



KIBALE EXPLORER

The Kasiisi Project & Kibale Forest Schools Program

Color Me Blue



High above Kibale's forest floor, a cartoon-like bird calls out with a deep "cow cow" before clambering up a leafy tree. After nabbing a juicy fig, the massive bird clumsily leaps to the next tree. This great blue turaco, with its stunning turquoise-blue body and green belly, long elegant tail, large blue-black crest and bright yellow and red-tipped bill, is unquestionably one of Kibale's most stylish residents.

The Incredible Reversible Toe

A forest species, great blue turacos spend much of their time among tree branches, foraging for native fruits, as well as shoots, buds, leaves, flowers and the occasional insect. With short, rounded wings well adapted for thick vegetation, the birds are strong

short-range fliers, but they prefer to climb and, amazingly, they're quite good at it!

Like all turacos, great blues benefit from a flexible back rear toe that can turn forward when perching and rotate backwards when climbing branches at odd angles.

To help them climb, turaco chicks not only have this special — *semi-zygodactylous* — toe, but also have small claws on the back edge of each of their wings. Two to three weeks after birth, the young turacos use these wing claws to climb out of their nest, a platform of dry sticks at the top of a leafy tree. These wing claws disappear as the young turaco grows.

Meet Some of Uganda's Other Turacos

Uganda is home to ten different turacos. Here are just a few:



The **Lady Ross' turaco** is one of the region's biggest seed spreaders.



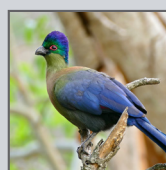
The **Hartlaub's turaco** was named to commemorate the German physician and ornithologist Gustav Hartlaub.



The medium-sized **black-billed turaco** is a resident breeder in the forests of central Africa.



Each of the colorful **white-crested turaco's** claws has a pair of toes that point forward and a pair that face backwards.



The **purple-crested turaco** is the national bird of the Kingdom of Swaziland.



Truly Green

Whether brown or brilliant blue, a bird's coloring results from pigments embedded in their feathers or from light refraction caused by the structure of the feather. The brilliant red of a scarlet tanager is produced by one type of pigment: Carotenoids, which are actually plant pigments that birds acquire from their food. Most turacos, as well as some owls and a few other birds, have another type: Porphyrins, a pigment that also colors red blood cells. Porphyrins can make red, brown, green or even pink colors. The great blue turaco's green belly feathers contain the porphyrin *turacoverdin*, the only true-green pigment found in birds. The green feathers of some other birds, parrots for example, are not actually green pigments, but rather yellow carotenoid pigments mixing with blue-reflecting light. All porphyrin pigments fluoresce bright red under ultraviolet light, which birds can see but humans can not. Just imagine how much more vividly turacos appear to other birds!

Engage

While you may not be lucky enough to spot a great blue turaco in your area, you can probably spot birds that share some of their characteristics. Take this checklist with you whenever you go out and try to spot everything on the list! Use field guides and other sources to help you identify these and any other birds you see:

- A bird with a crest.** What is the purpose of the crest?
- A bird that climbs.** What types of food is it eating?
- A bird with a long tail.** Is it a strong flier?
- A bird with a big beak.** Why do you think the bird needs a big beak?
- A blue bird.** Are there other colors? What makes their feathers blue?

The Secret Sauce is Co-Parenting

Though classified as a species of *least concern*, great blue turacos are hunted for their meat and beautiful feathers. International law prohibits the trade of wild turacos, but a number of zoos are involved in breeding and husbandry. The Nashville Zoo has had tremendous success breeding great blue turacos. Early on they hand-reared chicks, but soon implemented a co-parenting protocol, where the chicks remain with their parents, but zoo staff help when necessary. The approach nearly doubled survival rates. The zoo hopes the techniques they've perfected can be applied to help more at-risk turaco species.



Explore

Outside of Uganda, the great blue turaco can be found in nine other African countries. With your curiosity and a computer, book or other materials, color in all the countries where the great blue turaco lives on the attached map.

Pick another turaco species and do the same using a different color. Do the two turacos *ranges* overlap? Why or why not? Hint: they might use different habitats, or eat different foods.

BONUS: color in the map for all African turaco species, using a different color or pattern for each. Draw small pictures of the turacos to make a key.

SHARE!

We'd love to see and highlight your work!
Email photos to KibaleExplorer@gmail.com.

