

**Songbird
ReMix**

Barbets



Avian Models for 3D Applications
Characters and Texture Mapping by Ken Gilliland

Songbird ReMix BARBETS

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Songbird ReMix BARBETS

Introduction

Barbets are found in both the “new” and “old” worlds. They tend to be plump birds, with short necks and large heads. They get their name from the bristles that fringe their heavy bills. Most species are brightly colored and live in tropical forests. They are found in the *Piciformes* (woodpecker) family and the “new world” barbets are closely related to the toucans.

For this set, some of the most distinctive or endangered barbets from the Americas, Africa and South-eastern Asia were chosen. There are 16 species and 29 birds in all. This ranges from the corvid-like, Black-breasted Barbet, to the colorful and distinctive Versicolored Barbet to the striking Fire-tufted Barbet. The base model includes all the normal Songbird ReMix features from folding wings, working facial features to a host of controls and morphs to alter the bird in hundreds of ways.

There are two versions of this set for native support in Poser and DAZ Studio. Materials have been tuned to support Iray, 3Delight, Superfly and Firefly renderers.

Overview and Use

The set is located within the **Animals : Songbird ReMix** folder. Here is where you will find a number of folders, such as **Bird Library**, **Manuals** and **Resources** . Let's look at what is contained in these folders:

- **Bird Library:** This folder holds the actual species and poses for the "premade" birds. Birds are placed into a "type" folder (such as "Birds of Prey (Order Falconiformes)" which for example would hold falcons, hawks and eagles). The birds for this set can be found in the following folder(s):
 - **Woodpeckers and Toucans (Order Piciformes)**
 - **Barbets and Honeyguides**
- **Manuals:** Contains a link to the online manual for the set.
- **Props:** Contains any props that might be included in the set
- **Resources:** Items in this folder are for creating and customizing your birds
 - **Bird Base Models:** This folder has the blank, untextured model(s) used in this set. These models are primarily for users who wish to experiment with poses or customize their own species of bird. When using physical renderers such as Iray and Superfly, SubD should be turned to at least “3”.

Poser Use

Select **Figures** in the **Runtime** Folder and go to the **Animals : Songbird ReMix** folder. Select the bird from the renderer *Firefly or Superfly*) folder you want and simply click it to load. Some birds in the Songbird ReMix series may load with attached parts (*Conformers*) such as tail or crest extensions. Some of these parts have specific morphs. You will need to click on the attached part to access those controls. Associated poses can be found in the same folder- **Bird Library : (Type) : Poses**.

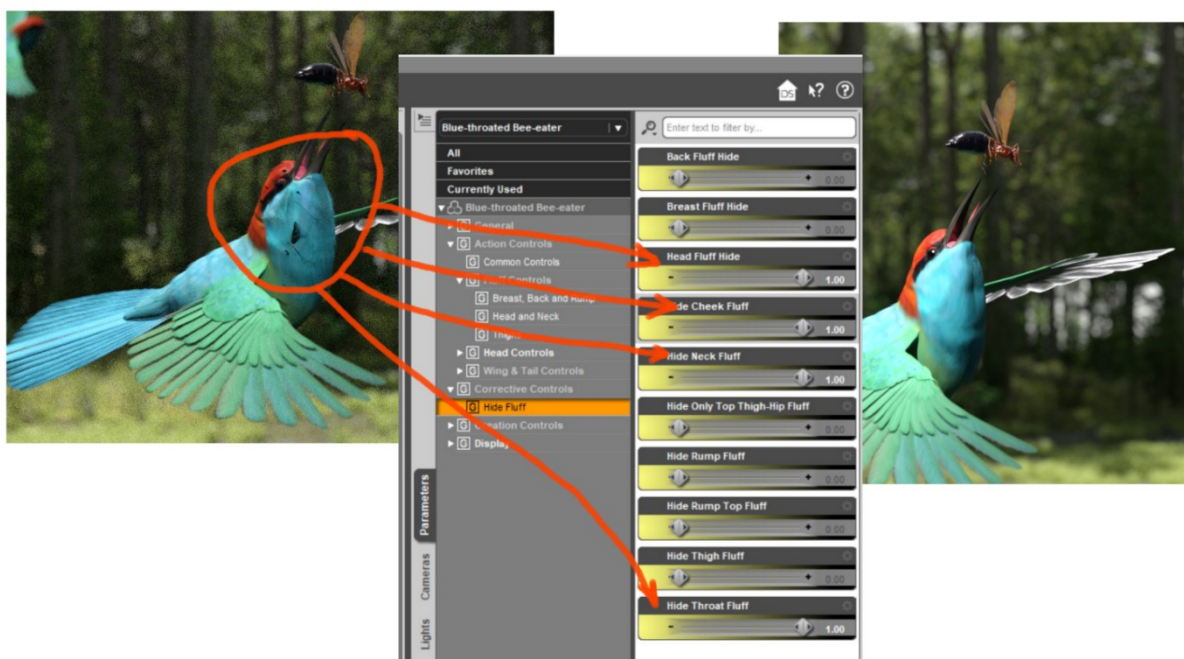
DAZ Studio Use

Go to the **Animals : Songbird ReMix** folder. Select the bird from the renderer (*3Delight or Iray*) folder you want and simply click it to load. Some birds in the Songbird ReMix series may load with attached parts (*Conformers*) such as tail or crest extensions. Some of these parts have specific morphs. You will need to click on the attached part to access those controls. Associated poses can be found in the same folder- **Bird Library : (Type) : Poses**. **Note:** Using the "Apply this Character to the currently selected Figure(s)" option **will not** properly apply the correct scaling to the bird selected. It is better to delete the existing character first and load the one you want to use.

Physical-based Rendering

Iray and **Superfly** requires more CPU and memory horsepower than the legacy renderers because of ray-trace bounces and higher resolution meshes needed for displacement. Poser's **Superfly** renderer will require that the "Min Transparent Bounces" be set to **at least 16** and that the "Max Transparent Bounces" be set to **at least 32** in render settings. Superfly renders may show artifacts in the head area. The higher the bounce settings, less chance those will be apparent. This is a known Poser issue and may be addressed in the future. Increasing the SubD may minimize this issue.

A good work around solution for Iray or Superfly artifacts is to **HIDE Fluff areas (Correction Controls)**.



Posing & Shaping Considerations

This volume has various species, so when using generic poses not every pose will work perfectly with every bird. You may find that some minor alteration on the stock poses may be warranted.

Here are some of the most common alterations you may need to make:

- Birds will not be flat on the zero plane due to leg size and overall scale.
- Because of the numerous beak shapes, closing the beak may range from 0.5 to 1. Usually 0.8 is about right.

- **Raise Upper Beak** (*in Action Controls*): This morph is a “one size fits all” control. Because of the variety of beak shapes. It may not work with all birds.
- **Tongue poke-through** (especially when the beak is open). This can be easily solved by using the **Throat-Fuller1 & 2** morphs (*found in Creation Control/Head Shapes*).

IK Concerns... Some poses may go askew when IK is turned on. By default, Poser’s IK feature is turned off when loading a bird. To turn it on, select the “Figure” category from the main tool bar and “Use Inverse Kinematics” from the submenu.

By default, DAZ Studio’s IK feature is turned on when loading a bird. This will cause the thigh and shin rotations change when the character is moved. The **CTRL K** keypress will turn IK on and off in DAZ Studio. I usually just remove IK when working in DAZ Studio by selecting the character in the **Scene tab** and simply deleting the two IK body parts.

If you want to use IK in DAZ Studio, here’s how it works...

1. First, go to the Scene Tab, and select the “**IK-...: Left (or Right) Leg**”.
2. On the “Parameters” Tab, select “Inverse Kinematics”.
3. Turn off “Pin Translation” and “Pin Rotation” to pose the feet to a perch and then “ON” when posing the rest of the bird.

Where to find your birds & poses

Type Folder	Bird Species
Woodpeckers and Toucans (Order Piciformes) Barbets and Honeyguides	Versicolored Barbet Lemon-throated Barbet Sira Barbet Black-girdled Barbet White-cheeked Barbet Yellow-crowned Barbet Red-throated Barbet Red-crowned Barbet Great Barbet Fire-tufted Barbet Coppersmith Barbet Black-breasted Barbet Bearded Barbet Black-collared Barbet Yellow-spotted Barbet Naked-faced Barbet

Songbird ReMix BARBETS

FIELD GUIDE

American Barbets

Versicolored Barbet
Lemon-throated Barbet
Sira Barbet
Black-girdled Barbet

Asian Barbets

White-cheeked Barbet
Yellow-crowned Barbet
Red-throated Barbet
Red-crowned Barbet
Great Barbet
Fire-tufted Barbet
Coppersmith Barbet

African Barbets

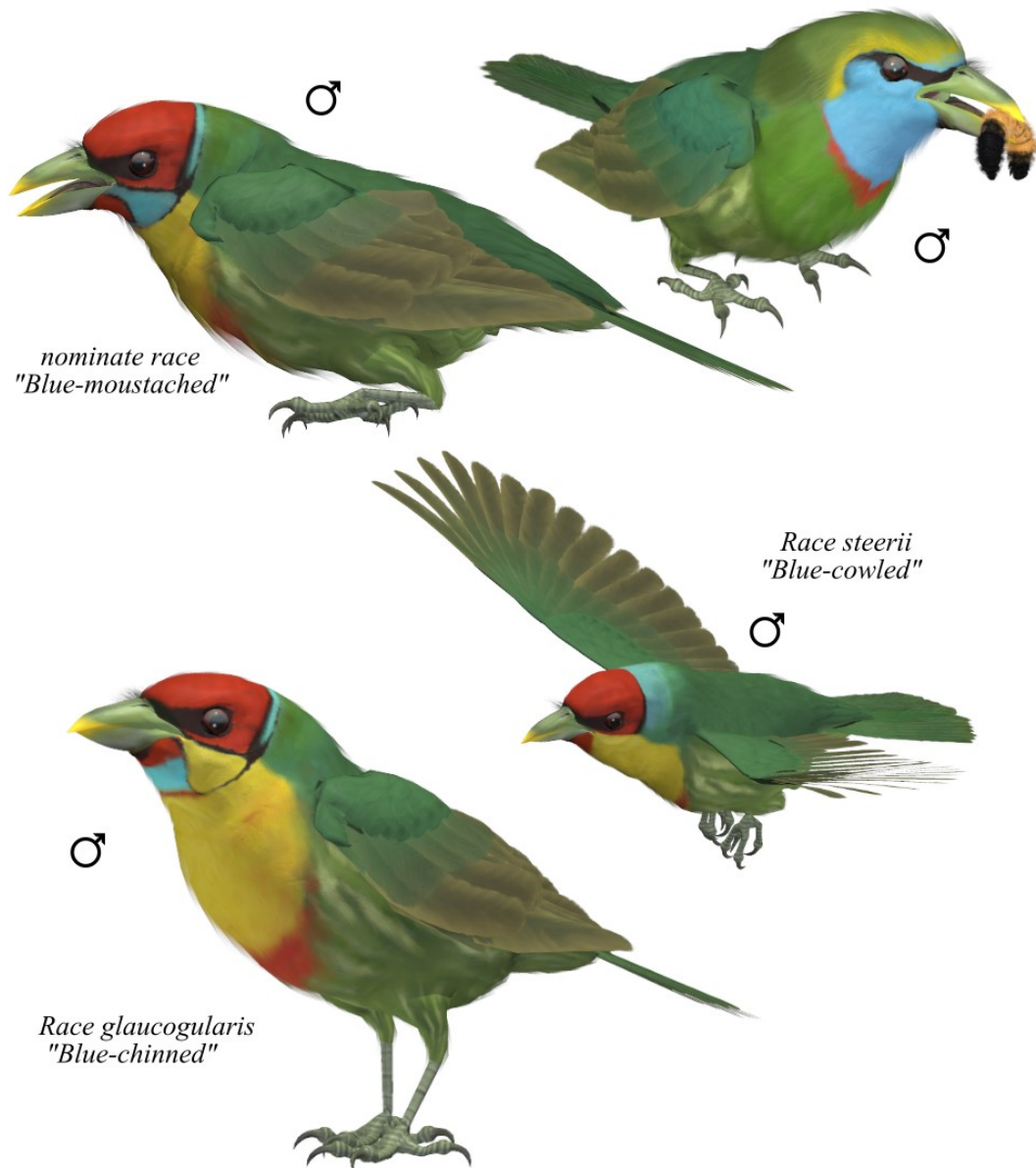
Black-breasted Barbet
Bearded Barbet
Black-collared Barbet
Yellow-spotted Barbet
Naked-faced Barbet

Common Name: Versicolored Barbet
Scientific Name: *Eubucco versicolor*

Size: 6.3 inches (16 cm)

Habitat: South America; it ranges from east of the Andes from northern Peru to northern Bolivia.

It inhabits submontane humid forests with prominent epiphytes and mosses, old secondary forests, and Bolivian dry forests. It is found mostly at middle



elevations, from 750 m to 2225 m, but most commonly at 1000–2000 m.

Status: Least Concern to Near Threatened. **Global population:** Unknown amount of mature individuals with a decreasing population trend. While this species has a whole, is not globally threatened, both Races *steerii* and *glaucogularis* are considered Near Threatened due to habitat destruction.

Diet: Diverse fruits and their seeds make up about 80% of diet. It will take beetles and other arthropods.

It specializes in foraging on dried leaf clusters. They are most often encountered alone or in pairs, less frequently in the company of mixed-species feeding flocks.

Breeding: It is sexually dimorphic. The male is red-capped with a narrow black line around the base of bill. It has green to blue-green upper-parts with a red throat. The lower throat and malar are blue. There is a blue section around the nape and it has yellow on the breast. There is a red patch in the center of the lower breast and it has green flank streaked with yellow. The bill is yellow, washed with orange near its tip, with pale blue-green elsewhere, mostly near base. The tarsi and toes are blue gray. In adults, the iris is red; in immatures, it is brown. The female has blue around the eyes, on ear-coverts and to the throat. It has an orange-gold crest that extends to the base of the neck. There is a narrow red band on the upper breast. It is green-blue to blue-green on lower breast.

They nest in tree holes, usually about 2 m above the ground. The nest tunnel extends horizontally for 6 cm, then abruptly curved downwards for about 18 cm, and the nest chamber had a diameter of 6 cm with a sawdust-like lining 1 cm thick. Two to three eggs are laid.

Cool Facts: This species was originally called the “Blue-moustached Barbet” but has since been renamed the “Versicolored Barbet” and broken into three subspecies:

- *E.v. glaucogularis*. This race is known as the “Blue-chinned Versicolored Barbet” and is found in Central Peru on eastern slope from eastern Huánuco south to northern Cuzco. This race differs from the nominate in male’s yellow (vs pale blue) malar area, a much reduced red patch under the bill that is supplemented below by a broad blue lower throat patch that borders the yellow malar area. Also, it has a stronger golden yellow lower border to the throat band.
- *E.v. steerii*. This race is known as the “Blue-cowled Versicolored Barbet” and is found in Northern Peru from west-central Amazonas south to northern Huánuco. It differs from race *glaucogularis* in male’s yellow (continuous with submoustachial area and breast) vs broad pale blue lower throat patch, lack of golden-yellow line bordering lower edge of blue throat band, and darker and rather broader blue hind collar line, merging more gently into bluer green upper-parts; and from the nominate in having yellow (vs pale blue) submoustachial area, small (vs large) red patch under bill, covering chin only and thus not forming red lower border to

submoustachial area, and not bordered below by a pale blue line, and darker and rather broader blue hind collar line merging more broadly into bluer-green upper-parts.

- *E.v. versicolor*. The nominate race is found in Southern Peru (Cuzco, Puno) to north-central Bolivia (Cochabamba).

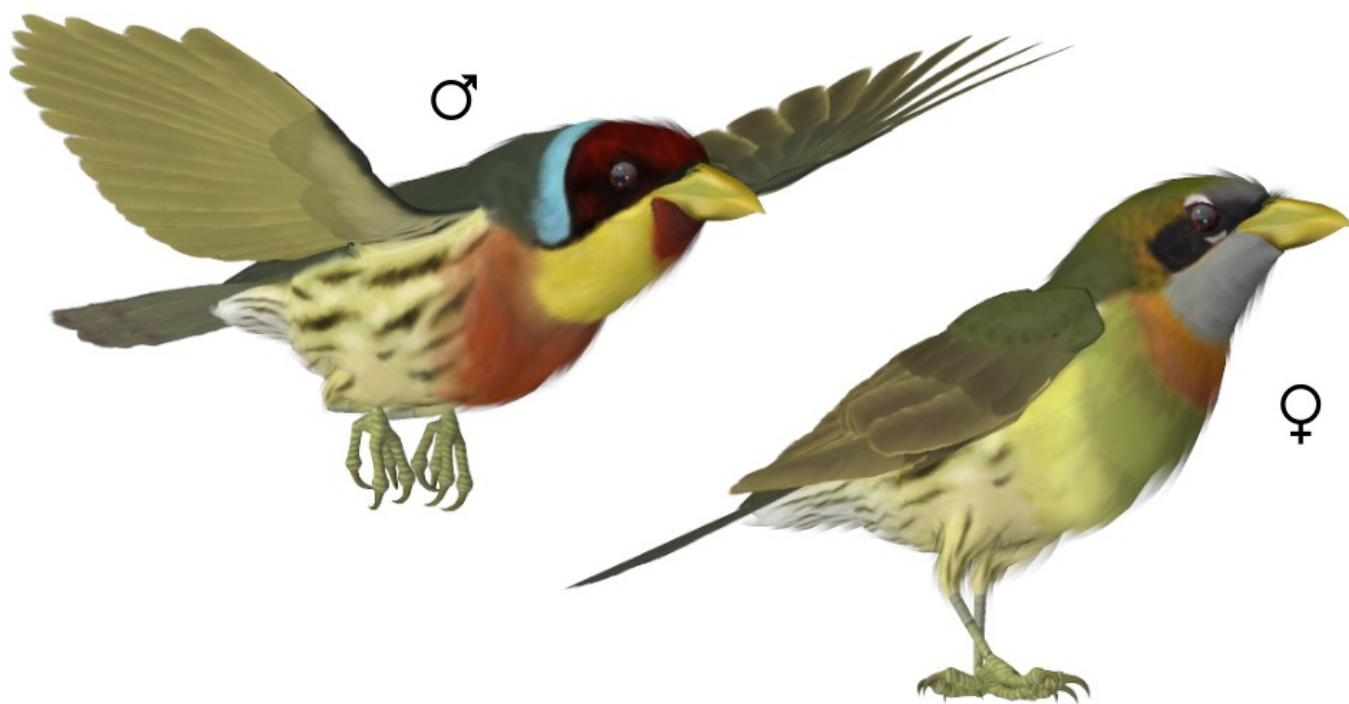
Common Name: Lemon-throated Barbet
Scientific Name: *Eubucco richardsoni*

Size: 6.1 inches (15.5 cm)

Habitat: South America; it is endemic to western Amazonia.

It occurs in mainly lowland forests, being most regularly seen at edges and in clearings, and its altitudinal range reaches to almost 1400 m, although it is rarely found much above 1000 m. The species is often found near water.

Status: Least Concern. **Global population:** Unknown amount of mature individuals with a decreasing population trend. This species is suspected to lose 8.0-8.7% of suitable habitat within its distribution over three generations (26 years) based on a model of Amazonian deforestation. It is therefore suspected to decline by <25% over three generations.



Diet: Fruits, such as those of *Cecropia* and their seeds, also grasshoppers, locusts, spiders, less often roaches.

It forages, usually alone or in pairs, in canopy and sub-canopy flocks, at 12–24 m, occasionally down to 5 m. It clings to take fruits. It frequently joins mixed-species foraging flocks. It is often seen hanging upside-down, reaching and leaning out to grasp prey or fruit with its bill. While searching for animal prey (not fruit), it spends most or all of their time, investigating dead leaf clusters.

Breeding: Sexes are dimorphic. The male of the nominate subspecies has a red crown, gray-blue nape, and green upper-parts. Its throat is yellow, the

breast orange-red, and the belly and flanks greenish with dark streaks. The female is duller, with a gray-green crown, nape, and upper-parts. Its throat is bluish, the breast orange-gold, and the under-parts are bluish yellow with dark streaks.

Breeding season is February or April to November. It nests in cavities of rotten snags or dead sections of trees.

Cool Facts: This barbet comprises four subspecies that vary, principally in males, in the color of the head, which is either red or black, with a yellow or blue nape. There is question on whether Race *auranticollis* should be considered a separate species.

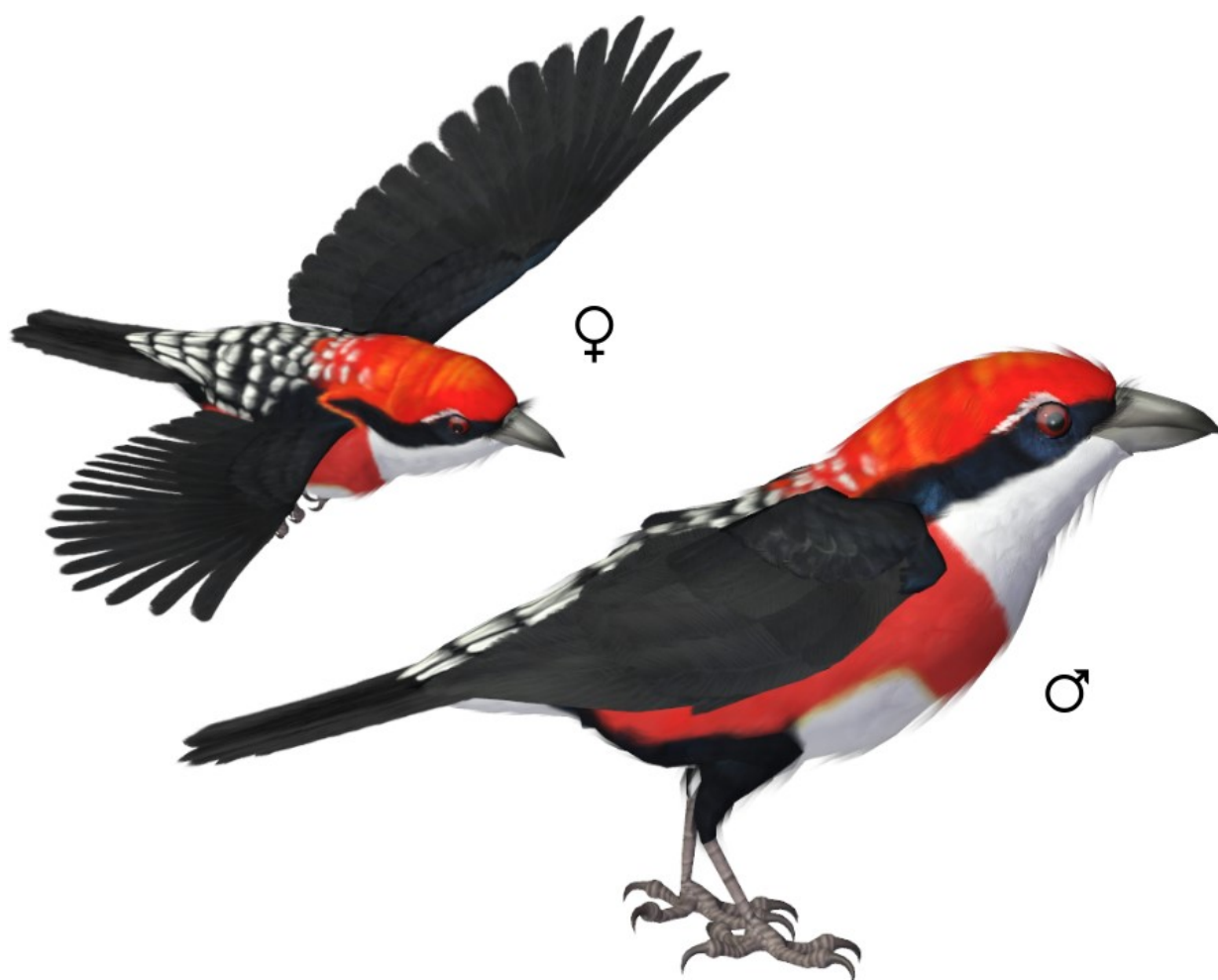
- *E. r. richardsoni*. The nominate race is found in eastern Colombia's Arauca Department south and east through eastern Ecuador into northern Peru west of Iquitos.
- *E. r. nigriceps*. This race is found in the lower Putumayo and Napo Rivers in northeastern Peru east to far western Amazonas, Brazil, north of the Amazon River. One record further east in Jaú National Park. It differs from the nominate race by the male having a black crown and both sexes having blue-green upper-parts.
- *E. r. aurantiicollis*. This race is often referred to as the "Flame-throated" Barbet and is from the area of the Marañón River in eastern Peru east to near the Juruá River south of the Amazon in western Brazil and south to northwestern Bolivia. When compared to the nominate race, it has a yellow nape and more yellow or even orange in dorsal green. The male has more gold or orange on throat and redder breast patch, while the female has a less yellow throat to breast and slightly more orange-gold on the sides of the head.
- *E. r. purusianus*. This race is found in western Brazil south of the Amazon from the Juruá River area east to the upper Madeira River. It is close to race *aurantiicollis*, but the male is overall paler, with more pinkish red on breast and has the yellowish nuchal patch narrower, while the female has a narrower gold-orange breast-band.

Common Name: Sira Barbet
Scientific Name: *Capito fitzpatricki*

Size: 7.7-7.9 inches (19.5-20 cm)

Habitat: South America; it is endemic to east-central Peru, east of the Andes. It is only known from the eastern slope of the southern Cerros del Sira mountain range (Ucayali).

It is found in montane forests on ridge tops and slopes at 950–1250 m, possibly higher (but below 1700 m). It can also be found in tall, lush forests with sparse understorey of palms and woody vegetation, in lower forests with arboreal epiphytes and moss, and with understorey predominantly of low trees, shrubs, and small to medium-sized ferns. It occurs together with Gilded Barbet (*Capito auratus*), seemingly without competitive interactions.



Status: Near Threatened. **Global population:** 1,000-2,499 mature individuals with a stable population trend. The Sira Communal Reserve provides some protection, and steep topography and lack of roads in the Sira mountains may limit the degree of human influence. Nevertheless, both mining and logging activities and oil exploration are underway in the region, and in the longer term the effects of climate change could be a further threat

Diet: Primarily fruits and takes small numbers of insects as well.

It forages in the forest canopy and subcanopy. It was observed in pairs, small groups of the same species, and in mixed-species foraging flocks.

Breeding: Sexes are dimorphic. The adult male's crown and nape are crimson. It has a band of white, fairly wide at the shoulders tapering to the tail; the rest of the upper-parts are black. It has a broad white supercilium and a black "mask". The rest of its face, throat, neck, and upper chest are white. A broad crimson band crosses the chest and extends along the flanks where it meets a variable amount of black or gray. The rest of the underparts are white. The female's plumage has minor differences from the males. Barbets are cavity nesters that usually lay 2-3 eggs.

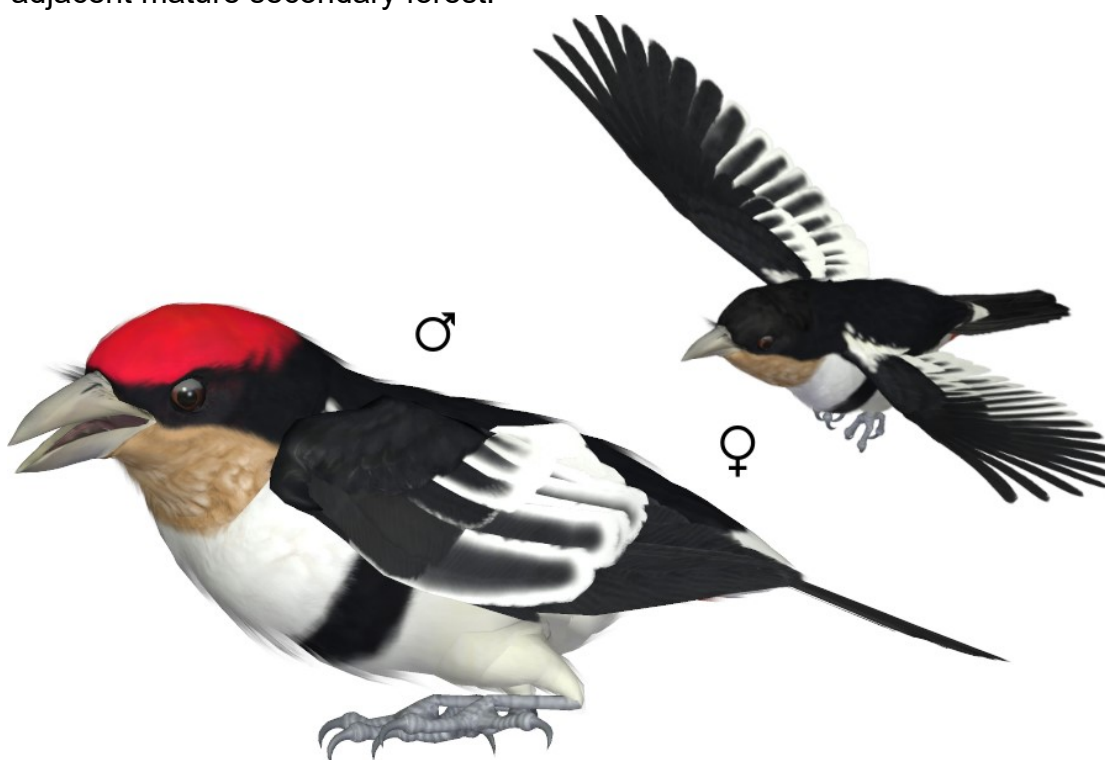
Cool Facts: The Sira barbet was discovered in 2008 and formally described in 2012. The bird's epithet commemorates John W. Fitzpatrick, an expert for the Peruan avifauna and past director of the Cornell Lab of Ornithology.

Common Name: Black-girdled Barbet
Scientific Name: *Capito dayi*

Size: 7.1 inches (18 cm)

Habitat: South America; it is a resident in central South America, along the southern fringes of Amazonia. In Brazil it occurs in southeastern Amazonas, most of southern Pará, the northwestern half of Mato Grosso, and eastern Rondônia. Its range extends slightly into Santa Cruz Department of northeastern Bolivia.

It inhabits the canopy of evergreen terra firme and várzea forests and also adjacent mature secondary forest.



Status: Near Threatened. **Global population:** Unknown amount of mature individuals with a decreasing population trend. The population is believed to be in decline as a consequence of the loss, fragmentation and degradation of forests in its range. It believed there will be a 20-29% population loss over the next three generations due to habitat destruction.

Diet: Primarily fruits and takes small numbers of insects as well.

It forages in the forest canopy and subcanopy. It was observed in pairs, small groups of the same species, and in mixed-species foraging flocks.

Breeding: Sexes are dimorphic. The adult male's entire crown and nape are scarlet, the sides of the head black, and the chin and throat various shades of brown. Its back is black, except for the white or yellowish-white scapulars. The upper-tail coverts are a pale olive green. The wings are black with the outer

webs of the tertials and inner secondaries being a yellowish white. The rectrices are black. Its under-parts are white or off-white on the upper breast merging to pale greenish yellow on the belly. Its flanks are black, which extends nearly across the lower breast forming the "girdle". The adult female differs in that its crown and nape are black. The immature is similar to the adult but duller overall.

It primarily breeds between August and November, though February and June are also implicated. It is assumed to nest in a tree cavity like other New World barbets, but its nest and eggs have not been described.

Cool Facts: Its scientific name "*dayi*" honors Lee Garnet Day, one of the leaders of the expedition that discovered the bird in 1916.

Common Name: White-cheeked Barbet
Scientific Name: *Psilopogon viridis*

Size: 6.5–7.3 inches (16.5-18.5 cm)

Habitat: Asia; endemic to Southern India. It is found in the forest areas of the Western Ghats, parts of the Eastern Ghats and adjoining hills.

Although largely a bird of moist forest habitats, it has expanded its range into several human-dominated habitats, and is now one of the most common birds in cities such as Bengaluru.

Status: Least Concern. **Global population:** Unknown amount of mature individuals with a stable population trend. The population is suspected to be stable in the absence of evidence for any declines or substantial threats.



Diet: Consumes diverse fruits (e.g., figs and berries), flowers, nectar, and animal matter, the latter particularly when it has nestlings.

It is largely arboreal, feeding in trees, usually alone but sometimes in groups of over 20 at fruiting trees. Only occasionally has it been observed descending to the ground in search of food. It is an active participant in mixed-species flocks, making sallies out to catch flying insects such as winged termites and *Lepidopterans*, and frequently descending quite low.

Breeding: Sexes are alike. It is a medium-sized barbet. It has a conspicuous white cheek-stripe. It is mostly a deep green color, brighter on the under-parts. The crown is dark brown, with black between the base of the bill and the eye.

It has a short white supercilium, and a broad white cheek patch that gives the species its English name. The throat is whitish and the breast is brown and streaked with white. The bill is relatively short and is brownish pink in color, with prominent black bristles projecting forward from the base. The tail is green with soot-colored feather shafts, and there is bluish sheen to the underside. The outer wing primaries are brownish, inner primaries bright green. The under-wing shades from yellowish at the base to grayish near the tip

This barbet begins breeding in December and continue to nest until May. They are believed to form a pair bond that lasts for longer than a single breeding season. Calling is intense during the courtship period. Courtship feeding of the female by the male is usual prior to copulation. Calling intensity drops after the hatching of the eggs. The nest hole is usually made in dead branches. These barbets are aggressive towards smaller hole-nesters such as the Malabar barbet, sometimes destroying their nests by pecking at the entrance. Both sexes excavate the nest and it can take about 20 days to complete the nest. Eggs are laid about 3–5 days after nest excavation. About 3 eggs are laid. The incubation period is 14 to 15 days. During the day both sexes incubate, but at night, only the female sits on the eggs. The pair will defend their nests from palm squirrels which sometimes prey on the eggs. Chicks are fed an insect rich diet. The young leave the nest after 36 to 38 days.

Cool Facts: It is also called the “Small Green Barbet”. Like many other Asian barbets, they sit still, and perch upright, making them difficult to spot. During the breeding season which begins at the start of summer their calls become loud and constant especially in the mornings. The call, a monotonous *Kot-roo...Kotroo...* starting with an explosive *trrr* is not easily differentiated from that of the brown-headed barbet. During hot afternoons, they may also utter a single note *wut* not unlike the call of Collared Scops Owl or Coppersmith Barbet. Other harsh calls are produced during aggressive encounters.

Common Name: Yellow-crowned Barbet
Scientific Name: *Psilopogon henricii*

Size: 8.5-8.9 inches (21.5-22.5 cm)

Habitat: Asia; Brunei, Indonesia, Malaysia, Singapore, and Thailand.

It is found mainly in lowland dipterocarp forests, also in mixed and dipterocarp hill forests, secondary as well as primary forests. It will go into low swampy forests, cacao plantations, and partly logged forests. Younger males may utilize sub-optimal habitats. Below 750 m, rarely to 950 m; mainly over 200 m in Sumatra; in Borneo replaced by the Mountain barbet (*P. monticola*) above 600 m, with little or no overlap. It is usually found below the Black-browed barbets (*P. oorti*) range.



Status: Near Threatened. **Global population:** Unknown amount of mature individuals with a declining population trend. It is considered uncommon to common throughout its range. A moderately rapid decline is suspected to be taking place as a result of forest loss and degradation throughout the species's range.

Diet: Primarily fruits and takes small numbers of insects as well.

It feeds mostly in the mid-canopy; movements primarily from that tree to canopy of a 40-m tree in which it roosted.

Breeding: Sexes are alike. It is a green, sturdy-billed barbet with blue throat and much yellow on crown. The nominate race has a central hind-crown that is blue, golden-yellow runs from forehead extending broadly around crown over eyes. It has black lores and a line that runs through the eye, pale green

cheeks and line over the eye. There is a narrow red band on the upper neck side. There is a red mark on each side of the breast at border of the throat. The immature is duller, all bright colors paler, with only the forehead yellow, and base of the bill pale and grayish.

Barbets are cavity nesters that usually lay 2-3 eggs. Breeding season is February to August.

Cool Facts: Its song is usually a long series of phrases, each with 2–7 “tuk” notes preceded by, or sometimes followed by, brief trill, “ttrrrt”; phrases of 2–3 seconds, may sometimes lack trill note.

- *P.h. henricii*. The nominate race is endemic to southern peninsular Thailand southward to Sumatra.
- *P.h. brachyrhynchus*. This race is endemic to Borneo. It is smaller-billed, less bright, with blue areas more violet-blue, green of ear-coverts yellower, yellow top of head less golden.

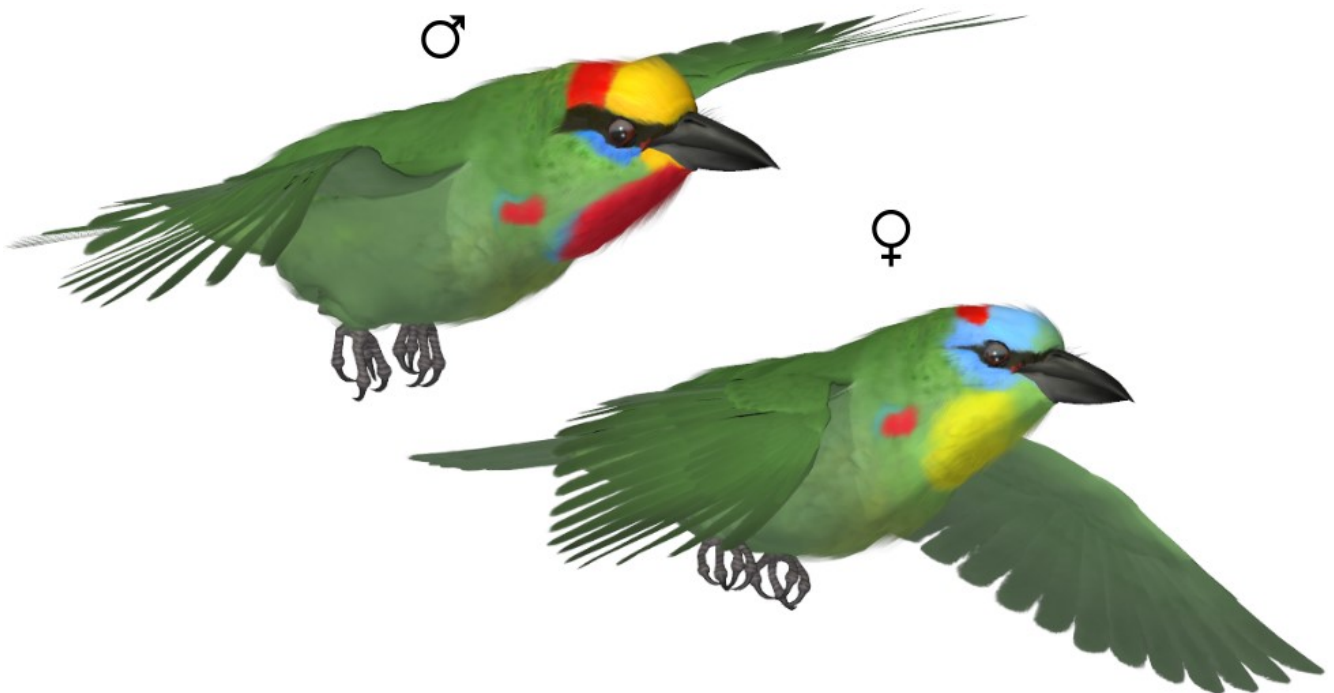
Common Name: Red-throated Barbet
Scientific Name: *Psilopogon mystacophanos*

Size: 8.9–9.5 inches (22.7–24.2 cm)

Habitat: Asia; Brunei, Indonesia, Malaysia, Myanmar, Singapore, and Thailand.

Its natural habitats are subtropical or tropical moist lowland forest and subtropical or tropical swamps.

Status: Near Threatened. **Global population:** <10,000 mature individuals with a declining population trend. It is typically described as common or uncommon and in Sarawak, Borneo, a density of 20 birds/km² was recorded. Consequently, although the population size has not been estimated, it is not considered likely to meet or approach the threshold for listing as “Threatened” (<10,000 mature individuals).



It is suspected to be declining because of forest loss throughout its range. Over the past three generations (12.3 years), forest loss in this species' range has been equivalent to 23-25%. Because this rate was similar between 2016 and 2020, with little indication this will slow in the future, the same rate is projected over the next three generations. As a forest-dependent species, the population is suspected to be declining at a rate broadly similar to that of forest loss.

Diet: Mainly fruits, especially figs. It will also feed on insect larvae and sometimes snails(especially during courtship feeding).

Insect larvae is taken by pecking, making pits in bark.

Breeding: Sexes are dimorphic. The male is mainly green with a red crown, throat, and spot below the throat. He also has a black spot above each eye and a yellow crown patch. There is also some blue near his eyes and on the lower part of his throat. The female lacks most of the male's facial coloration, but is otherwise similar. Juveniles resemble females

Breeding season begins May–June on the mainland; November–May and September in Sumatra; in Borneo reported June–July. Singing birds flicks tail down, extends throat, and keep bill closed. In courtship feeding, the male bows low to the female with its bill forward and calls.

The nest is excavated 3–6 m up in tree, or arboreal ant nest or termitarium. It lays 2–4 eggs and the incubation period is 17–18 days. The nestling period is 24–29 days. Both the incubation and brood-feeding performed by both sexes. The young are independent within 1 week, then often, a second brood is started. Females can be aggressive to male during nesting.

Cool Facts: Traditionally, this species was thought to belong to a group that includes also *P. javensis*, *P. rafflesii*, *P. corvinus* and *P. chrysopogon*; last two of these, however, appear not closely related to the others.

- *P. m. mystacophanos*. The nominate race is found in southern Myanmar (south-central Tenasserim), southwestern and peninsular Thailand, Peninsular Malaysia (except in the southwest), Sumatra and Borneo.
- *P. m. ampalus*. This race is endemic to Batu Island, off Western Sumatra. It is similar to the nominate race but has a red patch between the bill and the front of the eyes.

Common Name: Red-crowned Barbet
Scientific Name: *Psilopogon rafflesii*

Size: 9.6–10.6 inches (24.5–27 cm)

Habitat: Asia; It inhabits the Sundaic upland and lowlands of south Tenasserim, Myanmar, peninsular Thailand, Sabah, Sarawak and Peninsular Malaysia, Singapore, Kalimantan and Sumatra, Indonesia and Brunei.

Its natural habitats are subtropical or tropical moist lowland forests and plantations.

Status: Near Threatened. **Global population:** Unknown amount of mature individuals with a decreasing population trend. It is considered scarce in most part of its range and is suspected to be declining because of forest loss throughout its range.



Diet: Diverse fruits, such as figs, some cultivated fruits; also insects.

Breeding: Sexes are alike; although females often appear duller in color. It is primarily green, with a red crown, red spots behind the eyes, and a red mark on the side of the neck. The barbet wears a blue throat and broad supercilia accompanied by a black and yellow face. Immatures resemble males with a duller color scheme.

The breeding season begins in April and ends in May for a total of 36 days. Before the courtship begins, they release several loud and constant calls during the morning and evenings consisting of "*kotroo kotroo*" by the female and "*kurro kuroo*" by the male. Once a female has found a male, the courtship can begin. The male perches next to the female and begins to preen her feathers. If she accepts, the male flies off in search of insects and fruits. He returns and passes the food to the female to eat. After 10-20 minutes of this, the female initiates the coupling by using soft churning calls. She swings her tail horizontally, fluffs her feathers and pulls down her wings slightly

The pair choose a specific dead tree to begin pecking a hole about 20-30ft above the ground. Scientists believe the position of the hole faces the south to protect the nests from the monsoon rains. As they begin pecking, bits of wood and dust are taken out by their beaks and tossed to the ground. Their nest is about 30 cm in depth with a smooth chamber at the bottom for the eggs. Entering their nest, they would pass through a tunnel of 4.5 cm in diameter before there is a slight drop towards the chamber, where it widens to about 16 cm (6.3 in). The smooth walls of the bowl mean the barbet does not need any nesting material.

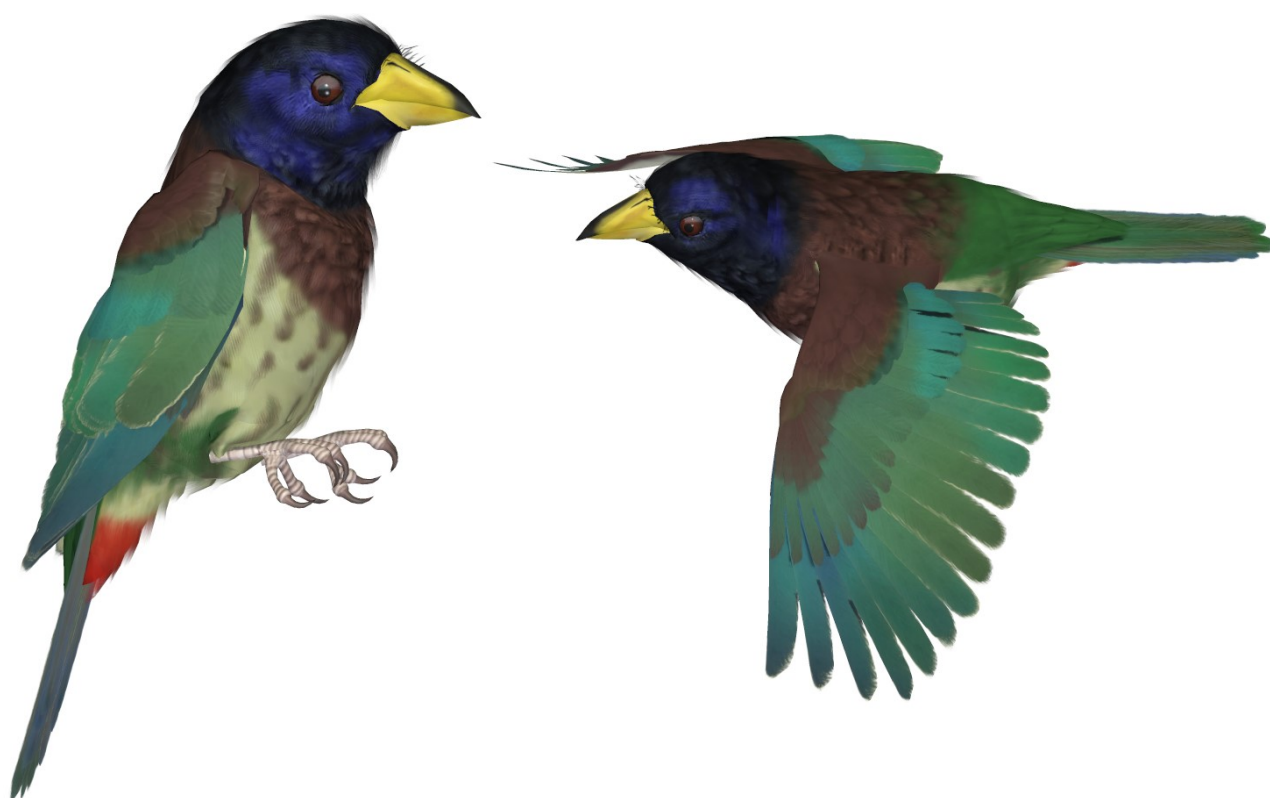
The female lays an average of three glossy white, elongated with an oval shaped end eggs. The pair exchanges roles of incubating the eggs every 20 to 30 minutes for 14–15 days. Once the eggs hatch, the pair begin collecting food for the chicks. They pass food directly to the chicks and take the fecal sacs out of the nest, keeping it clean. Once the younglings reach adolescence, based on the dull colorations on their forehead, the male and female feed them from the entrance of the nest.

Cool Facts: The song starts with low "*took*" notes at 1 per second, leading to "*tuk*" notes at 3 per second, for 5–15 seconds; some songs end in fast trill "*-datttttttt*"; songs repeated monotonously, 2–3 per minute.

Common Name: Great Barbet
Scientific Name: *Psilopogon virens*

Size: 12.3-13.4 inches (31.3–34 cm)

Habitat: Asia; occurs from northeastern Pakistan and India from Kashmir through Himachal Pradesh, Uttarakhand, and eastward along the Himalayas through Nepal, southern Tibet, Sikkim, Bhutan, and Arunachal Pradesh in northeastern India. It extends eastward to northern Myanmar and southern China (north to Sichuan and east to Hong Kong and Zhejiang), and southwards to Bangladesh (Chittagong), and Manipur in northeastern India, as well as eastern Myanmar, northwestern Thailand, and northern Laos and Vietnam. It occurs between 1000–3000 m in the Himalayas in summer, but sometimes down to 300 m, especially in the winter when it appears to undertake downslope migrations. In the eastern parts of its range, it is typically found between 600–800 m at the lower limit (sometimes down to sea level in Hong Kong), and up to 2400–2600 m at the upper limit.



It is found in moist temperate and subtropical evergreen and moist deciduous forests, as well as in forest edges and adjacent orchards and gardens with suitable fruiting trees. In Hong Kong, it occupies “fungshui” wooded valleys. In the Western Himalayas of India, it occupies oak and sal (*Shorea robusta*) forests as well as pine forests. Across its range, individuals at high elevations move downslope in the winter, spending this season in wooded valleys. It tends to inhabit forests with both closed and open canopies.

Status: Least Concern. **Global population:** 1,000-100,000 mature individuals with a decreasing population trend. The species is tentatively assessed as being in decline due to habitat loss and unsustainable levels of hunting.

Diet: Mainly fruits and insects.

Breeding: Sexes are alike. The feathers on the head (crown, nape, cheek, ear coverts, and throat) are brown basally, giving way to black and then glossy dark blue at the distal margin. The upper back is a deep brown color, often (but not always) with some feathers possessing pale tips that may manifest as pale yellow mottling. On the mid-back, feathers are a paler yellow-brown to deep-brown, with chestnut tips. This brown gives way to a deep green on the lower back, which extends to the rump and upper-tail coverts. Shafts of the tail feathers are brown or blackish. The central rectrices are bright green with blue margins and the remaining rectrices have dusky inner webs and greenish outer webs with blue margins. Upper-wing coverts are brown, often giving way to green more distally and with a blue sheen to the outer webs of the outer greater coverts. Remiges and primary coverts are dusky on the inner webs. The outer webs are bright aqua-blue on the inner 2-3 tertials, green on the remaining secondaries, and greenish blue, aqua, or dark blue on the primaries. The upper breast is deep brown, paling toward the mid-breast. Sides and flanks exhibit streaking, with brown centers and the tips and edges of each feather bordered with pale yellow, yellowish white, or greenish yellow, often becoming brighter green above the legs including the femoral feathering. The lower breast and ventral region shows a scalloped, greenish to blue appearance. The undertail coverts are bright red. The underwing coverts are yellowish-white with barred green and blue near the bend of the wing..

The great barbet's nesting season is from April to July. It typically builds nests in tree holes. Both male and females take care of the young.

Cool Facts: This enormous is the largest of the barbets, approximately the size of a small pigeon.

- *P. v. marshallorum*. First reported by Megalaema Marshallorum Swinhoe in 1870. This race is found in Northeast Pakistan and northwest India east to western Nepal. It is a paler brown than all other subspecies, with a violet-blue head. The streaking on the nape is extremely prominent, forming a yellowish patch. The lesser and greater wing-coverts are the same brown as the back, with limited green.
- *P. v. magnificus*. First reported by Baker in 1926. This race is endemic to Eastern Nepal east to central Assam, India. It is a paler brown than the nominate race, with stronger yellowish streaking on the nape and a generally bluer head. Considered intermediate between nominate, *virens* and *marshallorum* races.
- *P. v. clamator*. First reported by Mayr in 1941. this race is found in Northeastern Assam (India), northern Myanmar, and south-central China

(western Yunnan) to north-western Thailand. This race is defined by its larger size, with darker brown back and breast and more blue in the head than the nominate race.

- *P. v. virens*. First reported by Boddaer in 1783. the nominate race is found in Central Myanmar and north-central Thailand to northern Vietnam and south-central and south-eastern China.

Common Name: Fire-tufted Barbet
Scientific Name: *Psilopogon pyrolophus*

Size: 11 inches (28 cm)

Habitat: Asia; It is native to Peninsular Malaysia and Sumatra.

It is found mainly in canopy and subcanopy of primary and older secondary forests, forest edges and patches, especially in dense foliage with vines and creepers.

It inhabits broad-leaved evergreen montane forests between 1,070 and 2,010 m (3,510 and 6,590 ft).



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a decreasing population trend. The population is suspected to be in decline owing to ongoing habitat destruction and capture for the pet bird trade within its restricted range.

Diet: Primarily figs, other fruits, arthropods and insects.

It forages in pairs or family groups of up to 6–7 birds, pecking and probing. It also has been seen hanging in foliage to reach fruits or insects, and occasionally descending to understorey. It chases smaller barbets, (such as the Black-browed Barbet (*P. oorti*)), from fruiting trees. Sometimes, lone birds join mixed-species foraging flocks.

Breeding: Sexes are dimorphic. The male is green with a brownish-maroon nape, gray lores, and a white band on the forehead. It has red-tipped crown feathers. Its throat is green, followed by a bright yellow band before a black band, appearing like a necklace. The bill is fawn coloured with a black vertical band. It has tufts of feathers at the base of beak. The upper tufts of males are fiery orange whereas the females are duller in color. Female also lack the red on crown.

Breeding season occurs January to mid-September. Males countersing, holding body nearly horizontal, in encounters may fall to ground clasping and pecking one another. Both adults excavate cavity in dead tree or branch at 4 m or more above ground. Two to three eggs are laid. Both parents feed the young at first, each remaining in nest until other returns to feed. The nestling period last about 42 days. Fledglings are fed by parents for 5–8 days after fledging, then feed independently.

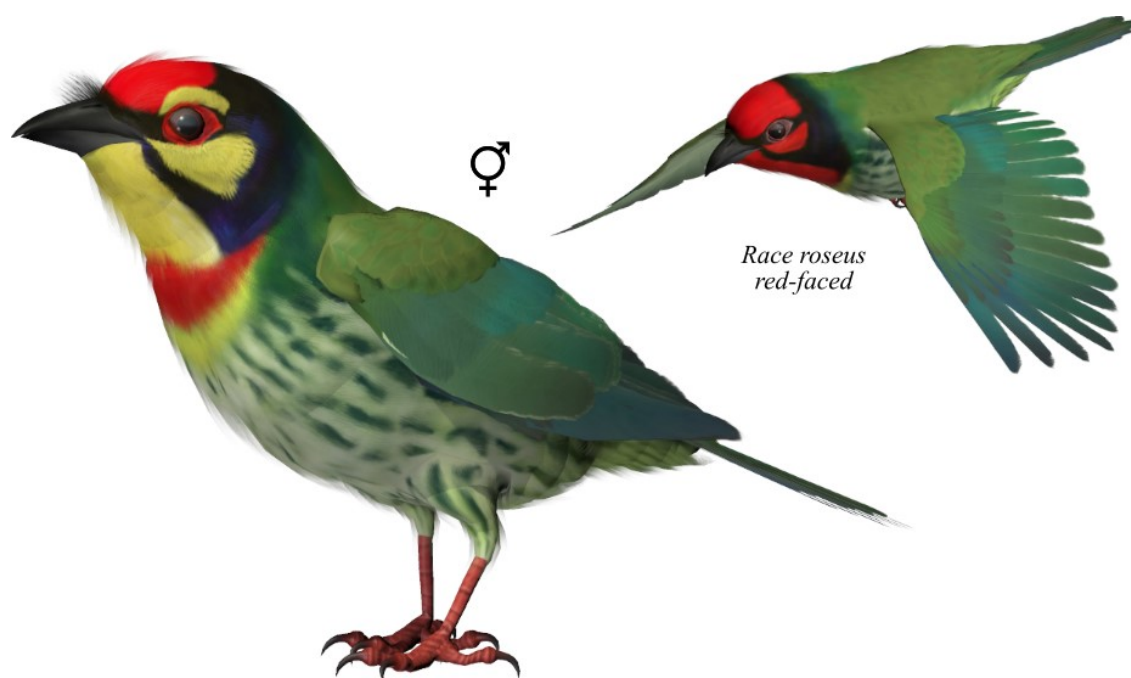
Cool Facts: Its call is very similar to that of cicadas.

Common Name: Coppersmith Barbet
Scientific Name: *Psilopogon haemacephalus*

Size: 7.1-8.7 inches (18.1–22 cm)

Habitat: Asia; its range spans the Indian subcontinent, Southeast Asia, Sumatra, Java, Bali, and the Philippines.

Throughout its range, it inhabits gardens, groves and sparse woodland. Habitats with dead wood suitable for excavation of nests are important. It is one of the only Asian barbets to regularly occupy non-forested/human-dominated habitats.



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a increasing population trend. This species is reported to be widespread and common throughout its range. This adaptable species shows a preference for man-made and altered habitats, it is common throughout its range and is found in heavily urbanized areas such as Singapore. Its range has expanded since the 1930s to include central and southern peninsular Malaysia.

Diet: Largely frugivorous, taking fruits, drupes, and berries, as well as some insects and flower parts.

Breeding: Sexes are alike. It has bright-green upper-parts, with dark-streaked, pale-yellowish underparts, and a geographically variable combination of red, yellow, and black on the head and breast.

It nests in cavities; either excavating or repurposing holes in dead trees, posts, or tree branches, although it will also readily nest in other anthropogenic structures.

Cool Facts: It is also known as the Crimson-breasted Barbet or Coppersmith, is one of the best-known members of its family. Its repetitive, metallic call, which recalls the sound of a coppersmith hammering metal, can be nearly ubiquitous during the breeding season throughout its range.

The Western Yellow-faced Group:

- *P. h. indicus*. First reported by Latham in 1790. It ranges from northeastern Pakistan to Sri Lanka, China, Vietnam and Singapore. It resembles the other yellow-patterned subspecies, especially *delicus*, but is larger, yellower, generally brighter dorsally, and has a broader gold breast patch.

The Javan Red-faced Group:

- *P. h. roseus*. First reported by Dumont in 1805. It occurs in Java and Bali. This race differs from the nominate race in having the yellow in the face and throat replaced with red. It is similar to other red-faced subspecies from the Philippines, particularly race *cebuensis*, but lacks yellow spotting in the red patches, is generally more white below without the yellowish tinge, and has a more yellow-green back.

The Philippine Yellow-faced Group:

- *P. h. haemacephalus*. First reported by Müller in 1776. The nominate race occurs in Luzon and Mindoro.
- *P. h. mindanensis*. First reported by Rand in 1948. It occurs in Mindanao (southern Philippines). It differs from the nominate race in having a brighter throat, more yellow on the under-parts with heavier green streaking, and deeper bluer green upper-parts.
- *P. h. celestinoi*. First reported by Gilliard in 1949. It occurs in Samar, Catanduanes, Biliran, and Leyte. It is very similar to the nominate race and to race *mindanensis*, but is slightly longer-billed, shorter winged, and shorter tailed.

The Philippine Red-faced Group:

- *P. h. cebuensis*. First reported by Dziadosz and Parkes in 1984. It occurs in Cebu (central Philippines). It resembles race *intermedius* but has a broader black band on the rear of the face and crown, and more yellow mixed in the red on the crown, face, and throat.
- *P. h. homochroa*. First reported by Dziadosz and Parkes in 1984. It occurs in Tablas Island. It resembles race *intermedius* but is duller and more uniform in color, with more green wash in the rear black border of the face and throat, a more concolorous green back, wings, and tail, and a more diffuse gold band on the breast. Variations by season and sex makes assessment of this subspecies difficult.
- *P. h. intermedius*. First reported by Shelley in 1891. It occurs in Panay, Guimaras and Negros. It differs from the nominate in having the yellow on the face and throat replaced by red (with some yellow feather bases showing through), and more cream-yellow below.

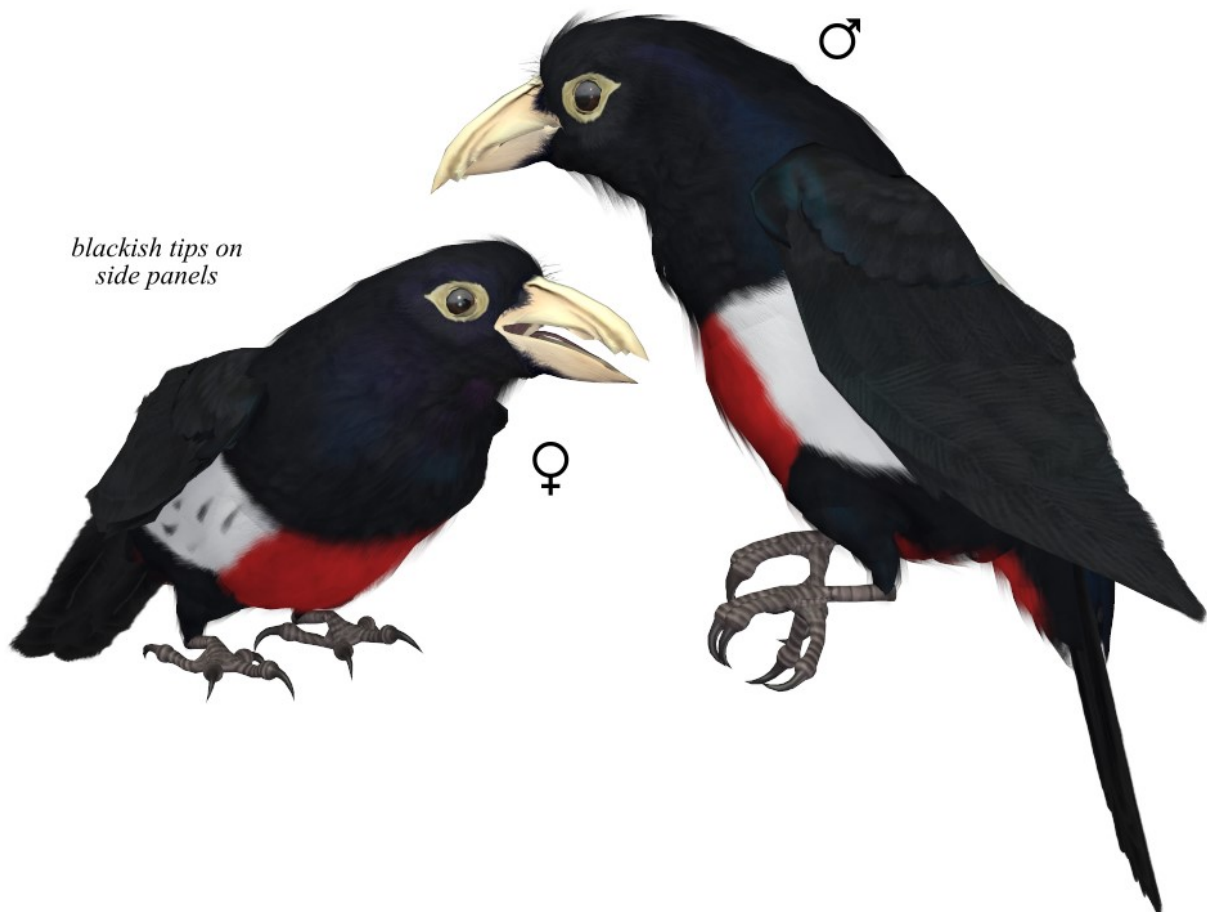
Common Name: Black-breasted Barbet

Scientific Name: *Pogonornis rolleti*

Size: 10.6 inches (27 cm)

Habitat: Africa; found in Central African Republic, Chad, Sudan, South Sudan, and the extreme northeast of Democratic Republic of Congo and northern Uganda.

It occurs in woodlands of the eastern Sahel, between 200m and 1200m altitude (and as high as 2134m in western Sudan). This frugivorous barbet is known to frequent fig trees in Zakouma National Park in the dry season. As these riverine areas flood heavily in the wet season, their movements are unknown but they are not presumed to be migratory.



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a declining population trend. It is described as probably uncommon or perhaps locally common. The population is suspected to be in decline owing to desertification of its habitat and removal of dead trees which are required for nesting.

Diet: Diet of fruits, including guavas, mangoes, figs and others; presumably eats insects as well.

Breeding: Sexes are dimorphic. It is a distinctive, large, big-billed, black, white and red barbet. The male is all glossy black, except for white patch on lower back, red belly, white flank patch; black hair-like feathers around base of bill, especially out over nostrils. The facial skin is blue to gray and the eyes are brown. The ivory bill “toothed” and with grooves on sides. Female has small black spots on white flank patch. Immature less glossy black, browner, reds duller and more orange-red.

Breeding season occurs February–July, perhaps occasionally later, to November, in north; September–December in northern Uganda. Nest excavated in tree, at up to c. 5 m. One to two eggs are laid.

Cool Facts: It is distinguished from Bearded Barbet (*Pogonornis dubius*) by its all-black throat and breast, and dark eyes and facial skin and from the Double-toothed Barbet (*Pogonornis bidentatus*) additionally by its larger size, much heavier bill with prominent grooves.

Common Name: Bearded Barbet
Scientific Name: *Pogonornis dubius*

Size: 10 inches (26 cm)

Habitat: Africa; it is found in Western Sahel from northern Senegambia and Guinea-Bissau east to southwestern Chad, south to Guinea, central Ivory Coast, central Ghana, Togo and Benin, central Nigeria, central Cameroon and northwestern Central African Republic.

It occurs around trees in dry areas, including in Acacia, baobabs (*Adansonia digitata*), figs, fruiting trees in gardens, and in thickets, open woods, abandoned farms, secondary growth, and associated undergrowth, from near sea-level to c. 1,500 m.



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a stable population trend. It is common in Senegambia and Nigeria.

Diet: Mainly fruits and some insects.

The bearded barbet forms social groups of 4-5 birds and pairs or groups roost together in a tree cavity.

Breeding: Sexes are dimorphic. It is fairly plump, with a short neck, large head and a shortish tail. The adult has a black crown, back, tail and breast band. The throat and belly are red and there is a yellow eye patch. The rump

is white. The massive bill is very thick and yellow, and the well developed clump of bristles at its base give the species its name. The “beard” on the female has less red in it.

It nests in a tree hole, laying 2 white eggs.

Cool Facts: The bearded barbet was formally described in 1788 by the German naturalist Johann Friedrich Gmelin in his revised and expanded edition of Carl Linnaeus's *Systema Naturae*.

Common Name: Black-collared Barbet
Scientific Name: *Lybius torquatus*

Size: 6.9-7.4 inches (17.5-19 cm)

Habitat: Africa; found in Sub-Saharan Africa through Angola, Botswana, Burundi, Democratic Republic of the Congo, Eswatini, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe.

It is found in diverse open woodland to pasture habitats, avoiding deserts and forest: includes farmlands, gardens, Acacia woodlands, riverine woods, wooded grasslands, and Parinari-Pericopsis woodlands.



Status: Least Concern. **Global population:** mature individuals with a decreasing population trend. This species is reported to be common in most of its range. Race *irroratus* is suspected to be in decline owing to ongoing habitat degradation and fragmentation although it presently remains common.

Diet: Grapes, guavas, figs, and fruits of Euclea, Hippobromus, Lycium, Rhus, Royena, Scutia, Trichelia and Ziziphus, among others. It will also feed on ants, rose chafers, beetles, bees and other hymenopterans, as well as other insects.

It gleans insects in foliage, and picks and probes along bark of twigs and on the trunks of bushes and trees. It also works in lichens, debris and termite

tunnels. It pecks out and eats seeds from dried pods of *Cassia abbreviata*. Occasionally, it will fly-catch from perches.

Breeding: Sexes are alike. A Common, conspicuous, vocal and social brown, black and yellow barbet. Both sexes of the nominate race with have red (sometimes yellow) over much of head and throat, with a black hind-crown, nape and mantle, and with brown remaining upper-parts finely vermiculated with black. There is a black band across breast. It has a yellowish belly and large black bill with 1 or 2 “teeth”.

Cool Facts: Indigenous names include “*Rooikophoutkapper*” in Afrikaans, “*isiKhulukhulu*” and “*isiQonQotho*” in Zulu, and “*Isinagogo*” in Xhosa.

- *L. t. zombae*. First reported by Shelley in 1893. It is found in southeastern Tanzania to south-central Malawi and northeastern and central Mozambique. This race is variable, with no red on head, face rather spotted to streaked white, orange or yellow on black, underparts paler and less yellow, white-marked morphs common.
- *L. t. pumilio*. First reported by Grote in 1927. It is found in the eastern Democratic Republic of the Congo, southern Uganda, eastern Rwanda, east, west and south Burundi and western Tanzania southward to northeastern and eastern Zambia, northern and western Malawi and northwestern Mozambique. This race is smaller, more orangey on head and breast, paler yellow belly becoming whiter on flanks than the nominate.
- *L. t. irroratus*. First reported by Cabanis in 1878. It is found in coastal eastern Kenya southward to east-central Tanzania. It resembles race *pumilio*, but smaller, paler below, with hair-tipped red throat-breast feathers that hang over black collar.
- *L. t. congicus*. First reported by Reichenow in 1898. It is found in northern and north-central Angola eastward to the south-central part of the Democratic Republic of the Congo and northwestern Zambia. It is like the nominate, but separated by race *bocagei*, which is yellower ventrally, with few lateral vermiculations on flanks.
- *L. t. vivacens*. First reported by Clancey in 1977. This race is endemic to Malawi, Mozambique and eastern Zimbabwe. It is similar to race *pumilio*, but browner above with finer vermiculations, still paler, whiter, below.
- *L. t. bocagei*. First reported by Sousa in 1886. This race is endemic to Angola, western Zambia, northern Namibia and northern Botswana. It is yellower ventrally, with few lateral vermiculations on flanks.
- *L. t. torquatus*. First reported by Dumont in 1805. The nominate race is endemic to southeastern Botswana eastward to northeast and eastern South Africa and Swaziland.

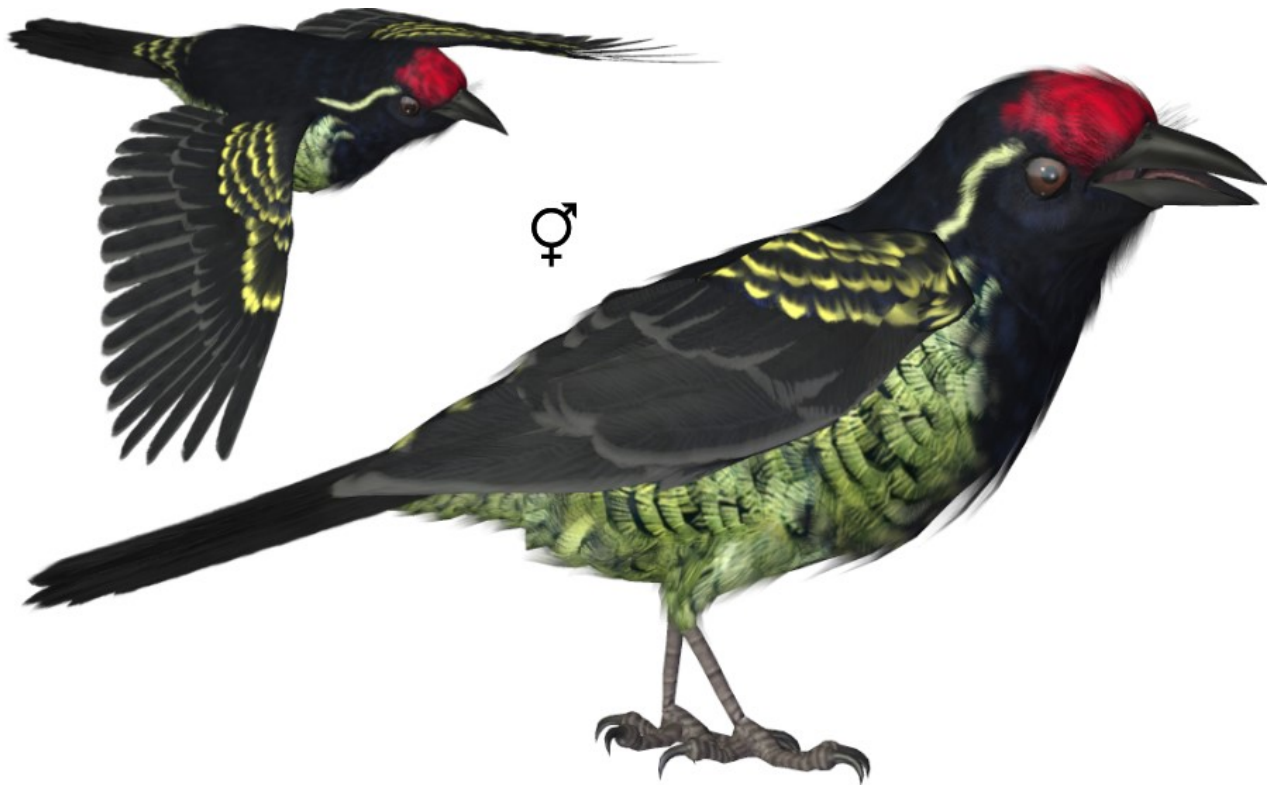
Common Name: Yellow-spotted Barbet
Scientific Name: *Buccanodon duchaillui*

Size: 6.1-6.7 inches (15.5-17 cm)

Habitat: Africa; it is found in Angola, Cameroon, Central African Republic, the Republic of the Congo, the Democratic Republic of the Congo, Ivory Coast, Equatorial Guinea, Gabon, Ghana, Guinea, Kenya, Liberia, Nigeria, Sierra Leone, Tanzania, and Uganda.

It inhabits forests, including old secondary forests, forest patches, edges, overgrown clearings and tree plantations, but is absent from such habitats in southwestern Uganda. It can also be found in riverine forests.

Status: Least Concern. **Global population:** Unknown amount of mature individuals with a decreasing population trend. The species is tentatively assessed as being in decline due to habitat loss.



Diet: Mainly small fruits, such as those of *Allophylus*, *Ficus*, *Heisteria*, *Musanga* and *Vismia*, and oil palm (*Elaeis guineensis*). It will eat nuts as well as insects such as termites, and snails.

It clings or grasps thin branches, and gleans fruits or insects from them. Small figs taken at three per minute. It occasionally will flycatch. It forages at heights of 8–30 m and sometimes congregates in groups of up to 12 at trees laden with ripe fruits, where attacked by species of *Gymnobucco*. It will join in with mixed-species foraging flocks.

Breeding: Sexes are alike. It is larger and chunkier than a tinkerbird. It is glossy black with yellow spots on the upper-parts. The throat and upper breast are black with yellow tipped feathers extending from the lower breast to the rump. It has a distinctive orange-red forehead and forecrown, and yellow supercilia. The orbital skin is black, as well as the bill. The immature lacks the red on the head, and the yellow and black parts both duller. It has pinkish orbital skin, and a yellow or orange bill with a dark tip.

Cool Facts: It gives a distinctive frog-like purring “*brrrr--t*” call.

Two subspecies are known:

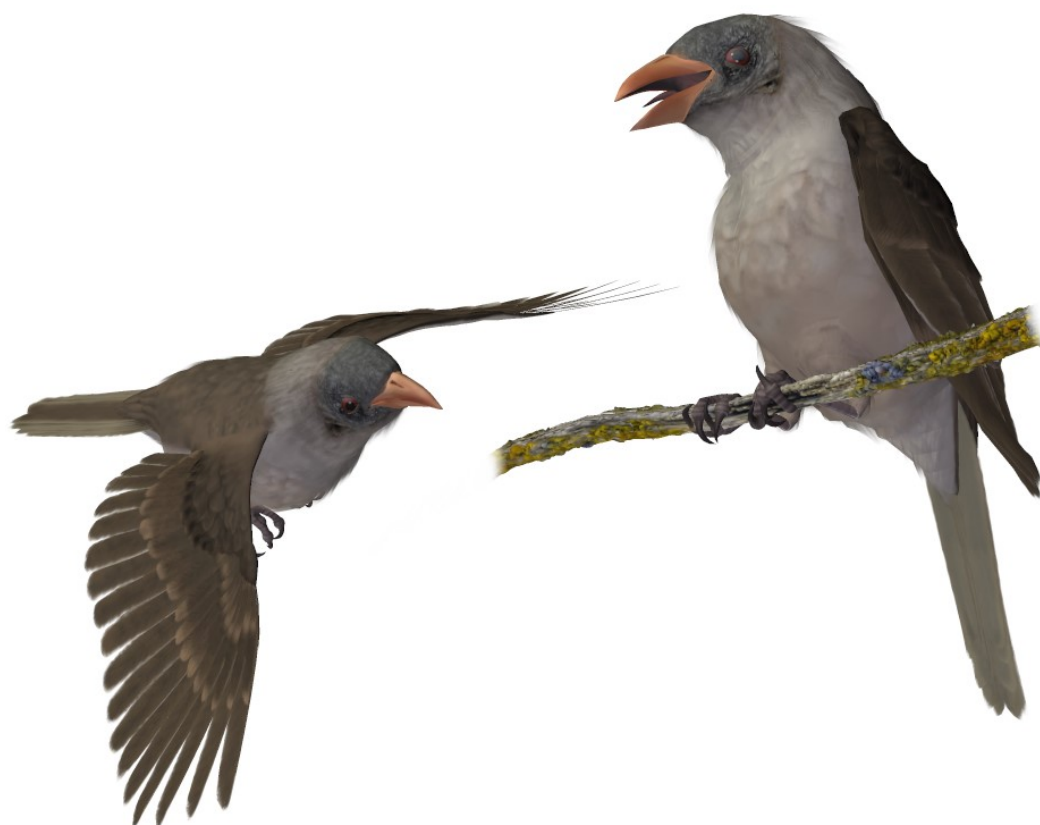
- *B. d. duchaillui*. First reported by Cassin in 1856. The nominate race, known as the “Eastern” Yellow-spotted Barbet, is endemic to eastern and central Africa, west to Nigeria.
- *B. d. dowsetti*. First reported by Boesman & Collar in 2019. The “western” yellow-spotted barbet is found in Sierra Leone to Togo. The western subspecies was described in 2019 as a distinct species based on its unique song.

Common Name: Naked-faced Barbet
Scientific Name: *Gymnobucco calvus*

Size: 6.7-7 inches (17–18 cm)

Habitat: Africa; it is distributed from Liberia and Guinea east to Cameroon and south to northern Angola, with a disjunct population in the uplands of western Angola which has recently been suggested might be better treated as a different species (rather than subspecies).

Throughout its range, this barbet seems to be more numerous in second growth than it is in primary forest, although it requires tall, dead trees for nesting; the species will also utilize wooded grassland, nearby plantations, farms and villages with fruiting trees, and even farmbush.



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a declining population trend. The population is suspected to be in decline owing to loss of suitable nesting and roosting trees.

Diet: Mainly fruits and some insects.

Feeds in the manner of a tit (*Paridae*), being surprisingly agile in foliage and along branches, and it remains for long periods in trees with ripe fruits.

Breeding: Sexes are alike. It has predominantly brown plumage, streaked paler both on the upper- and underparts, a characteristically short tail, a partially bald pate and face with some tiny, hair-like, dark feathers scattered on the bare areas, and bristly tufts of feathers on the chin and either side of the base of the usually pale bill.

It nests in a tree hole, laying 2 white eggs.

Cool Facts: As if caught in an awkward molt, the adult Naked-faced Barbet's head has a wizened "balding" appearance... a look that is shared with most other members of the genus *Gymnobucco*.

Special Thanks to my Beta-Testing Team...

Alisa & FlintHawk

Species Accuracy and Reference Materials

The author has tried to make these species as accurate to their real life counterparts as possible. With the use of one generic model to create dozens of unique bird species, some give and take is bound to occur. The texture maps were created in Painter with as much accuracy as possible.

Field Guide Sources:

- **Handbook of the Birds of the World** <https://www.hbw.com/>
- **Wikipedia** https://en.wikipedia.org/wiki/Main_Page
- **BirdLife International** <https://www.birdlife.org/>

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