Crotophaga ani (Smooth-billed Ani)

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

Fig. 1. Smooth-billed ani, *Crotophaga ani.*

[http://www.hoteltinamu.com/wp-content/uploads/Crotophaga-ani-Garrapatero-Piquiliso-Smooth-billed-Ani-Tb1.jpg, downloaded 16 November 2014]

TRAITS. A black, glossy bird with a slight purple sheen on its wings and tail (Fig. 1). Adults range from 30-35cm in length from bill (beak) to tail (Evans, 1990). The average length of one wing in males is 155mm and in females is 148mm (Ffrench, 2012). There is little sexual dimorphism between sexes, except a slight size and weight difference (Davis, 1940). It has a large, black bill that forms a high ridge on the upper beak which is curved downwards. This gives it a unique appearance and the smoothness of its bill distinguishes it from other species e.g. the groove-billed ani. Its tail is long, flattened and rounded at the tip and it is almost half the length of the bird. Its feet are black, with the toes in the zygodactyl arrangement; one long and short digit facing forward and one long and short digit facing backwards. This allows them to walk on the ground instead of hopping like other birds. Anis are poor fliers; their flight is said to look laboured and awkward (Davis, 1940).

ECOLOGY. Like others of their family, smooth-billed anis are an arboreal species. As such, they are found in pastures and open areas with bushes and trees, plantation fields, lowlands and residential areas (Ridgely, 1976). They seem to be present wherever there are cultivated areas of land with trees. It is common in much of the West Indies and the Caribbean and is native to Trinidad and Tobago. It has a varied diet; feeding on insects (Fig. 2), lizards, frogs, hatchlings of other birds and fruits, although it seems to favour termites (Sutton et al., 2009).

SOCIAL ORGANIZATION. Gregarious (social), monogamous (usually takes one mate at a time) and territorial. *Crotophaga ani* is a very social species of bird and can be found in groups of 8-20 (Ffrench, 2012). These birds nest together, roost together, feed together and often band together to chase away birds of other species that invade their territory. However, they don't fly in flocks, but in pairs, or groups of three. They often congregate while feeding or resting; group members are commonly seen perching on branches of trees, fences, walls or atop shrubby vegetation (Fig. 3). Within most flocks, there is a high ratio of males to females (Davis, 1940). Each flock of anis has a specific territory which they guard constantly against outsiders. A large flock may have a territory up to 5 hectares in size.

Since smooth-billed anis prefer this type of habitat, nests are commonly found in bushes or trees 2-14m in height (Ffrench, 2012). The social nature of this bird allows for communal nesting, with the nests being made by multiple group members, even up to 20 birds at a time (Ffrench, 2012). These nests are shared among members, who in turn care for the eggs of one another by incubating them. Sometimes, several birds may help to incubate one nest. Observations of a nest made in Panama, revealed that the nest was made by one male and two female smooth-billed anis, who would take turns incubating the eggs (Ffrench, 2012); the male would incubate the eggs at night and the three birds would alternate during the day. After hatching, fledglings leave the nest at 6-10 days old, at which point they begin to forage for themselves. These young fledglings then help to feed and care for other broods of offspring within the group and as such, become incorporated in the group as a member.

ACTIVITY. Like others in the cuckoo family, smooth-billed anis are diurnal. Much activity is displayed during the day: feeding, foraging, playing, preening, nest building and socialization. In the evening or at sunset before going to roost, the birds would cease their activities and gather in a tree, wait for the other members to arrive and then they would all fly to their particular sleeping spot (Davis, 1940). Anis sleep in heavily foliaged trees and dense thickets of vegetation. They usually choose one tree in which all the members rest. On arrival at the tree, they huddle together as close as possible on a branch, bury their heads on their chests/shoulders and fluff up their feathers before resting. In the morning after sunrise, they come out from under the foliage and group together while sunning out and stretching to keep warm (Davis, 1940). They then move to the open areas of their territory to forage for food, which they do for most of the day.

FORAGING BEHAVIOUR. Within the territory of each flock of smooth-billed anis, there is a large expanse of open area in which they search for food. Anis spend much of the day foraging. Usually there is one sentinel present high atop a branch which acts as a lookout while the other group members forage (Sutton, 2009). They search through the grasses for insects and other invertebrates, lizards and frogs. Sometimes they even pilfer the nests of other species of bird, eating the eggs and hatchlings (Ffrench, 2012). *Crotophaga ani* is extremely smart when it comes to foraging. Anis have learnt to forage around other animals or humans that move through

the grass, as it disturbs the insects making them easier to catch. As such, anis are often seen foraging around grazing cattle, even congregating behind tractors that cut down the high grass. In some cases they have learnt that a man carrying a grass cutting blade intends to cut grass and they would flock to that location in hopes of getting an easy meal (Davis, 1940).

COMMUNICATION. Smooth-billed anis use a variety of calls and sounds to relay messages to other group members. The most common is the flock call (*ooo-rink/ooo-eek*) which is used during flock activities to alert other members; heard during foraging and afterward when the entire flock leaves to roost (Davis, 1940). When the flock is disturbed (especially by humans) they emit alarm calls and retreat into a nearby tree where they remain, sounding their alarm calls until the passerby or object has left (Davis, 1940). During the nesting period, the anis emit high-pitched tones from the trees signalling that the nest is being built (Davis, 1940). A much softer call/sound is used between pairs when together at the nesting tree. At sunrise, a rapid call is emitted to wake sleeping members; this call is also used to coax nestlings out of the nests (Davis, 1940). On the occasion when a bird flies into the territory of a flock of anis, they emit a "conk" call; a deep, harsh sound used to chase away outsiders. It is also emitted by anis who directly engage in fights with these birds, to signal that they are about to attack (Davis, 1940).

SEXUAL BEHAVIOUR. Breeding and nesting occurs year round. It all depends on the diet of the birds and the availability of ideal sources of food, which stimulate their reproductive organs (Davis, 1940). Group members that are ready to breed usually choose a suitable tree, separate from the tree of the flock. At this tree, the birds pair up. Since nest building is a communal affair, the members randomly gather building materials such as leaves and twigs, while searching for a suitable nesting area (Davis, 1940). Upon finding such an area, the birds begin building the nest. Almost no courtship behaviour is observed except the soft sounds a pair makes to each other while perched together. Copulation is quite ordinary and does not include any rituals. While perched on a branch, the male mounts the female and dismounts when copulation is complete (Davis, 1940). Females lay up to 6-7 eggs each, but due to the communal nesting behaviour of this species, it is not uncommon to find over 10 eggs in one nest. The eggs are blue in colour and hatch after 12-14 days (Ffrench, 2012).

JUVENILE BEHAVIOUR. After hatching, the young develop rapidly and are able to leave the nest at 10 days old. They are natural climbers and even before learning to fly, they can be seen climbing the tree using their beak for assistance, although this only occurs if there is some disturbance in the nest (Davis, 1940). Sometimes at a very early age, the hatchlings wander outside the nest to explore while under adult supervision. The young often help to feed other broods within the flock. The juveniles develop adult features quickly with the exception of the characteristic deep crest on the bill which takes some time to form (Davis, 1940). This allows a clear identification of juveniles and adults within a group.

ANTIPREDATOR BEHAVIOUR. Smooth-billed anis emit specific danger calls to warn other members of aerial predators. When the call is sounded, the anis take cover in the foliage of trees as they wait for the danger to pass (Davis, 1940). Since these birds are poor fliers, they would make easy targets in the air. The flocking behaviour of anis may be an adaptation against predation. Being in a group has advantages, including establishing a territory, having a safe place to roost and a faster rate of detecting predators, depending on the amount of group members.

During flocking activities, there are often one or more sentinels on the lookout to alert group members if danger was to arise (Davis, 1940). The response of smooth-billed anis to terrestrial predators is not yet known, although whenever a human or a strange animal is present, the anis keep their distance and issue alarm calls to warn other members (Davis, 1940).

REFERENCES

Davis, E.D. 1940. Social Nesting Habits Of The Smooth-Billed Ani. *The Auk* **57**: 179-218.
Evans, P.G.H. 1990. *Birds of the Eastern Caribbean.* London: The Macmillan Press Ltd.
Ffrench, R. 2012. *A guide to the birds of Trinidad & Tobago*. New York: Cornell University Press.
Ridgely, R.S. 1976. *A Guide to the Birds of Panama.* New Jersey: Princeton University Press.
Sutton, A.H., Downer, A. and Sutton, R. 2009. *A Photographic Guide to the Birds of Jamaica.* New Jersey: Princeton University Press.

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Fig. 2. Smooth-billed ani with a grasshopper in its beak displaying foraging behaviour.
[http://strongatart.blogspot.com/2013_01_01_archive.html, downloaded 16 November 2014]

Fig. 3. Smooth billed anis displaying group behaviour. Their alternating positions allow for no surprises or ambushes by predators.

[http://www.oiseaux.net/photos/maxime.dechelle/smooth-billed.ani.2.html, downloaded 16 November 2014]