



## Avian Models for 3D Applications

Characters and Texture Mapping by Ken Gilliland

# Songbird ReMix Cuckoos

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# Songbird ReMix Cuckoos

## Introduction

Cuckoos are birds in the *Cuculidae* family. The cuckoo family includes the common or European cuckoo, roadrunners, koels, malkohas, couas, coucals, and anis. The family Cuculidae contains 150 species, which are divided into 33 genera.

They are generally medium-sized, slender birds with zygodactyl feet (two inner toes point forward and the two outer backward). Most species live in trees, though a sizeable minority are ground-dwelling. The family has a cosmopolitan distribution; the majority of species are tropical. Some species are migratory. The cuckoos feed on insects, insect larvae, and a variety of other animals, as well as fruit. Some species are brood parasites, laying their eggs in the nests of other species and giving rise to the metaphor "cuckoo's egg", but most species raise their own young.

Cuckoos have played a role in human culture for thousands of years, appearing in Greek mythology as sacred to the goddess Hera. In Europe, the cuckoo is associated with spring, and with cuckoldry, for example in Shakespeare's *Love's Labor's Lost*. In India, cuckoos are sacred to Kamadeva, the god of desire and longing, whereas in Japan, the cuckoo symbolizes unrequited love.

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):
  - **Cuckoos and their relatives (Order Cuculiformes)**
- **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**.

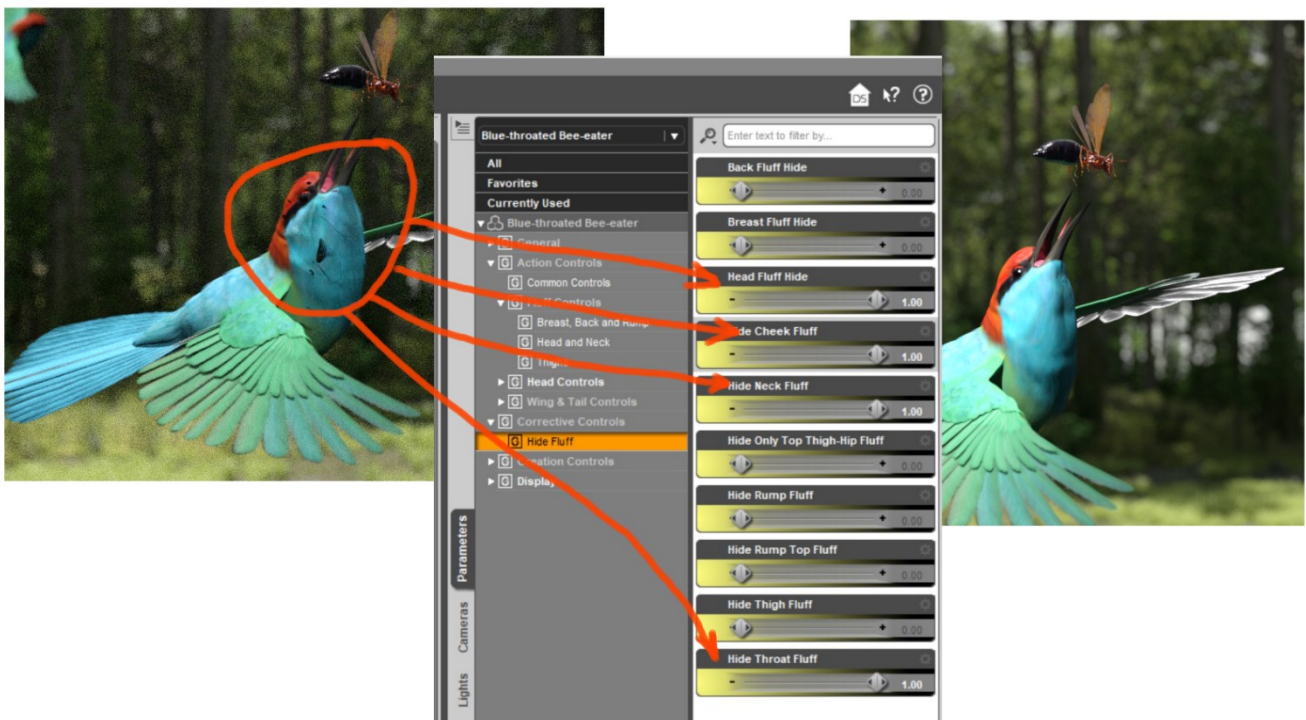
## DAZ Studio Use

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

Type Folder	Bird Species
<b>Cuckoos and relatives (Order Cuculiformes)</b>	Guira Cuckoo Greater Ani Striped Cuckoo Scaled Ground-Cuckoo Sumatran Ground-Cuckoo Crested Coua Buff-headed Coucal Blue-headed Coucal Chestnut-breasted Malkoha Yellow-billed Cuckoo Squirrel Cuckoo Great Spotted Cuckoo Common Cuckoo Mangrove Cuckoo Jamaican Lizard-Cuckoo

## Where to find your poses

Type Folder	For what species?
<b>Cuckoos and relatives (Order Cuculiformes)</b>	All Cuckoos

## Songbird ReMix Cuckoos

# FIELD GUIDE

Guira Cuckoo  
Greater Ani  
Striped Cuckoo  
Scaled Ground-Cuckoo  
Sumatran Ground-Cuckoo  
Crested Coua  
Buff-headed Coucal  
Blue-headed Coucal  
Chestnut-breasted Malkoha  
Yellow-billed Cuckoo  
Squirrel Cuckoo  
Great Spotted Cuckoo  
Common Cuckoo  
Mangrove Cuckoo  
Jamaican Lizard-Cuckoo

**Common Name:** Guira Cuckoo  
**Scientific Name:** *Guira guira*

**Size:** 14.1-16.5 inches (36-42 cm)

**Habitat:** South America; found in eastern and southern Brazil from extreme southern Amapá and Pará southward to Bolivia, Paraguay, northern and eastern Argentina and Uruguay.

It frequents second-growth scrub, drier trees and scrub savanna and scrub woodlands, pampas, pastures, coastal dunes. Groups tend to huddle together on cold days and perch together in trees at night. They roost in trees.

**Status:** Least Concern. **Global population:** 10,600,000 mature individuals with an increasing population trend. It is generally common and has extended its range during the last 100 years, entering fields occupying deforested areas. It disappears with afforestation, and absent from forested parts of Amazonia.

**Diet:** Insects (including grasshoppers, cicadas, flying termites and spiders), frogs, lizards and snakes. They will take eggs and nestlings of small birds, and have been observed taking mice and rats in captivity.



They are gregarious; feeding on the ground in flocks of up to 20, although the most common group size is 6–8 birds.

**Breeding:** Sexes are similar although the male is slightly larger in size. Adults are shaggy-looking above, with their backs and wings white-streaked brown, short orange-rufous crests, and their lower backs white and their tails blackish with broad whitish lateral area at base and at tip. The central rectrices of the tail are all dark except at base. It is whitish below with striped brown on its throat and breast. The bare facial skin is yellow and the iris is yellow to orange. The bill is orange to yellow and their feet are bluish gray. Juveniles have small white spot on the tips of the remiges. Their bills are black and white and their irises are a light gray.

In Brazil, some nest in dry months, May through August, but mainly during the rainy season (August–November) near Brasília and Rio de Janeiro. They nest in November and December in Uruguay and Argentina. Sometimes, these cuckoos will lay their eggs in nests of other species. Flocks decrease in size in the spring, when some groups split into pairs to breed.

The nest is a large open platform of sticks, high in a thorny tree and they often renovates old nests from previous season. The eggs are gray to turquoise with whitish chalky splotches and streaks raised in relief. Most groups have several females laying in the same nest, averaging up to ten eggs in a group nest (number of eggs greater in groups with more birds). The incubation time is 10–15 days. Nestlings are pale-skinned with white hair-like down above, the bill is pale with a black culmen ridge and mandibular rami. The mouth-lining is pale with raised papillae and black bar on tip of tongue. The young fledge about 15 days after hatching.

**Cool Facts:** The Guira Cuckoo was described and illustrated in 1648 by the German naturalist Georg Marcgrave in his *Historia Naturalis Brasiliae*. The word Güirá means "bird" in the Guaraní language. The Guaranian are indigenous people from South America's interior (Brazil, Argentina, Paraguay and Bolivia).



**Common Name:** Greater Ani  
**Scientific Name:** *Crotophaga major*

**Size:** 18 inches (46 cm)

**Habitat:** Central and South America; it is widely distributed in lowland South America from Colombia to Paraguay, extending into Central America only as far as eastern Panama.

It is found in forested lowlands adjacent to water (particularly those with partly inundated banks and sluggish or standing water). This preferred habitat includes bamboo, mangroves, flooded forests, gallery forests, swamps, marshes, and lake and creek edges. In the Panama Canal area, it frequently nests on small islets. It prefers to nest in small trees or shrubs growing in the water (including *Drepanocarpus*, *Annona glabra*, *Montrichardia arborescens*, and *Acrostichum danaeifolium*).

**Status:** Least Concern. **Global population:** 500,000-4,999,999 mature individuals with a stable population trend. This species is locally abundant in areas of appropriate habitat, particularly in upper Amazonia. Christmas Bird Count data indicate that Greater Anis are regularly observed in the few count circles within its range, usually in groups of more than several dozen individuals.



The construction of Gatun Lake in 1914, formed when the Chagres River was dammed to create the Panama Canal, created a large area of habitat that was

rapidly colonized by Greater Anis. Elsewhere in its range, nesting habitat is doubtless destroyed by the clearing of forests along rivers, lakes, and other waterways, and by the filling and dredging of marshes and swamps.

**Diet:** Large insects (particularly *Orthoptera*, *Phasmatodea*, *Odonata*, *Lepidoptera*, *Blattodea*, and *Coleoptera*). It will also take fruit, berries, Euphorbia seeds, arachnids, small lizards (*Anole* and *Ameiva*), and small frogs.

This is a very gregarious species and almost always found in noisy groups. It forages from forest understorey to canopy, most frequently seen in midstory along water's edge. Occasionally, it captures aerial insects above water's surface. It rarely forages on the ground in grassy clearings near forest edge. It has been reported following army ant swarms and squirrel monkeys.

**Breeding:** Sexes are alike in plumage. Females average smaller than males, but there is substantial individual variation and overlap between sexes. It is a large, long-tailed cuckoo with proportionately broad, rounded wings. It is overall a glossy black with its breast and wing feathers a glossy blue-green and its back feathers broadly edged with a bronze-green. The feathers on the nape and neck are long, narrow, and edged with bronze-green, giving the head a "ridged" look. Its rectrices are long, square at tip, and glossed a violet-purple. The irregular molt of its rectrices gives the tail a graduated appearance. Its iris is white to a greenish-yellow, with the outer ring of iris changing to a lime-green when stressed. Its bill is very large and laterally compressed with high flange on its upper mandible. The flange is flat with a variable number of smaller raised ridges, but less consistent and conspicuous than bill grooves of other *Crotophaga* species. The tarsi and skin black in color. There is no apparent plumage variation among the populations.

Mating patterns and reproductive strategies within groups appear to be quite complex: though pairs are socially monogamous, extra-pair copulations with other group members are common, and unrelated, unpaired "helpers" may join nesting groups and attempt to reproduce as well. Females synchronize laying and compete with one another for reproduction by ejecting the eggs of fellow group members from the communal nest.

Juveniles are similar to adults, but their upper mandible flange is smooth and much reduced. They also have irises that are dark brown.

Nesting groups are composed of two to four unrelated pairs that build a single nest in which all of the females lay their eggs. All of the individuals in the group participate in territorial defense, nest-building, incubation and food delivery. Adults are apparently incapable of recognizing their own eggs or nestlings, so the young are raised in communal clutches.

Adults brood nestlings almost continuously for the first 2-3 days after the first eggs hatch, allowing late-laid eggs to hatch asynchronously. As in incubation, all adults participate in brooding and shifts typically last up to a few hours.

Fledging typically occurs at 8–10 days, but nestlings may leave nest earlier if disturbed by predators. Fledglings from the same nest usually disperse to different areas around the nest, where the adults continued to feed them for the next 2 weeks. Fledglings probably capable of flight at 2-3 weeks, but adults continue to feed fledglings for up to 6 weeks.

**Cool Facts:** It is fairly tolerant of human presence and will forage around houses and buildings.

**Common Name:** Striped Cuckoo  
**Scientific Name:** *Tapera naevia*

**Size:** 11 inches (27 cm)

**Habitat:** Central and South America; it occurs from southern Mexico (Veracruz, Oaxaca, Tabasco, Chiapas and Quintana Roo) southward through Central America continuing south in South America to northern Peru and east of the Andes southward to Bolivia, Paraguay, Uruguay and northern Argentina.

It is generally found in open country with scattered trees and thickets.

**Status:** Least Concern. **Global population:** 500,000-4,999,999 mature individuals with a stable population trend. It is widely distributed, and usually is considered to be fairly common to common across its range.

**Diet:** Primarily insects (including grasshoppers, caterpillars, dragonflies, cockroaches and beetles. It has occasionally feed on berries.



**Breeding:** The sexes are alike. The Adults upper-parts, including the crest, tend toward a more rufous, dull ochraceous color, streaked with buff and black. The alula is large and black and the wing is brown to rufous. Its upper tail coverts are light rufous becoming dark brown. The tail is long, graduated

and dark brown in color. Its face has a white eyebrow and black whisker lines. Its under-parts are whitish with a narrow black malar streak. The throat and breast have black streaks while its belly is mostly white.

The juvenile is generally similar to adult with a black crown with buff spots. Its upper-parts are a rufous brown streaked buff and black. The alula, upper wing coverts and upper tail coverts have buff spots, while its under-parts are buff with fine black bars on the throat and breast. The belly is white with small dark spots.

The Striped Cuckoo is brood parasitic. As is true for all brood parasitic species, parental care of eggs and young is provided by the host species. Striped Cuckoos typically parasitize small-bodied passerines that construct covered or domed nests. Sub-oscines are parasitized much more often than oscines, and ovenbirds (*Furnariidae*) in particular are frequent host species.

The eggs are white, bluish white, or greenish blue. Incubation takes about 15 days. The young cuckoo kills nestmates soon after hatching with hooked bill and is reared alone in nest of its host. The young cuckoo leaves the nest when 16 - 18 days old. The fledgling remains flightless for another week and may still be cared for by host to age 36 days old.

**Cool Facts:** This bird is very important in Brazilian folklore, being related to the legend of the saci, or matita-perê. Saci was a one-legged black man, who smoked a pipe and wore a magical red cap that enabled him to disappear and reappear wherever he wished (usually in the middle of a Dirt devil). Besides disappearing or becoming invisible (often with only his red cap and the red glow of his pipe still showing), the Saci can transform himself into a Matitaperê or Matita Pereira, an elusive Striped Cuckoo, whose melancholic song seems to come from nowhere. One can escape a pursuing Saci by crossing a water stream. The Saci dares not cross, for then he loses all his powers. Another way is to drop ropes full of knots. The Saci is compelled to stop and undo the knots. One can also try to appease him by leaving behind some cachaça, or some tobacco for his pipe.

Considered an annoying prankster in most parts of Brazil, and a potentially dangerous and malicious creature in others, he nevertheless grants wishes to anyone who manages to trap him or steal his magic cap. However, his cap is often depicted as having a bad smell. Most people who claimed to have stolen this cap say they can never wash the smell away.

It has two subspecies:

- *T. N. excellens*. It was first reported by Sclater in 1857. It is found in tropical southeastern Mexico to Panama. It is smaller than the nominate species.
- *T. N. naevia*. It was first reported by Linnaeus in 1766. The nominate subspecies is found from northern South America to Brazil, Argentina, Trinidad and Isla Margarita.



**Common Name:** Scaled Ground-Cuckoo  
**Scientific Name:** *Neomorphus squamiger*

**Size:** 17 inches (43 cm)

**Habitat:** South America; it is endemic to the Amazon rainforest near the Tapajos River in Brazil.

The Scaled Ground-Cuckoo occurs on the ground in tropical Amazonian evergreen lowland forest.

**Status:** Near Threatened. **Global population:** An unknown amount mature individuals with a declining population trend. The Scaled Ground-Cuckoo is considered rare, occupying a small geographic range, and is highly sensitive to human disturbance. The primary threat is habitat loss and degradation due to accelerating deforestation in the Amazon Basin for ranching and agriculture. This is exacerbated by extensive road-building in the region that not only directly causes loss of forest but also facilitates mining and hydroelectric development which produces additional damage to the forest environment. In addition, Scaled Ground-Cuckoo may be susceptible to hunting directly, or to the hunting of peccaries on which it may depend.



There are 63,000-127,000 Rufous-vented Ground-Cuckoos and it is listed as vulnerable. Some scientists believe the Scaled Ground-Cuckoo is a subspecies of this bird.

**Diet:** Attends swarms of army ants in order to capture prey that is flushed from the undergrowth as the ants move through it .

The Scaled Ground-Cuckoo also has been observed in association with White-lipped Peccaries. It has been suggested, in relation to other species of *Neomorphus*, that this behavior is beneficial to the cuckoos because the peccaries disturb potential prey items as they forage.

It is a primarily terrestrial species that runs and walks swiftly along the forest floor on long legs and robust feet. The movements of ground-cuckoos in this regard have been described as “squirrel-like”.

**Breeding:** The sexes have similar plumage. Adults have a heavy decurved bill that is greenish with a bluish dusky base and a yellowish tip. Their forehead and crown is brownish. Its crest is a shaggy, glossy, blue-black and erect. Most of the face is cinnamon buff but with bright cobalt blue bare skin behind the eye. Their hind-neck and upper back are bronzy olive brown, the lower back bronzy brown to purplish, and the rump and upper-tail coverts deep purplish brown with a bronze gloss. Their tail is black with a purple and green gloss on the upper side. Their wings are olive green with purple-glossed bluish primaries. Their throat is dusky white to pale buff. Their breast is buff or grayish with bold black semicircles that give it a scaly appearance and has an indistinct black band below it. The rest of the underparts are whitish or buffy with chestnut on the flanks, lower belly, and under-tail coverts.

The juveniles breast and flanks are a dark brown and the belly dark brown with a paler center.

Ground-cuckoos are non brood-parasitic species. The breeding behavior and phenology of Scaled Ground-Cuckoo is virtually unknown. No data on nest type or placement, clutch size, egg appearance, incubation and nestlings periods, and other aspects of breeding behavior has been recorded. Nests are presumably similar to other ground-cuckoos; the large bulky cup placed in an understorey tree.

**Cool Facts:** The scaled ground cuckoo's taxonomic status has not been settled. The South American Classification Committee (SACC) of the American Ornithological Society, the International Ornithological Committee, and the Clements taxonomy treat it as a species. However, BirdLife International's Handbook of the Birds of the World (HBW) treats it as a subspecies of the vulnerable Rufous-vented Ground-cuckoo (*N. geoffroyi*). This finding is based on genetics and coloration, however, several scientists maintain that they can be easily separated by several plumage characters that show no intergradation along the Amazon near the Rio Tapajós where the two forms meet.

The Scaled Ground-Cuckoo likely is vulnerable to extinction due to habitat loss and fragmentation of the Amazonian rainforest. Thus, it is imperative that its status as a distinct species be validated so that it may receive appropriate conservation measures apart from Rufous-vented Ground-Cuckoo, which is much more widely distributed in Central and South America.

**Common Name:** Sumatran Ground-Cuckoo  
**Scientific Name:** *Carpococcyx viridis*

**Size:** 21.7 inches (55 cm)

**Habitat:** Asia; this species is endemic to southwestern Sumatra (the foothills of Barisan Range).

It is found in forests; particularly in hilly areas. It is terrestrial, but nests and roosts in trees. It is found between 300–1400 m elevations.



**Status:** Critically Endangered. **Global population:** 250+/- mature individuals with a declining population trend. The true status of this species has until recently been concealed by the fact that it was treated as conspecific with Bornean Ground-cuckoo (*C. radiceus*).

Presently, the species is, in fact, seriously imperiled. It is known from eight museum specimens, all from areas in which the Sumatran Rhinoceros (*Dicerorhinus sumatrensis*) was also known, and a series of recent sightings.

The cuckoo was not observed in the wild since 1916, until one was trapped and photographed in 1997 at Bukit Barisan Selatan National Park. Subsequently, there has been an unconfirmed sighting in 2000 in the Bukit Rimbang-Baling Wildlife Sanctuary and a camera-trap photograph near

Kerinci Seblat National Park in 2006. After another bird was caught in Bukit Barisan Selatan National Park in 2007, as many as five individuals have been seen in and around this protected area. Ground-cuckoos are unobtrusive and it may still persist in additional forest areas. Nevertheless, it seems likely that it is rare and locally distributed; hence global population is estimated to comprise fewer than 250 mature individuals BirdLife International (2015).

At least a third of the montane forest and 80% of lowland forest on Sumatra has been destroyed, however, and the continuing loss of this habitat to agricultural encroachment by shifting cultivators (Palm Oil) is likely to be the most serious threat to the survival of this species. It may also be caught inadvertently in snares set for Red Junglefowl (*Gallus gallus*). Part of its range is protected. Recent records come from Bukit Barisan Selatan National Park and near Kerinci Seblat National Park (from where there is also an old specimen). Field research is required to determine the location and extent of any remaining populations. The species should be fully protected by law.

**Diet:** Mainly insects, including beetles and giant ants.

**Breeding:** The sexes have similar plumage. The adult has black on its crown, shading to green on hind crown. Its mantle, upper back, neck-sides, wing-coverts and secondaries are a dull green with the lower back a brown with broad greenish-brown bars. The wings and tail are a glossy greenish black. The lower throat and upper breast are a dull grayish green with the rest of the under-parts a cinnamon-buff, and more rufous on flanks. It is finely barred brownish-green on the lower breast and brown on the belly and flanks. Its bare skin above the eye is green, behind the eye, lilac, and on its cheek, blue. The iris is a dull reddish, the upper bill green and paler below (tarsi green). It lacks the dark-hooded appearance and purplish or coppery hues on the upper-parts of the Bornean Ground-Cuckoo (*C. radiceus*). The juvenile is rufous-chestnut above with indistinct brown barring, wings and a tail variable greenish-rufous. Its chin to breast is mottled brownish, shading to rufous-buff on its belly. The belly and vent are faintly barred. There is smaller area of bare skin around the eye than in the adult. Its iris is a dark gray, the bill, horn-black, and its feet, a dark gray.

Its breeding and nesting habitats are unknown.

**Cool Facts:** The original spelling of its latin name, *radiceus*, is almost certainly an error for *radiatus* or *radiosus*. Both names were applied to the taxon in other writings by Temminck himself; however, internal evidence of original description is insufficient to justify emendation, or indeed to clarify which alternative might have been intended.



**Common Name:** Crested Coua  
**Scientific Name:** *Coua cristata*

**Size:** 15.7-17.3 inches (40-44 cm)

**Habitat:** Africa; found virtually throughout northern, western, southern, and eastern Madagascar, but is absent from the majority of the central plateau.

It is found in primary and secondary forests (but decidedly uncommon in wetter forests), savannas, spiny brushlands, palms, and mangroves. Sometimes it favors recently burnt areas of forest. It is commonly at elevations from sea level to 1,150 m in northern Madagascar. Race *pyropyga* inhabits dry deciduous forests, spiny bush and gallery forests, but is absent from humid and littoral forests in southeast Madagascar.



**Status:** Least Concern. **Global population:** Unknown mature individuals with a declining population trend. The species is suspected to have undergone declines owing to habitat loss and degradation and hunting pressure. Over three generations (14.43 years), tree cover loss within the range is currently estimated at rates of between 30 and 40%. However, large parts of the range are secure in several protected areas, and the species can persist in degraded forest, so tree cover loss alone is unlikely to be driving an equivalent population decline.

**Diet:** Large insects (including caterpillars, crickets, mantises, grasshoppers, leaf insects, beetles, centipedes, and cicadas), snails, geckos, chameleons, and berries, seeds, fruits (*Terminalia* and *Commiphora*), and tree flower buds.

It gleans food from branches and trunks, often working up from the base of the tree, reaching top, then flying down to the base of a nearby tree before repeating the process. It is notably gregarious in the non-breeding season, forming parties of 3–5 birds, and regularly joins mixed-species flocks.

**Breeding:** The sexes have similar plumage. It is green-gray above with its head crested, which is also gray. It has a long tail which is purplish blue and tipped white. Its throat is gray, the breast purplish to rufous, and its belly white. The primaries are glossed violet blue above, with bluer fringes, and the secondaries are glossed blue. The primary coverts and alula are glossed bluish, while the tertials and greater coverts are pale glossy greenish blue, and the median and lesser coverts are bluish gray. The undersides of the flight feathers are dark brownish gray. The bare skin around the eye is lilac outlined in black, and becoming blue behind the eye. The juvenile has a gray crown, rufous-edged back and wing-coverts. Its breast is unbarred, and has feathered skin around eye.

Season overall is at least mid September–mid March (October–March with Race *pyropyga*). The nest built by both sexes above ground in a tree, sometimes obscured by creepers. It is a bulky shallow bowl of twigs and rootlets. The clutch size is usually two dull white eggs and incubated for about 14 days and leave the next after 10 additional days.

**Cool Facts:** This, the most widespread of the couas, is represented by four subspecies, although one or two of these might be better treated as separate species, and one (which is possibly now extinct) is known solely from the unique type specimen.

- *C. c. cristata*. First reported by Linnaeus in 1766. The nominate subspecies is found in northern and eastern Madagascar (southwest to Mahajanga, north to the Antsiranana region and south in the eastern lowlands to near Farafangana).
- *C. c. dumonti*. First reported by Delacour in 1931. It is found in western Madagascar, from Mahajanga and the Sofia River south to Morondava and the Tsiribihina River. It is slightly larger on average, with a paler and narrower breast-band, faint rufous more restricted on under-tail coverts, broader white tail tip (extending over one-third of tail), and a longer crest. There appears to be a relatively broad zone of intergradation between this subspecies and *C. c. pyropyga*, with considerable variation in the depth of coloration of the under-tail coverts between the Tsiribihina and Mangoky Rivers, while there is also evidence that the intensity of the pink increases with distance from the coast, indicating that those in spiny forest were closer to *C. c. pyropyga* and those inland, in deciduous forest, more like *C. c. dumonti*.
- *C. c. pyropyga*. First reported by A. Grandidier in 1867. This subspecies is found in southwestern and southern Madagascar, from the Mangoky

River, Morondava and Toliara south to Amboasary and the western foot of the Anosyenne Mts. The adult, compared to most other subspecies is generally larger, with a shorter bill, paler upper-parts, a more extensive pale gray throat, more extensive and brighter rufous on under-tail coverts, and broad white tip to outer tail feathers (typically one-third of the length). The bill and legs are black, the iris is red, bright purplish blue or reddish brown, with sky-blue or greenish-blue and brilliant green skin behind eye, whereas in front of eye skin is cobalt-blue, bright purplish blue or purplish brown. Juvenile is apparently undescribed.

- *C. c. maxima*. First reported by Milon in 1950. It is found in southeastern Madagascar (just north of Tolagnaro). It is the largest and darkest of all the subspecies, with grayish-blue upper-parts, glossy violet-blue upper-tail, grayish-blue throat merging into tawny-brown upper breast, which color continues to vent. The flight feathers and tertials are glossy blue. The throat is a cold bluish gray versus the nominates' gray. The breast is dark tawny-brown versus purplish gray, the lower breast to belly a tawny-brown versus whitish, the back a grayish blue versus greenish gray, the innermost secondaries a blue versus green and the upper-tail an intense violet-blue versus subdued green-tinged blue.

**Common Name:** Buff-headed Coucal  
**Scientific Name:** *Centropus milo*

**Size:** 23.6-26.8 inches (60-68 cm)

**Habitat:** Oceania; endemic throughout the Solomon Islands.

It prefers lowland, hill and mist forests, primary and secondary forests and thickets in gardens.

**Status:** Least Concern. **Global population:** Unknown mature individuals with a stable population trend. It is common on New Georgia, where can be found in secondary growth and near human habitation.



**Diet:** Insects (including stick insects, grasshoppers, beetles, pupae and giant centipedes).

It mainly feeds on the ground, but also occasionally ascends into trees.

**Breeding:** The sexes have similar plumage. The adult is black except for buff foreparts. Its iris is a red to red-brown, the bill black, the basal skin a deep gray and the feet a blue-gray. Juveniles are brown, mottled with black, wings and its long tail a rufous, barred blackish. The iris is gray to brown, the bill brown and the lower mandible a pale horn to whitish.

**Cool Facts:** With a body mass of 769 g (1.695 lb), this may be not only the largest coucal, apparently outweighing other very large coucals like the Goliath Coucal, but possibly the largest of all cuckoos, with a slightly higher cited weight than even the Channel-billed Cuckoo, usually considered the world's largest cuckoo.

There are two subspecies:

- *C. m. albidiventris*. First reported by Rothschild in 1904. This race is found in Vella Lavella, Mbava, Ranongga, Simbo, Gizo, Kolombangara, Kohinggo, New Georgia, Rendova, Tetepare, Vangunu and Nggatokae (Western-central Solomons). This race is distinctive, with lower underparts and rump being white (versus the nominate, black), and a strong tan wash to white in plumage.
- *C. m. milo*. First reported by Gould in 1856. The nominate subspecies is found in Guadalcanal and the Florida Islands (Southern Solomons).



**Common Name:** Blue-headed Coucal  
**Scientific Name:** *Centropus monachus*

**Size:** 18-20 inches (45-52 cm)

**Habitat:** Africa; it is found in Angola, Benin, Burundi, Cameroon, Central African Republic, Chad, Republic of the Congo, Democratic Republic of the Congo, Ivory Coast, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Mali, Nigeria, Rwanda, Sudan, Tanzania, Togo, and Uganda.

Its habitat is swamps and marshes, tall grassland, river banks, wet savannah, plantations, secondary growth forest, farmland and villages.

**Status:** Least Concern. **Global population:** Unknown mature individuals with a stable population trend. Generally common within its range. It is common in village areas in northeastern Gabon, and very common around Lake Victoria and Lake Kyoga. The nominate race, *monachus*, seems to be less numerous, at least in Kenya.



**Diet:** Insects (mainly grasshoppers and beetles), also snails, nestling birds, bird eggs, lizards, snakes, frogs, mice and rats.

It hunts within cover and is considered shy.

**Breeding:** The sexes are similar, the adult having the head, sides of neck and back black, glossed with blue, the lower back and rump black, the wings predominantly deep chestnut and the tail black, glossed with green or bronze. The under-parts are white or pale buff. The eyes are dark red, the beak black and the legs and feet grayish-black. The juvenile is similar to the adult but the black areas are dull rather than glossy; the head is streaked with rufous-buff, the wings are dark chestnut heavily barred with dark brown, and the back and tail are barred with buff. The throat and breast feathers are spotted with black.

It breeds June through July in Togo, March to June in Nigeria, January and April to September in Cameroon, August to March in northeastern Gabon, May to November in Uelle (northern Zaire), September and February to June around Lake Victoria. The nest is an oval mass of dry grass and sedge (or sticks and dry leaves), lined with green leaves, with a side entrance, concealed in bushes or tall grass or a dense tree. The clutch is usually three eggs; white with a light gloss. Hatchlings have black skin with long white down.

**Cool Facts:** Three subspecies currently recognized:

- *C. m. occidentalis*. This race is found in Guinea, Ivory Coast and Ghana through southern Nigeria, western and southern Cameroon, Equatorial Guinea and Gabon to northern Angola. Race *occidentalis* sometimes considered indistinguishable from Race *fischeri*.
- *C. m. fischeri*. It is found in Sudan to the Democratic Republic of the Congo, Uganda, western Kenya, Rwanda, Burundi and northwestern Tanzania. Race *fischeri* is slightly smaller, its back and wings slightly duller (more olive). The juvenile is darker above.
- *C. m. monachus*. The nominate race is endemic to the highlands of Eritrea and Ethiopia to central Kenya.

**Common Name:** Chestnut-breasted Malkoha  
**Scientific Name:** *Phaenicophaeus curvirostris*

**Size:** 16.5-19.7 inches (42-50 cm)

**Habitat:** Asia; occurs from southern Myanmar (Tenasserim), through the Thai-Malay Peninsula including Singapore, and on Sumatra and the neighboring Mentawai Islands and Bangka, Java and Bali, Borneo, and the Palawan group in the southwestern Philippines.

The species is common in forests, forest edges, and second growth in the Sunda region of Southeast Asia, from the Thai-Malay Peninsula through the islands of Sumatra, Java, Bali, Borneo, and Palawan (as well as many of their associated satellites).



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

**Diet:** Mainly insects (including caterpillars (hairy and hairless), grasshoppers, crickets, beetles, cockroaches, stick insects, ants, locusts, and butterflies), small vertebrate prey, and figs.

Like other malkohas, it jumps through vegetation almost squirrel-like with large swinging movements of its tail. Perches motionless in tree canopy (often 30–50 m above ground) for several minutes, watching for prey. It often participates in mixed-species flocks, joining drongos (*Dicrurus spp.*), woodshrikes (*Tephrodornis spp.*), other malkohas, and Black Magpie (*Platysmurus leucopterus*) in low, dense scrub.

**Breeding:** The sexes have similar plumage (except the females gray stripe below the red facial skin is broader, and the chin is also gray. In comparison to the male). It is a mid-sized malkoha that is easily distinguished from other species by its heavy greenish-yellow and red bill, a large red area of naked facial skin, chestnut underparts, and iridescent green wings and tail, the latter with a broad chestnut tip (except in Race *oeneicaudus*).

The breeding season appears to be protracted, but typically occurs during the drier months between March and August. The nest is built in the fork of a tall bush or in a tree up to 2.5–10.0 m above ground. The egg clutch is 2-3 eggs that are incubated for 13-14 days. Fledging occurs about 2 weeks after hatching.

**Cool Facts:** There are 6 subspecies. Populations differ principally in their underparts and head coloration, but some differences exist also in tail pattern and nostril shape.

- *P. c. oeneicaudus*. First reported by J. and E. Verreaux in 1855. It is confined to the Mentawai Islands off western Sumatra, Indonesia. Recorded on Siberut, Sipura, and Pagai. It is by far the darkest and best-differentiated subspecies. Distinctive by virtue of a dark gray stripe below the eye, a dark vinous-chestnut chin to upper breast, whilst the lower breast, belly flanks and thighs are all glossy green. Unlike all other taxa, there is no rufous in the tail feathers (on either surface)
- *P. c. singularis*. First reported by Parrot in 1907. It occurs on the Thai-Malay Peninsula, including southernmost Tenasserim, Myanmar, on Pulau Siantan, as well as Sumatra. It has cheeks and chin usually gray (but much variation), whilst the belly is black, and the red facial skin is bordered by fine black-and-white feathers.
- *P. c. curvirostris*. First reported by Shaw in 1810. The nominate subspecies occurs in west and central Java.
- *P. c. harringtoni*. First reported by Sharpe in 1877. It occurs in the southwest Philippines, in the Palawan group; specifically, it has been recorded on Balabac, Busuanga, Calauit, Culion, Dumaran, and Palawan itself. The head is tinged olive-brown and has a broad gray stripe below the red facial skin. The underparts are typically paler than those of the nominate taxon and the chestnut central rectrices vary considerably in length. This subspecies exhibits no sexual dimorphism.
- *P. c. deningeri*. First reported by Stresemann in 1913. It is found in east Java and on Bali. It is generally paler than other subspecies, with a paler rufous throat and a pale gray face.

- *P. c. microrhinus*. First reported by von Berlepsch in 1895. It is widespread throughout Borneo, along with the Natuna Islands and Bangka. Some individuals have the head dark gray with a pale rufous chin, whereas others are entirely pale grayish. The under-parts are always dark red-brown, and the tail is shorter and less rounded than other subspecies. The bill is green with an almost all-red mandible. The nostrils are wider than they are deep (unlike other subspecies).



**Common Name:** Yellow-billed Cuckoo  
**Scientific Name:** *Coccyzus americanus*

**Size:** 10.2-11.8 inches (26-30 cm)

**Habitat:** North and South America; the summer distribution of the Yellow-billed Cuckoo ranges throughout much of the United States, southeastern Canada, the Greater Antilles, and Mexico, but range boundaries have been confused by recurrent observations of non-breeding individuals away from breeding sites. Vagrants are not infrequent on Atlantic shores and prairies in Canada, and occasionally wander as far as Alaska and Western Europe. Although generally considered a nearctic-neotropical migrant, some southern populations may prove to be sedentary. Furthermore, immature cuckoos collected in South America in summer suggest isolated breeding sites at tropical latitudes.



**Status:** Least Concern to Endangered. **Global population:** 9,600,000 mature individuals with a declining population trend. Unfortunately, the future of the Yellow-billed Cuckoo is uncertain. Populations are declining precipitously throughout its distribution. Western populations have suffered severe range contractions during the twentieth century, and are already extirpated from British Columbia, Washington, and Oregon. In California, this cuckoo once numbered more than 15,000 pairs, but the population has been reduced to about 40 pairs in less than 100 years, owing primarily to the destruction and degradation of preferred riparian habitat.

Until recently, the critically imperiled western population received no federal protection due largely to controversy surrounding the validity of its subspecies status. After almost 30 years of petitioning, however, the western subspecies of Yellow-billed Cuckoo was successfully deemed a distinct population segment and was granted protection as threatened under the Endangered Species Act in October 2014. A proposed rule to designate critical riparian habitat under the Act was approved 2021.

**Diet:** Insects; especially tent caterpillars and cicadas, but also some lizards, eggs of other birds, and berries. Cuckoos sometimes congregate near insect outbreaks, such as the emergence of exotic gypsy moth caterpillars.

These birds forage in dense shrubs and trees and also may catch insects in flight.

**Breeding:** The sexes have similar plumage; females are slightly larger than males. It is a slender, long-tailed bird with zygodactyl feet. Its head and upper parts plain grayish brown, faintly glossed with olive. The under-parts are dull white, faintly shaded with pale bluish gray or pale buff. Its long, graduated tail (about 15 cm) is plain grayish brown above and black below. The outer rectrices broadly tipped with bright white, giving appearance of 6 large, white spots on the underside. The distinctive tail pattern noticeable both in flight and when perched. The wings are plain grayish brown above. The outer webs of the primaries are a dull cinnamon-rufous, tipped with brown. The large rufous wing patches are visible in flight. It has a moderately long, decurved bill that has a hooked tip. The upper mandible is black while the lower mandible is yellow to orange yellow at base with dark tip. Juveniles generally resemble adults, but have wing coverts tinged with cinnamon brown and less distinct undertail pattern.

**Cool Facts:** Cuckoos are known worldwide for their bizarre haunts and habits, and the Yellow-billed Cuckoo is no exception. Furtive, retiring, and watchful by nature, this species' presence may be first revealed by its hollow, wooden call: ka-ka-ka-ka- kow-kow-kow-kow-kowlp-kowlp-kowlp. It has been dubbed the "Raincrow" because of its apparent tendency to call more frequently on cloudy days, although its proficiency as predictor of weather has never been demonstrated.

While the western population of the Yellow-billed Cuckoo under goes scrutiny as declaring it a proper subspecies, it's habitat has been protected as a stopgap measure. In 2021, the US Department of the Interior Fish and Wildlife Service designated areas "Critical Habitat for the Western Distinct Population Segment of the Yellow-Billed Cuckoo". The critical habitat for the western distinct population segment of the yellow-billed cuckoo under the Endangered Species Act encompasses approximately 493,665 acres of habitat in Arizona, California, Colorado, Idaho, New Mexico, Texas, and Utah. This designation will help to protect the western populations while the acceptance of the western population as a true subspecies is vetted by scientists. There are significant differences in wing and bill size between eastern and western populations, as well as differences in dorsal shade and mandible color.

**Common Name:** Squirrel Cuckoo  
**Scientific Name:** *Piaya cayana*

**Size:** 15.7-18.1 inches (40-46 cm)

**Habitat:** North and South America; widespread in the Neotropics. It occurs from northern Mexico (north to southern Sonora and southern Tamaulipas) south to Panama; and, in South America, south west of the Andes to northwestern Peru (south to Lambayeque); and, east of the Andes, south to northern Argentina.

It inhabits a variety of forested habitats across its range, including humid to semi-humid forest, deciduous forest, forest edge, second growth, plantations, and even scattered trees in open country.

It has a very broad elevational distribution, from the lowlands well up into montane regions. In Mexico, up to 2000 m, in Costa Rica, up to 2450 m, in Panama, "to over 1800 m", in Colombia, to 2700 m, in Venezuela, to 2500 m, although usually below 1200 m north of the Orinoco, and to 1800 m south of the Orinoco, in Ecuador, "regularly up to about 1500 m, in small numbers as high as 2000-2200 m, and occasionally up to 2500 m ... even to 2700 m in Loja", and in Peru, to 2800 m.



**Status:** Least Concern. **Global population:** Unknown mature individuals with a decreasing population trend. It has a very wide distribution and a large population size. Despite this, declining or fluctuating range size, habitat extent and quality has caused a noticeable decline in population.

**Diet:** Primarily insectivorous; caterpillars (including caterpillars with stinging "hairs"), walking sticks, grasshoppers, beetles, wasps, bees, large ants, cicadas, hemipteras, odonates, unidentified insects, and spiders. They also

take small lizards, small frogs and some small fruit. Squirrel Cuckoos also are suspected of taking bird eggs.

They typically forage in the midstory and canopy, where, despite their large size, they easily can be overlooked. They often hop along tree branches. They often moves from one tree to another with a long glide, sometimes punctuated with a few quick wing beats.

They occasionally forage over army ants.

**Breeding:** The sexes have similar plumage. A large arboreal cuckoos with a very long, graduated tail. The upper-parts are chestnut to rufous-chestnut, usually paler on the crown. The remiges tipped with grayish brown. The rectrices rufous-chestnut above with a broad white terminal spot and a black subterminal bar. The underside of the rectrices primarily brownish-black, with a broad terminal white spot. The throat and breast are cinnamon. The belly is gray, shading to slate to slaty black on the flanks, crissum, and undertail coverts. The underwing coverts are light gray while the undersides of remiges are cinnamon-buff. The long tail is rufous above but the undersides of the rectrices are blackish, with broad white tips. The juvenile is similar to the adult, but the plumages is more lax and fluffy, and the throat is a little grayer. The rectrices are narrower, with more pointed tips, and (especially on the central pair) the white tips and the black subterminal bar are reduced in size.

The nests are built in trees or in low dense growth. While building, one partner (probably the male) brings material to the other, who stays on the nest and arranges it. The completed nest consists of a loose foundation of coarse sticks supporting a thick mass of leaves, some of which are green when brought back.

The clutch typically is two eggs. Both sexes incubate. The period of incubation is 18-19 days. Both sexes provision the nestlings. Feedings are infrequent. The parents maintain a fairly clean nest removing droppings and bringing in fresh leaves. The young begin to leave the nest by about eight days after hatching, venturing around the rim and surrounding branches and then returning to the nest again.

**Cool Facts:** The name 'Squirrel Cuckoo' comes from their coloration and the fact that their movements in trees resemble those of a squirrel at first glance.

There are 14 subspecies

- *P. c. mexicana*. First reported by Swainson in 1827. The “West Mexican” Squirrel Cuckoo is found in Mexico on Pacific slope and inland southward to Isthmus of Tehuantepec. It is a paler rufous-chestnut above. The underside of the rectrices is rufous, with black subterminal bars and broad white tips.
- *P. c. thermophila*. First reported by Sclater in 1859. The “Middle American” Squirrel Cuckoo is found in eastern Mexico (eastern San Luis Potosí and southern Tamaulipas southward to Veracruz, Yucatán and Isthmus of Tehuantepec on Gulf coast south to near Tehuantepec City) through

Central America to Panama and NW Colombia. It is relatively dark rufous-chestnut above. The belly and under-tail coverts are dark gray to black. The underside of the rectrices are black. The white tips to rectrices relatively narrow.

- *P. c. nigricrissa*. First reported by Cabanis in 1862. This race is found in western Colombia (occurring east to the slopes of central Andes), western Ecuador, and northwestern Peru (Tumbes). It is similar to Race *thermophila*, but the plumage is darker and the belly and under-tail coverts are blackish.
- *P. c. mehleri*. First reported by Bonaparte in 1850. This race is found in northeastern Colombia east of Gulf of Urabá to Magdalena Valley and along the western slope of the eastern Andes, eastern coastal Venezuela to Paria Peninsula. It is more rufous than Race *mexicana*, with a lighter throat and breast that grades to light gray on the belly. The undersides of the rectrices are rufous.
- *P. c. mesura*. First reported by Cabanis and Heine in 1863. This race is found in Colombia east of the Andes, eastern Ecuador, and northeastern Peru (north of the Marañón River). It is similar in plumage to Race *nigricrissa*. It is smaller, but with an overlap in size.
- *P. c. circe*. First reported by Bonaparte in 1850. This race is found in Venezuela south of Lake Maracaibo. The upper-parts slightly more rufous than Race *mehleri*, but paler than the nominate.
- *P. c. cayana*. First reported by Linné in 1766. The nominate race is found in eastern and southern Venezuela through the Guianas and southward to the northern bank of lower Amazon.
- *P. c. insulana*. First reported by Hellmayr in 1906. This race is endemic to Trinidad. It is similar to the nominate, but its under-tail coverts are black.
- *P. c. obscura*. First reported by Sneath in 1908. This race is found in central Brazil south of the Amazon from the Juruá River eastward to the Tapajós River and south to upper Ji-Paraná, eastern Peru and northern Bolivia. It is darker (less rufous) above and the under-tail coverts are black.
- *P. c. hellmayri*. First reported by Pinto in 1937. This race is found in Brazil south of the Amazon from Santarém east to mouth of the Amazon River, and coast of northern Maranhão. The upper-parts are more tan (less rufous) in color.
- *P. c. pallescens*. First reported by Cabanis and Heine in 1863. This race is found in eastern Brazil. The upper-parts are paler, more tan.
- *P. c. cabanisi*. First reported by Allen in 1893. This race is found in central Brazil (central Mato Grosso and Goiás to northern São Paulo). It is more rufous, the throat is rusty and the belly and under-tail coverts are pale.
- *P. c. macroura*. First reported by Gambel in 1849. This race is found in southeastern Brazil to Paraguay, northeastern Argentina and Uruguay. The upper-parts are dark and the belly and under-tail coverts are blackish.
- *P. c. mogenseni*. First reported by Peters in 1926. This race is found in southern Bolivia to northwestern Argentina. The upper-parts are a lighter rufous. The throat is rust-colored and the under-parts are a dark gray (not blackish).

**Common Name:** Great Spotted Cuckoo  
**Scientific Name:** *Clamator glandarius*

**Size:** 13.7-15.7 inches (35-40 cm)

**Habitat:** Europe and Africa; breeding occurs in the Iberian Peninsula, southern France, western Italy, Croatia, southeastern Bulgaria, northeast Greece, and locally in southern Morocco (South and Western High Atlas and Anti-Atlas areas); Turkey and Cyprus east to northern Iraq and western Iran, and south through Middle East to Egypt; also sub-Saharan Africa from Senegal and Liberia east to Sudan, Eritrea, Ethiopia, northern Somalia, and Kenya, and south to Tanzania, Angola and South Africa.

Northern populations and those in southern Africa migrate to tropical Africa for non-breeding period. However, small numbers winter in southern Spain and rarely in Middle East; a few remain all year in east Cape region of South Africa.



They are common in semi-arid open woodland, especially Acacia thorn-scrub, also other scrub, rocky hillsides in dry savannas. They also prefer dry cultivation in desert-like areas. In Europe, favors savanna-like heathland,

often with cork oak (*Quercus suber*) or stone pine (*Pinus pinea*), also olive groves. They are found mainly between 500 m and 2,000 m elevations, but occurs up to 3,000 m.

**Status:** Least Concern. **Global population:** 3,000,000-10,499,999 mature individuals with a stable population trend. Generally uncommon throughout most of its range, but species is broadly distributed. Hunting and automobile collisions have been reported to be important causes of human-related mortality in southern Europe.

**Diet:** Insects, mainly large hairy caterpillars; also termites, locusts, grasshoppers, moths, and small lizards.

It usually forages quietly within vegetation, but also feeds on the ground. It will remove hairs and spines from caterpillars before eating.

**Breeding:** The sexes have similar plumage. Adults are with crown silvery gray (male) to gray-brown (female) and a short, flattened crest. It has long wings and tail, with the tail drooping in flight. It has dusky brown upper-parts with white spots, and under-parts are yellowy-white with a throat buffy to buffy white. The juvenile differs in having black upper-parts with white spots and rufous primaries that are conspicuous in flight.

Breeding season occurs late in April to early June in Mediterranean; in Africa, breeds March in Egypt, April–May in Senegal and Sierra Leone, April–July in Mali, Ghana and Nigeria; in East Africa breeding varies with local rainy seasons, east of Rift in April and October–December, in arid northwest in February–April; October–January in South Africa, December–March in Namibia, into April in Botswana.

This cuckoo may lay up to 23 eggs per season. Incubation takes 12-14 days and fledge 20 to 26 days after hatching.

**Cool Facts:** The Great Spotted Cuckoo is one of the model species in the study of brood parasitism. It's an obligate brood parasite that targets a variety of corvid host species across its range, especially Eurasian Magpie (*Pica pica*) and Carrion Crow (*Corvus corone*) in Europe, and Pied Crow (*Corvus albus*) in sub-Saharan Africa, but it also parasitizes a variety of open-nesting and hole-nesting starlings in Africa.



**Common Name:** Common Cuckoo  
**Scientific Name:** *Cuculus canorus*

**Size:** 13 inches (32-34 cm)

**Habitat:** Eurasia and Africa; a widespread summer migrant to Europe and Asia, and winters in Africa.

It is found in forests and woodlands, both coniferous and deciduous, second growth, open wooded areas, wooded steppe, scrub, heathland, also meadows, reedbeds. Lowlands and moorlands and hill country to 2000 m, in Nepal to 3800 m.

**Status:** Least Concern. **Global population:** 116,000-1,032,000 mature individuals with a declining population trend. It is generally a common and vocally conspicuous species throughout its range.



**Diet:** Insects (mainly caterpillars, less often dragonflies, damselflies, mayflies, crickets, cicadas and beetles in cold weather upon spring arrival on the northern breeding grounds). It also takes spiders, snails, but rarely fruit. It preys on eggs and nestlings of small birds.

**Breeding:** The adult male has dark ashy-gray above and its tail is blackish brown, spotted and tipped with white, unevenly barred black. From its chin to

breast, it is ashy gray, with the rest of under-parts white with black bars. It has a yellow eye ring and its iris is light brown to orange. The bill black with yellow base and its feet yellow. The female is similar, but has a rufous-tinged upper breast. The female (nominate only) also occurs in a rufous ("hepatic") morph, with the upper-parts barred chestnut and blackish brown, rump and upper-tail-coverts plain rufous, the under-parts white barred pale chestnut and blackish, lower breast tinged rufous. The juvenile has white nape spot, white tips to crown and back feathers.

Breeding season occurs from May–June in the UK and elsewhere in northwestern Europe, April–May in Algeria, April–July in India and Myanmar. It is a brood-parasitic and its hosts include many insectivorous songbird species (more than 100 have been recorded), for example, flycatchers, chats, warblers, pipits, wagtails and buntings. Some species only occasionally parasitized, but still raise the young cuckoo. They are often mobbed by real or potential hosts near their nests. Eggs polymorphic in color (blue, pink, whitish) and pattern (spotted or unmarked) in Palearctic, where 15 distinct types recognized. Incubation takes around 12 days.

**Cool Facts:** The cuckoo family gets its common name and genus name by onomatopoeia for the call of the male common cuckoo. The English word "cuckoo" comes from the Old French "*cucu*", and its earliest recorded usage in English is from around 1240, in the song "*Sumer Is Icumen In*". The song is written in Middle English, and the first two lines are:

*Svmer is icumen in*  
*Lhude sing cuccu*

In modern English, this translates to "Summer has come in / Loudly sing, Cuckoo!"

There are four subspecies worldwide:

- *C. C. canorus*. First reported by Carl Linnaeus in 1758. The nominate subspecies occurs from Ireland through Scandinavia, northern Russia and Siberia to Japan in the east, and from the Pyrenees through Turkey, Kazakhstan, Mongolia, northern China and Korea. It winters in Africa and South Asia.
- *C. C. bakeri*. First reported by Hartert in 1912. This race breeds in western China to the Himalayan foothills in northern India, Nepal, Myanmar, northwestern Thailand and southern China. During the winter it is found in Assam, East Bengal and southeastern Asia. It is a darker gray than the nominate.
- *C. C. bangsi*. First reported by Oberholser in 1919. It breeds in Iberia, the Balearic Islands and North Africa, spending the winter in Africa. It is smaller than the nominate and females have more rufous on the breast.
- *C. C. subtelephonus*. First reported by Zarudny in 1914. It breeds in Central Asia from Turkestan to southern Mongolia. It migrates to southern Asia and Africa for the winter. It is pale with narrow black bars below.

**Common Name:** Mangrove Cuckoo  
**Scientific Name:** *Coccyzus minor*

**Size:** 11-13 inches (28-34 cm)

**Habitat:** Central and South America; a resident of southern Florida in the United States, the Caribbean, both coasts of Mexico and Central America, and the Atlantic coast of South America as far south as the mouth of the Amazon River.

It is found primarily in mangrove swamps and hammocks and is generally fairly common in its specialized range.

**Status:** Least Concern. **Global population:** 200,000 mature individuals with a declining population trend. This bird could be threatened by human development of mangrove habitat.



**Diet:** Insects (primarily caterpillars and grasshoppers, but will also take other insects, insect larvae and spiders), snails, small lizards, bird eggs, nestlings of small birds and fruit.

**Breeding:** The sexes have similar plumage. Adults have a long tail, brown above and black-and-white below, and a black curved bill with yellow on the lower mandible. The head and upper-parts are brown. There is a yellow ring

around the eye. This bird is best distinguished by its black facial mask and buffy under-parts.

It nests 2–3 m (6 ft 7 in – 9 ft 10 in) above water in a mangrove tree or above ground in a fork of a tree. The clutch is usually two eggs. Both parents bring food to the chicks

**Cool Facts:** The mangrove cuckoo was formally described in 1788 by the German naturalist Johann Friedrich Gmelin.

**Common Name:** Jamacian Lizard-cuckoo  
**Scientific Name:** *Coccyzus vetula*

**Size:** 15-15.7 inches (38-40 cm)

**Habitat:** North America; endemic to Jamaica.

It prefers tropical lowland evergreen forests, possibly also tropical deciduous ones; wooded areas and semi-arid country with trees and shrubs, in wet mountain areas and brush-covered limestone hills. It is found in the lowlands to 1200 m.

**Status:** Least Concern. **Global population:** 13,500 mature individuals with a declining population trend. Widespread within limited range of Jamaica, but generally uncommon. Compared with its congeners, relatively little is known about this species, and further research is required to determine various aspects of its breeding.

**Diet:** Anolis lizards, caterpillars, cicadas, mantids, locusts, mice, nestling birds; rarely tree-frogs.

It forages in the mid-storey and canopy.



**Breeding:** The sexes have similar plumage. Adults are grayish above, with their forehead to nape a dark brown. The wings are with a rufous patch formed by primaries. The throat is whitish and the underparts are rufous, paler on under-tail-coverts. The tail is long with the central rectrices a gray with a black subterminal band and broad white tip, the others are black with broad white tips. The orbital skin is red and the iris is brown. The bill is long, straight,

black above, paler below. Juvenile plumage is characterized by narrower rectrices and buff-tipped secondaries.

Breeding season generally is March through August. The nest is a flat platform of twigs, lined with leaves, in a tangle of branches, twigs and bromeliads in a tree and well hidden in tangle. The eggs are pale blue to dull white, and incubated by both adults. The young fed by both adults, mainly on lizards.

**Cool Facts:** The Jamaican lizard cuckoo and three other lizard cuckoos were for a time considered a single species. Individually they were previously placed in genus *Saurothera* that was later merged into the current *Coccyzus*, and they are considered a superspecies.

## 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](https://en.wikipedia.org/wiki/Main_Page)
- **BirdLife International** <https://www.birdlife.org/>
- **Audubon; Critical Habitat Finally Designated for Western Yellow-billed Cuckoo**  
<https://www.audubon.org/news/critical-habitat-finally-designated-western-yellow-billed-cuckoo>



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