do not come in contact with other trees. This ensures that predators such as snakes or monkeys do not have easy access to the nests (Bouglouan, 2011).

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Fig. 2. A crested oropendola colony of nests found in Tobago Main Ridge Forest Reserve.

[http://www.pbase.com/magpiejay/image/135195486, downloaded 6 November 2012]

Fig. 3. A male crested oropendola (right) performs a courtship display for a female (left).

[http://www.oiseaux-birds.com/card-crested-oropendola.html, downloaded 6 November 2012]

Fig. 4. Juvenile crested oropendola standing on a branch.
[http://monacoeye.com/birds/index_files/category-rio-clarinho-lodge.php, downloaded 7 November 2012]