Dacnis cayana (Blue Dacnis or Turquoise Honeycreeper)

Family: Thraupidae (Tanagers and Honeycreepers)
Order: Passeriformes (Perching Birds)
Class: Aves (Birds)

Fig.1. Blue dacnis, *Dacnis cayana*, male (top) and female (bottom).

[http://www.flickriver.com/photos/celiaurora/tags/p%C3%A1jaro/ downloaded 29 September 2012]

TRAITS. Widespread and often common in forested and wooded habitats. 12.5 cm long, weight ranges from 10-16 grams. Elevational range; sea level to 4000 feet. These attractive honeycreepers have red eyes, bill longer and more pointed than any other *Dacnis* with a base that is pinkish, mostly males are turquoise blue, with black lores, back wings, tail and throat, wings and tail black-edged blue (Ridley & Tudor, 2009). Females have a lime green body, paler below

with a bluish green head and greyish throat. Both males and females have pink legs. They hang upside down in search of insects that are hidden in dead curled up leaves.

ECOLOGY. They are found in varied habitats, most commonly in wooded and forested habitat ranging from dry deciduous to quite humid (Ridley & Tudor, 2009), also to some extent gardens and clearings. They are mostly found in pairs or small groups, they tend to move with mixed species flocks as they forage at all levels in search mainly for insects. They congregate with other birds to eat and come to flowering trees. They acrobatically explore the tree branches as well as leaves for fruits, insects and flower nectar. They tend to hang upside down in search of insects that maybe hidden in dead curled up leaves (Skutch, 2010). They will also feed on ripened *Cecropia* catkins. Some other fruits that they feed on include *Clusia* and *Miconia*. They will come out to feed on bananas given by bird feeders.

SOCIAL ORGANIZATION. They are found in pairs or family groups, often in mixed species flocks high in the canopy in rainforest areas. The birds in these mixed species flocks are found in the same areas but their different eating habits tend to eliminate competition. These mixed species flocks often contain the green honeycreeper (*Chlorophanes spiza*), yellow-bellied dacnis (*Dacnis flaviventer*) and black-faced dacnis (*Dacnis lineata*). They can be seen at canopy level. Being in flocks they tend to draw attention to themselves by foraging calls as they move through the canopy. Being with a mixed flock has its advantages in the sense that there is protection from predators. In terms of territorial settings, they would have use of a much larger exclusive area than they would have individually. However, there are permanent associations with jointly held territories. The composition of the core species is quite similar from flock to flock. There is commonly a pair of each species with their young of the year. All of the species will nest within the joint territory so all will defend this particular territory. Flock members spend their lives in this same flock. There are normally up to 30 or more members at one time in the canopy flocks.

ACTIVITY. They are omnivorous and as fruit eaters, they exploit the smaller, more succulent fruits in the trees, shrubs and vines. It is ecologically distinct from the larger species. The blue dacnis takes less nectar compared to the rest of the honeycreepers. Most of its insect searching is among foliage in which it rapidly flits examining both sides of the leaves, hanging occasionally to search the underside of the leaf or even stretching for examination and to take something from the underside of the leaf above it. A posture that it uses is to duck its head below the twig it is perched on just to examine the leaves below it. They tend to probe the leaf bases of bromeliads also into the bud of the flower or seeding flower heads. Studies show that they were seen pecking pieces out of two kinds of fruit in situ while the others were swallowed whole (Snow and Snow 1970). This honeycreeper tends to be wandering through the sunlit crowns of the forest trees and travels into the clearings and in which there are scattered trees and bushes that descend to the ground (Snow and Snow1970).

FORAGING BEHAVIOUR. Most of the time foraging occurs at the canopy level while the birds are in mixed flocks or parents and offspring. Blue dacnis mainly forage at all levels mostly gleaning insects and they would assemble with other bird species, in particular other honeycreepers, to eat small fruits and also they will visit some flowering plants. Studies show that they prefer orange, purple, red and black fruits which would indicate that they prefer ripened *G. glabra* fruits compared to unripe ones. Another study indicates that they are frugivores, they

disperses seeds of fig and other fruit trees. Foraging in flocks allows them to coexist and this is because they exploit different niches allowing them to forage in slightly different manners for the differing types and sizes of the prey. Blue dacnis tends to use leaf damage as a cue for foraging. Studies show that the blue dacnis are fond of red arils that are soft, it surrounds the seeds of the clusia (Skutch, 1964). They also consume a lot of berries of different varieties. Studies also show that dacnis took an interest in bananas when it was placed on a feeding shelf. In a 15year study it was found that dacnis displayed quite irregular attendance to the feeding trays only coming frequently at certain seasons, most of the time in threesomes and foursomes, but at other seasons they remain away for several weeks (Skutch,1964).

COMMUNICATION. The call of the blue dacnis is best described as a thin "tsip". They also use UV wavelengths as a "colour" in signalling, as the males display a secondary peak of reflectance in the UV part of the spectrum which females don't possess (Rajchard, 2009). UV light perception plays an important role in communication during the selection of mates (Rajchard, 2009). The male dacnis was found to be more vocal when he came out with his mate/partner rather than alone. He will perch besides the nest and repeat his lisping notes continuously for approximately a minute.

SEXUAL BEHAVIOUR. Sexually dimorphic and monogamous. Males tend to show off their brightest feathers at potential mates. There are sexual differences in plumage coloration which is known as sexual dichromatism and it is known to be common in tanagers. This is perceived under natural light conditions. Ambient light was proposed to be the factor that drove the properties of the plumage of the bird since it can either reduce or enhance the conspicuousness.

NESTING. The blue dacnis builds its nest in the shape of a cup and it is bulky. The nest is normally built on trees. The normal clutch is 2 brown-blotched white eggs. The females will incubate the eggs while the males will feed her and help raise the young. The dacnis pair will construct the nest with the usage of fine fibers and plant material. It is mostly 6-8 m from the ground usually in the fork of a branch (Skutch,1964). The nests are sometimes globular so they would build an entrance to the side of the nest. The fledging will be dependent on the parents usually when they are leaving the nest. The nesting period usually occurs from January all through until September. Eggs are laid from May- October. They tend to build their nests that are close to vegetation, this is done so that it can be hidden. Studies showed that the female brought more fine fibrous material in which she fastened them tightly among the clustered leaves around the end of the thin branches (Skutch, 1964). With her feet and bill she will continuously push and pull the fibrous material of her nest into place for 2 minutes or more. When her task is completed she often drops below the nest and flew off to the forest with her mate following her.

JUVENILE BEHAVIOUR. They are migrants so they will use red as a cue for quick recognition of food in unknown areas with unfamiliar species of fruits in the cases after fledging (Snow and Snow 1970). Studies show that a juvenile prefers in terms of color, red fruits and this can be due to their visual sensitivity (Snow and Snow1970). When juveniles leave the nest red fruits are quite dominant. When juveniles fledge they start searching for food, so colour recognition would be a key asset at this stage.

ANTIPREDATOR BEHAVIOUR. Most bird species join a flock for predator avoidance and so has the blue dacnis. By doing this it can be stated that the birds use a call that will indicate the presence of a predator while foraging etc. Alarm calls are made by the adult birds.

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Posted online: 2012

Fig. 2. Female and male blue dacnis feeding on fruit.

[http://www.flickriver.com/photos/margot_ft-curso/1434883405, downloaded 29 September 2012]

Fig. 3. Female blue dacnis on nest.

[http://avesphoto.com/website/EC/species/DACBLU-2.htm downloaded 29 September 2012]

Fig. 4. Female (left) and male (right) blue dacnis feeding on nectar from flowers.

[http://www.leedingain.com/2012_06_01_archive.html- downloaded 29 September 2012]
[http://heartwhispers.weebly.com/wings.html downloaded 29 September 2012]

Fig. 5. Female and male blue dacnis searching for materials for nest building.

[http://nationalzoo.si.edu/scbi/migratorybirds/featured_photo/bird.cfm?pix=Blue_Dacnis downloaded 29 September 2012]