Crotophaga major (Greater Ani)

Family: Cuculidae (Cuckoos and Anis)
Order: Cuculiformes (Cuckoos, Anis and Turacos)
Class: Aves (Birds)

Fig. 1. Greater ani, *Crotophaga major*.

[http://www.birdforum.net/opus/Greater_Ani, downloaded 5 November 2016]

TRAITS. The greater ani is a large bird also known as black cuckoo after the colour of its feathers (Wikipedia, 2016). The adult birds are approximately 48cm long with a weight of 170g. The females are slightly smaller than males, averaging 45cm long and weight of 160g. These birds are round-tailed with broad, rounded wings. There is an overall glossy black plumage colour. The wings and breast feathers have a glossy blue-green sheen while the back feathers are edged with bronze-green (del Hoyo, 2001). The back and front of its neck contains long narrow feathers edged with a bronze-green colour, giving the greater ani a ridged look. The long tail, which controls direction during flight, is square-tipped, with a violet gloss. The head is bluish-black with a massive, large bill with an arched, high, laterally-compressed rim or flange on the upper mandible (Fig. 1). The flange is flat with small ridges. The iris is white with a slight

greenish-yellow; when stressed the outer ring of the iris turns to a lime green colour. The legs and feet of the bird are black. Nestlings have black skin and hatch naked without any feathers. Juveniles (less than 1 year old) are similar to adults but have a smoother upper mandible flange and a dark brown iris.

ECOLOGY. The greater ani is widely distributed in lowland South America from Colombia to Paraguay. It is also extends as far as eastern Panama in Central America. Venezuela, Trinidad, Guyana and Argentina are also included in the distribution range (del Hoyo, 2001). The bird is found in habitats of forested lowlands adjacent to water. These lowlands may include areas such as flooded tropical forest, moist forest, mangroves, bamboos, gallery forests, swamps, lakes, marshes and edges of creeks. It feeds mainly on large insects such as beetles, grasshoppers, caterpillars and spiders (Fig. 2). They will also feed on small frogs, lizards, fruits, berries and euphorbia seeds.

SOCIAL ORGANIZATION. Greater anis are not solitary birds, they are gregarious. They usually associate themselves into small groups and hide in the vegetation (Belcher and Smooker, 1936). Feeding is done in flocks on the ground or in the canopy. The greater anis forage in areas overlapping with smooth-billed anis and they expressed no signs of aggression towards the other birds (Riehl, 2010). The construction of the bird's nest is a cooperative effort. Greater anis' nests are built on clumps of vegetation and they tolerate other species nesting as close as 1m to active nests. The nest serves for several females, with approximately 2-4 birds breeding in one nest. A nest may be reused for a few years but they avoid reusing the nest if accumulated faeces give it a bad odour. In this case nests are usually built above or to the side of the old nest.

ACTIVITY. Active both day and night. In the day, they may forage in wet areas resulting in a wet body; they dry their plumage in the sun, spreading the wings and tail and fluffing the feathers. The birds rarely walk or hop on the ground (Belcher and Smooker, 1936). They fly through the bushes in groups singing group choruses. During the nesting season, *Crotophaga major* spends the night outside the nest, protecting it. In the non-nesting season, *Crotophaga major* uses a communal roost with approximately 60-150 individuals.

FORAGING BEHAVIOUR. The greater ani forages from the canopy to the forest understory. They rarely forage on the ground close to the forest edge if grassy, but prefer wet forest edges. This is because insects are frequently climbing and hopping along the forest edges which would be easy to capture (Riehl, 2010). The greater ani uses its huge bill as a wedge to move around the large wet leaves. It rarely captures aerial insects above water surfaces as it is clumsy while in flight (del Hoyo, 2001). They use jerky movements of the wings and tail to flutter through the bushes, knocking down insects.

COMMUNICATION. Vocal communication: croaking, hisses, gating calls, whirring sounds, gobbling (turkey-like behaviour). *Crotophaga major* usually makes an alarm call to signal the rest of the birds to defend themselves from predators. This call is a harsh note repeated several times. The calls can also be a group chorus. They usually make a high pitched noise similar to the gobbling sound of a turkey, "kro-koro" (Belcher and Smooker, 1936).

Visual communication: wing flapping, tail waving. The visual display has not been described in detail. Wing flapping and tale waving is effective in signalling the bird's intention. There is usually a series of rapid flapping followed by a glide, descending steeply. They usually

use this method in flying across from one shore to the other (Belcher and Smooker, 1936). The waving tail and flapping wing are also use to search for insects as they knock them off shrubs.

SEXUAL BEHAVIOUR. The sexual behaviour of *Crotophaga major* varies according to the area it is situated. Breeding usually occurs between the months of April to May or September to December (del Hoyo, 2001). The nests are built cooperatively, by several pairs of greater anis, 3-5m off the ground in trees, often above water where it is less vulnerable to terrestrial animals such as snakes. The nests are bulky open-cup structures made with sticks, which *Crotophaga major* breaks of from trees using its bill (Riehl, 2010). The inside of the nest is lined with green leaves (Fig. 3). A nest may take a few days or couple of weeks to be built. Mating pairs are socially monogamous although the birds nest in groups of 2-4 pairs. The females lay approximately 5-7 eggs but the clutch can be from 2-10 eggs. When a female greater ani goes to lay its egg in a communal nest, it removes any previous egg before laying its first egg. This is called egg ejection. They stop removing eggs from the nest after laying their first to prevent accidents such as removing their own egg (Belcher and Smooker, 1936). In a communal nest there is an advantage to the birds that lay last, as the ones that lay first lose their eggs and the ones that lay last do not lose any. The rate of egg ejection increases with the number of birds in one nest. The eggs are greenish-blue in colour. Both males and females take up the responsibility of incubating the eggs. The eggs are incubated for approximately 11-12 days.

JUVENILE BEHAVIOUR. The young birds chip holes around the egg before hatching. After hatching, nestlings crush the eggshells or they are accidentally removed from the nest. The nestlings hatch blind and naked, with a black skin colour (Fig. 4). They gain their sight as their eyes open as early as 1 day after hatching and grow pin feathers after 4-5 days (Belcher and Smooker, 1936). After 5 days they are capable to climb and swim. With an average weight of 19-23g after hatching, they rapidly gain weight to 80-100g in a week. Once they are able to fly they leave the nest, but mothers continue to feed them for several weeks.

ANTIPREDATOR BEHAVIOUR. Predation occurs mostly on the eggs and nestlings. Eggs may be attacked by terrestrial animals which cause the birds to build nests over water surfaces. There is a greater risk of predation at the incubation period than the nestling period (Barksdale, 2013). The adult birds do not defend a nest if the eggs have not hatched as yet. During an incubation period the adult remains on the nest until the predator is a few metres away, then flies away nearby if the predator gets any closer. When there are nestlings, the adults defend them from predators by an alarm call or diving straight at the predator. The individual birds group quickly at the nest and attack the predators (Riehl, 2010). *Crotophaga major* also possesses a bad odour which is used as a defence mechanism, preventing the birds from being killed by cats.

REFERENCES

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Author: Faood Rahaman
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Fig. 2. Nestling consuming a large insect.

[http://neotropical.birds.cornell.edu/portal/species/lifehistory, downloaded 9 November 2016]

Fig. 3. Greater ani nest containing 7 eggs.

[http://www.oiseaux-birds.com/card-greater-ani.html, downloaded 9 November 2016]

Fig. 4. Nestling emerging from egg.

[http://neotropical.birds.cornell.edu/portal/species/lifehistory, downloaded 9 November 2016]