

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

Songbird ReMix

Cool & Unusual Birds v4

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Introduction

Songbird ReMix 'Cool and Unusual' Birds is an eclectic collection of birds from around the world.. The birds in this set were selected for their spectacular appearance or that they are personal favorites of the author.

Some of the "Cool" birds are the Red-whiskered Bulbul (which regularly visits Ken's yard) and the Yellow-billed Tit-Tyrant (whose name demands it be included). On the "Unusual" side, about every bird in the set math that criteria, from the vibrant Pompadour Cotinga to the African Paradise-Flycatcher.

The base models 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):
 - Gamebirds (Order Galliformes)
 - Gulls and Waders (Order Charadriiformes)
 - Perching Birds (Order Passeriformes)
 - Birds of Paradise & their Allies
 - Crows, Jays and their Allies
 - Fairywrens, Scrubwrens & their Allies
 - OW Warblers & their Allies
 - Tyrant Flycatchers & their Allies
 - Thrushes, Oxpeckers & their Allies
 - Wrens, Nuthatches & their Allies
- Manuals: Contains a link to the online manual for the set.

- o **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. SBRM Cool and Unusual birds has two. When using physical renderers such as Iray and Superfly, SubD should be turned to at least "3". For DAZ Studios 3Delight renders, the SubD must be turned from the "High Resolution" setting to the "Base" setting (otherwise some areas will render incorrectly transparent).
 - Conforming Parts (All Conforming Crests have alphabetical loons in the lower right corners such as "C10". This corresponds with characters in the Pose folders. All MAT/MOR files with the same icon use that particular Conforming Part. Be sure to read this: Most conforming parts are Crest which cover the head part. When posing the Base Model, the Conforming Part will follow any Bend, Twist or Rotate Commands. It will not obey any SCALE or MORPH commands you give the Base Model. You must manually scale the Conforming Part and with morphs such as "OpenBeak" you must also set it's counterpart in the head part of the Conforming Crest.

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.

Where to find your birds

Where to find your birds		
Type Folder	Bird Species	
Gulls and Waders (Order Charadriiformes)	Rufous-chested Dotterel Diademed Sandpiper-Plover	
Perching Birds (Order Passeriformes) Birds of Paradise & their Allies	African Paradise-Flycatcher	
Perching Birds (Order Passeriformes) Crows, Jays and their Allies	Southern Nutcracker	
Perching Birds (Order Passeriformes) Fairywrens, Scrubwrens & their Allies	Blue-faced Honeyeater	
Perching Birds (Order Passeriformes) OW Warblers & their Allies	Red-whiskered Bulbul Cambodian Tailorbird	
Perching Birds (Order Passeriformes) Thrushes, Oxpeckers & their Allies	Japanese Robin Metallic Starling	
Perching Birds (Order Passeriformes) Tyrant Flycatchers & their Allies	Yellow-billed Tit-Tyrant Chocolate-vented Tyrant Pompadour Cotinga	
Perching Birds (Order Passeriformes) Wrens, Nuthatches & their Allies	Long-billed Gnatcatcher	
Pigeons and Doves (Order Columbiformes)	Orange-bellied Fruit-dove	

Where to find your poses

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Type Folder	For what species?	
Gulls and Waders (Order Charadriiformes)	Rufous-chested Dotterel Diademed Sandpiper-Plover	
Perching Birds (Order Passeriformes) Poses can be found in "Universal Poses" & "type" folders	All Songbirds	
Pigeons and Doves (Order Columbiformes)	Orange-bellied Fruit-dove	

One Folder to Rule Them All

When I reworked the entire Songbird ReMix library starting in 2018, I decided to abandon the way the birds were sorted (by product name) and choose an Ornithological approach. All birds are found in the Bird Library folder and are arranged by type of bird. This approach is hopefully easier for most to find what bird they are looking for. Admittedly, it will take some getting use to for some longtime users, but I've always approached the Songbird ReMix series as a learning tool as well as a graphics tool, so hopefully some knowledge will rub off by seeing how birds are grouped.

Probably the most deceiving subfolder in the **Bird Library** is "**Perching Birds** (**Order Passeriformes**)". This is folder you probably will end up "favoriting" because this one folder (Passeriformes) **holds more than 50% of all birds**. Perching birds range from cardinals and jays to chickadees, crow and swallows.



Finding the bird you want within the "Perching Birds (Order Passeriformes)" folder can be daunting, even for an experienced birder (such as myself), so I've included an online reference tool within this folder that helps to make your search easier. Click the "Perching Birds Finder" icon and when loaded, look at the first column and search for the type of bird

you want. For example, I want a "manakin" (a bird common to Central and South America). Scroll down the first column alphabetically and stop on "manakin". Looking across to the second column, you will now know that manakins can be found in the "Tyrant Flycatchers & their Allies" subfolder.

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. This is a known Poser issue and may be addressed in the future. Increasing the SubD may minimize this issue.

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.

Specific Bird Controls

There are several controls with the *Action Controls* section of the model that are specific to certain species of bird.

- Under *Fluff Controls* (in Creation Controls):
 - These controls move the feathers on each side of the cheek towards the bill.
- 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. IK doesn't work that well in Studio, so I suggest selecting the character in the **Scene tab** and simply deleting the two IK body parts to remove IK.

Transparency Layer Striping

With certain lighting and camera angles the seams where the transparency "Fluff" planes may become visible on renders. One of the easiest ways to resolve this is to simply hide the offending transparency section. This solution can be found in the Correction Controls options.

Another solution is to adjust the "Fluff" in "Fluff Controls" section of the "Action Controls" menu.

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Field Guide

Rufous-chested Dotterel Diademed Sandpiper-Plover African Paradise-Flycatcher Southern Nutcracker Blue-faced Honeyeater Red-whiskered Bulbul Cambodian Tailorbird Yellow-billed Tit-Tyrant Chocolate-vented Tyrant Pompadour Cotinga Japanese Robin Metallic Starling Long-billed Gnatcatcher Orange-bellied Fruit-dove

Common Name: Rufous-chested Dotterel **Scientific Name:** *Zonibyx modestus*

Size: 7.4-8.7 inches (19–22 cm)

Habitat: South America; during the breeding season, it inhabits the southern part of the southern cone, specifically southern Santa Cruz (Argentina) and Magallanes (Chile), also Tierra del Fuego and the Falkland Islands (Malvinas).

It breeds in the southernmost part of Patagonia, including Tierra del Fuego, the Falkland Islands (Malvinas), and Patagonian fjords. It can breed in a great variety of habitats, including shrublands, grassy plains, upland marshes, and even stony summits of mountains. In contrast, during the winter season, it prefers the coast, flooded and swampy areas, and some pampas, sharing space with cattle.



Status: Least Concern. **Global population:** 133,000–1,063,000 mature individuals with a decreasing population trend. Human activity (nest disturbance, habitat destruction, trash) is believed to be the cause of this decline.

Diet: Insects, insect larvae, crustaceans, mollusks, and some plant material (e.g. algae).

It forages at the water's edge, where a territory of 10–100 m is often defended. Outside the breeding season, it forages in small parties of up to 200 birds, exceptionally 350 in the Falkland Islands (Malvinas) but usually 30 individuals. It is often seen with the Two-banded Plover (*Anarhynchus falklandicus*).

Breeding: It has spectacular breeding plumage. It is crowned with a beautiful brown cap, contrasting with a strong white supercilium, and a gray face and throat. Below the breast of this plover is a glowing orange-red, highlighted on its lower edge by a black band; otherwise, it is entirely white below. Its back is entirely brownish. The mix of colors and strong contrasts creates an elegant look. The female tends to be slightly duller. In the non-breeding adult (Definitive Basic Plumage), rufous and gray are replaced with pale brown, feathers of the upper-parts have bright fringes, and supercilia are creamy. The juvenile is similar to the non-breeding adult, but the upper-parts and breast are darker brown with clear buff fringes.

It breeds in the austral spring, starting by the end of September and presumably finishing by February in the Falkland Islands, but there is evidence that breeding starts early in August, probably in nonmigratory populations. The nest is usually placed in open areas or those covered with plants from sea level to 2,000 m. The nest is an oval-shaped cup (scrape), which may be covered or not, among stands of ferns, diddle-dee, sedges, and rushes providing cover. The clutch is usually 2-3 eggs. Incubation is biparental, with each member of a pair contributing an approximately equal amount of time to nest attendance. The male incubates mainly during the day and the female at night.

Cool Facts: The rufous-chested dotterel is placed by itself in genus Zonibyx by several authors and International Ornithologists' Union in 2023.

Common Name: Diademed Sandpiper-Plover Scientific Name: *Phegornis mitchellii*

Size: 6.5-7.5 inches (16.5–19 cm)

Habitat: South America; it is resident in high elevation bogs in the Andes from central Peru south to south central Chile and Argentina.

It is considered a habitat specialist of the cushion-plant peatlands and bogs with matted cushion-plant vegetation, especially Distichia bogs. It also occurs in gravel or grass on lake and stream shorelines. The presence and distribution of these unique peatlands habitats are correlated with the "flow accumulation and presence of glaciers in the watershed", as they occur above the frostline and below the snowline at these high elevations. The peatlands are characterized by a network of grassy banks interspersed with long streams and vernal pools... creating ideal foraging habitat.



Status: Near Threatened. **Global population:** <10,000 mature individuals with a decreasing population trend. Pastoralism, peat harvesting, agricultural development, and water diversion projects from local peoples continue to alter these peatlands ecosystems and threaten the populations of native avifauna, including the Diademed Sandpiper-Plover. It is predicted than there will be a 75+% loss of their necessary habitat due to climate change by 2100.

Diet: An assortment of freshwater aquatic invertebrates which they pick from the water's surface or off of plant matter.

It feeds in hidden spots, in eroded holes and creeks in bogs. It probes vertically with bill, and also picks prey off aquatic plants. Alone or in pairs, rarely more together.

Breeding: It is unlike other species of plover, the bill is long and slightly decurved. The face is black with a complete black eye-ring. A bold white supercilium extends all the way around the head and separates the black crown from the rest of the head patterning. A bright rufous nape patch is perhaps the most distinctive plumage characteristic. An unstreaked white throat patch borders the fine black-and-white barred chest, belly, and flanks. Barring becomes fainter towards the outer flanks and belly, vent and undertail coverts are pure white. The mantle, scapulars, and wings are an unpatterned dark brownish gray. Rump and uppertail coverts are black, tail is black with a white trailing edge. It has a stocky build with much of its mass towards the chest and shoulders. The tarsi are bright orange. Sexes are alike.

Egg-laying is reported from October–December in Chilephoto, and January in Bolivia. The nest is slight hollow on the ground lined with a few short pieces of dry twigs. The clutch is two; the eggs are light olive buff with many black and dark brown spots. Chicks likely emerge from the egg largely precocial, but still require strong parental guidance and protection. Chicks are regularly escorted to cover in tall grass when approached by a threat

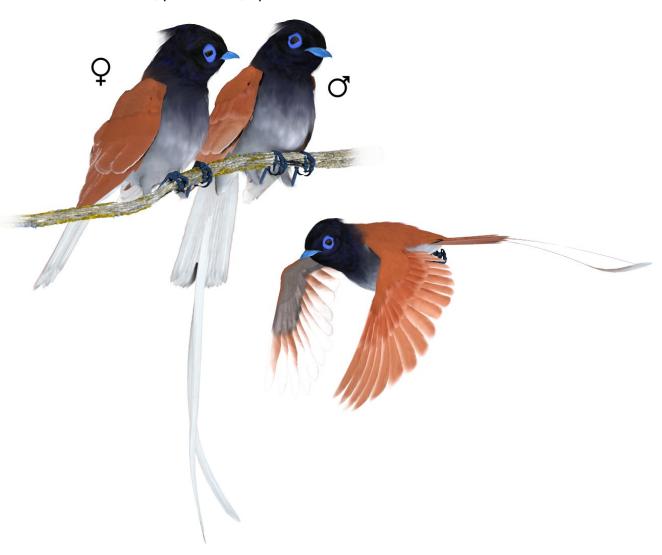
Cool Facts: The Diademed Sandpiper-Plover (or Diademed Plover) is characterized by its distinctive plumage pattern and by its thin decurved bill, which bears more than a strong resemblance to a typical sandpiper bill.

Common Name: African Paradise-flycatcher **Scientific Name:** *Terpsiphone viridis*

Size: 6.7 inches (17 cm); male tail adds another 6-7 inches (15-17 cm)

Habitat: Africa; widespread throughout Africa south of the Sahara.

It is found in most parts of Africa south of the Sahara Desert and also the Arabian Peninsula. Its typical habitat is savanna woodland, open grassland with isolated trees, plantations, open woodland and scrubland.



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a stable population trend. It is considered uncommon to common throughout its range with population pockets being locally abundant.

Diet: Insectivorous, often hunting by catching flies on the wing, and eating eggs, larvae and adults. It also feeds on spiders and sometimes consumes berries.

It is a noisy bird with a harsh scolding call. It has short legs and sits very upright whilst perched prominently, like a shrike..

Breeding: It is a medium-sized passerine bird. The two central tail feathers of the male are extended into streamers that commonly are more than twice as long as the body. The female tail feathers are of moderate length and without streamers. The upper parts of the male body, wings, and tail are boldly colored in chestnut or rusty shades, but the underparts and the head are variably gray to blue-gray, with the head of the mature male being darker, commonly glossy black with greenish highlights. The beak and other bare areas, including a wattle ring round the eye, match the color of the surrounding feathers. The female has a browner tint to the underparts and lacks the wingbar and tail streamers. Young birds are similar to the female but duller.

The males show considerable variation in plumage in some areas. There is a morph of this species in which the male has the chestnut parts of the plumage replaced by white, and some races have black tail streamers.

This species readily hybridizes with the genetically similar Rufous-vented Paradise-flycatcher. The red-bellied Paradise-flycatcher is also closely related to this species, and hybrids occur with the underparts a mixture of black and red.

This species is monogamous. Breeding Season is May–August (during rains) in West Africa, probably all year in Cameroon; all year in Gabon (peak mid-December to mid-February, little breeding mid-April to mid-August) in Gabon, June–July (during rains) in Central African Republic, March–July, September and November–December in the Democratic Republic of the Congo, March–June in Ethiopia, February in Yemen; all year (mostly in rains) in East Africa, August–October, December and March–April in Rwanda, October–March (mainly November–January) in Malawi, August–February (mainly October–December) in Zambia, September–March in Mozambique; September–March (mainly October–December) in Zimbabwe, October–January and July (mainly October–December) in Botswana, November–February in Namibia, and September–March (mainly November–December) in South Africa. It builds a neat cup nest in which it lays a clutch, usually of two or three eggs. Incubation is performed by both sexes, and lasts about 12-15 days. Fledging period last from 11-16 days.

Cool Facts: The African paradise flycatcher was originally described in the genus *Muscicapa*. Alternate names include the Gray-headed Paradise-flycatcher, Red-winged Paradise-flycatcher and Southern Paradise-flycatcher

There are 10 subspecies:

• *T. v. harterti.* First reported by Meinertzhagen in 1923, It is found on southern Arabian Peninsula. It has upperparts and tail dark chestnut (not

- rufous), black of breast often extending to belly (which otherwise dark slate).
- *T. v. viridisi.* First reported by Müller in 1776. The nominate race is found from Senegal and Gambia to Sierra Leone.
- *T. v. speciosai.* First reported by Cassin in 1859. This race was originally described as a separate species. It is found from southern Cameroon to south-western Sudan, Democratic Republic of Congo and north-eastern Angola.
- T. v. ferretii. First reported by Guérin-Méneville in1843. It was also originally described as a separate species. The "Abyssinian Paradise-flycatcher" is found from Mali and the Ivory Coast to Somalia, Kenya and Tanzania. It is as variable as Race speciosa, but the breast is grayer, the under tail-coverts are a dull gray and the tail is usually rufous, except (often) central pair of feathers.
- *T. v. restricta.* First reported by Salomonsen in 1933. this race is endemic to southern Uganda. It is like the nominate race but its upper parts are a darker rufous and the long central rectrices are sometimes white.
- T. v. kivuensis. First reported by Salomonsen in 1949. This race is found from south-western Uganda to eastern Democratic Republic of Congo and north-western Tanzania. It has rufous upper parts and tail; there is no white in the tail, and usually no white in the wing. It has bright rufous under tail-coverts.
- T. v. suahelica. First reported by Reichenow, 1898: Formerly classified as a separate species by some authorities, the Swaheli Paradise-flycatcher, is found in western Kenya and northern Tanzania. It is like Race ferretii but the under tail-coverts are a white to rusty brown, and the male never has a white tail.
- *T. v. ungujaensis*. First reported by Grant, CHB & Mackworth-Praed in 1947. This race is found in eastern Tanzania and nearby islands. It has belly center and under tail-coverts that are white. There is no white in the wing (this occurs only in rufous-backed and rufous-tailed color types).
- T. v. plumbeiceps. First reported by Reichenow in 1898. This race was originally described as a separate species. It is found from Angola to south-western Tanzania, Mozambique and northern South Africa, It has a head that is dark gray (not blue-black), and its upper parts and tail are always rufous. The under tail-coverts are white or pale rusty white.
- *T. v. granti.* First reported by Roberts in 1948. this race too was originally described as a separate species. It is found in eastern and southern South Africa. The race is like Race *ungujaensis* but its head is a glossy green (not blue).

Common Name: Southern Nutcracker Scientific Name: Nucifraga hemispila

Size: 13 inches (33 cm)

Habitat: Asia; it is distributed from the Himalayas through Nepal and northern India into northern Myanmar, southern and central China and Taiwan.

It occurs primarily in pine forests, with particular preference for Chinese white pine (*Pinus armandii*), blue pine (*Pinus wallichiana*), and other related white pines in *Pinus* subgenus *Strobus*. The seeds of which it caches and distributes in a manner similar to other nutcrackers. It will also use other conifers such as spruce in the event of cone crop failure in its preferred species.



Status: Least Concern. **Global population:** 10,000-100,000 mature individuals with a suspected declining population trend. It is considered uncommon to common throughout its range with population pockets being locally abundant.

Diet: Mainly nuts and seeds, especially those of pines, and stores large quantities of seeds to eat over the winter. In spring and early summer, the Southern Nutcracker readily takes invertebrates, especially earthworms and dung beetles, among others. Small rodents and small birds also reported as rare prey items.

It forages on ground and in trees. Its distinct ridge inside base of mandible serves as an ideal nut-cracking tool. It also holds hard items under foot and hammers at them with bill.

Breeding: Sexes are alike. It is largely brown, with limited white spotting on the face and upper breast, plain brown lower breast and back, unmarked black wings, and white lower belly and under-tail coverts. The tail is black with white outer corners. The bill is stout and black, the legs also black.

The Southern Nutcracker may begin breeding very early in the season, likely supported by its cache of food, and builds its nest high in a conifer.

Cool Facts: It was formerly considered to be conspecific with the northern nutcracker (*N. caryocatactes*) and the Kashmir nutcracker (*N. multipunctata*) under the English name "spotted nutcracker". It is now treated as a separate species based on differences in morphology and vocalization, as well molecular genetic analysis. For comparison, both the Northern nutcracker and the Kashmir nutcracker have extensive and larger white spots on the entire breast and back.

Four subspecies are accepted:

- N. h. hemispila. First reported by Vigors in 1831. the nominate race is endemic to the northwest and central Himalayas.
- N. h. macella. First reported by Thayer & Bangs in 1909. This race is found in the east Himalayas to central and southern China and northern Myanmar.
- *N. h. interdicta*. First reported by Kleinschmidt and Weigold in 1922. This race is endemic to northern China.
- *N. h. owstoni.* First reported by Ingram in 1910. This race is endemic to Taiwan.

Common Name: Blue-faced Honeyeater **Scientific Name:** *Entomyzon cyanotis*

Size: 10-12.5 inches (26-32.3 cm)

Habitat: Australia; it is common in northern and eastern Australia, and southern New Guinea. It appears to be sedentary in parts of its range, and locally nomadic in other parts.

They live throughout rainforest, dry sclerophyll forest, open woodland, Pandanus thickets, paperbarks, mangroves, watercourses, and wetter areas of semi-arid regions, as well as parks, gardens, and golf courses in urban areas. The understory in eucalypt-dominated woodland, where the blue-faced honeyeater is found, is most commonly composed of grasses, such as Triodia, but sometimes it is made up of shrubs or small trees, such as grevilleas, paperbarks, wattles, Cooktown ironwood or billygoat plum.

Status: Least Concern. **Global population:** Unknown amount of mature individuals with a suspected stable population trend. It is considered uncommon.



Diet: Invertebrates, supplemented with nectar and fruit.

They are encountered in pairs, family groups or small flocks, blue-faced honeyeaters sometimes associate with groups of yellow-throated miners (*Manorina flavigula*). They mob potential threats, such as goshawks, rufous

owls, and Pacific koels. There is some evidence of cooperative breeding, with some breeding pairs recorded with one or more helper birds.

Breeding: This blue-faced species is large for a honeyeater. Its plumage is distinctive, with olive upper-parts, white under-parts, and a black head and throat with white nape and cheeks. Males and females are similar in external appearance. Adults have a blue area of bare skin on each side of the face readily distinguishing them from juveniles, which have yellow or green patches of bare skin.

They often take over and renovate old babbler nests, in which the female lays and incubates two or rarely three eggs.

Cool Facts: The blue-faced honeyeater was first described by ornithologist John Latham in his 1801 work, *Supplementum Indicis Ornithologici, sive Systematis Ornithologiae*. However, he described it as three separate species, seemingly not knowing it was the same bird in each case. It was reclassified in the genus *Entomyzon* n in 1825. Today, four subspecies are accepted:

Blue-faced Honeyeater (White-quilled) Group

E. c. albipennis. First reported by Gould in 1841. This race is referred to as the "White-quilled". Blue-faced Honeyeater found in North-western Australia (Kimberley Division) eastward across the top end of Northern Territory (including Melville Island) to extreme northwestern Queensland (Nicholson–Leichhardt Rivers, on southern Gulf of Carpentaria). It is a distinctive, large, sturdy and full-chested honeyeater with strong, decurved bill. It has broad rounded wings and moderately long tail. The adult is similar in size and plumage to the nominate group, but the under-wing patch is white (not pinkish) and larger, it is conspicuous on both upper-wing and under-wing in flight, and its facial skin more yellowish or greenish, and the iris is orange-yellow.

Blue-faced Honeyeater (Blue-faced) Group

- E. c. harterti. First reported by Swainson in 1825. It is found in southern New Guinea (Trans-Fly lowlands).
- *E. c. griseigularis.* First reported by Eduard van Oort in 1909. It is endemic to northern Queensland (Cape York Peninsula). It is significantly smaller than the nominate but similar in plumage, though the pink-buff patch on under-wing is slightly larger.
- E. c. cyanotis. First reported by Latham in 1801. The nominate race is found in eastern Australia from base of Cape York Peninsula south (in Queensland east of Thomson–Barcoo Drainage Basin) to north-central and northwestern Victoria (mainly along the Murray River and northern foothills of Great Divide) and in southeastern South Australia.

Common Name: Red-whiskered Bulbul Scientific Name: Pycnonotus jocosus

Size: 6.7-9 inches (17-23 cm)

Habitat: Asia; its native range extends from India, the Andaman Islands., and Nepal east to Bhutan, Bangladesh, Myanmar, Thailand, northern Malaya, Indochina (Laos, Cambodia), and southern China. Locations of successful introductions include the Nicobar Islands., Mauritius, Réunion, Australia, southern Malaya, and Singapore. It has also introduced in eastern Saudi Arabia, United Arab Emirates, Oman, Borneo (Brunei), Spain (Valencia) and the Canary Islands.



There is an established resident populations in Dade Co. (Miami, Princeton, Kendall), southeastern. Florida. It is also a rare and local resident in Los Angeles County, southern California, where individuals periodically sighted in and around the Los Angeles County Arboretum (Arcadia), Huntington Gardens (San Marino), Pasadena and the Crescenta Valley (author's home). In the Hawaiian Islands, the species occur only on Oʻahu, where they are restricted to southeastern portions of the island.

They prefer lightly wooded areas, more open country with bushes and shrubs in the wild. It is associated with human habitation in their natural and introduced ranges. They frequent agricultural and urban areas, including parks, suburban and botanical gardens..

Status: Least Concern. **Global population:** Unknown amount of mature individuals with a decreasing population trend. This species species is considered a serious agricultural threats to fruit orchards, vegetable gardens, and flower nurseries in introduced and native ranges. Bulbuls are potential dispersers of noxious weed seeds. A disastrous example of the introduction of a dispersal agent for a plant already present but quiescent was the explosive spread of the weed jujube tree (*Cordia interrupta*) by Red-whiskered Bulbuls on the island of Mauritius. Red-whiskered Bulbul is also considered the principal dispersal agent of privet. Many of these noxious weeds are currently established in the Hawaiian Islands and could potentially spread into native Hawaiian rain forests. No information available on dispersal of weed seeds by bulbuls in Florida and California.

Diet: Primarily frugivorous but also consume insects. This food includes leaves, flowers, buds, nectar, pollen, fruits, berries, figs, insects and spiders. Around habitations, takes kitchen waste and visits bird feeders.

They hop on branches in trees and shrubs or on the ground when foraging. They are highly aggressive, especially toward fellow bulbuls. It is usually dominant over birds of their own size or smaller. Throughout the year in Florida, adult pairs were frequently accompanied by a third adult that perched and foraged close to the pair. Only when the third adult came very close to the pair was it chased off. In captivity, when a human approached a nest with young, female attacked hand of the intruder.

Breeding: Sexes are similar. It is a medium-sized, long-tailed passerine. Its upper parts are brown, being darker on the wings and tail. The under parts are grayish white, washed with brownish on sides. It has an incomplete dark-brown band on the upper breast which forms an interrupted collar. Its black crest is sharply pointed, and often held upright. Its white lower cheeks are outlined with black and it has a white throat with a fine black moustachial line. A tuft of glossy, hairlike crimson feathers behind eyes forms "whiskers." The tail is tipped in white, except for central pair of rectrices. The under tail coverts crimson. The bill, legs, and feet are black and its iris is dark brown. Juveniles are like adults, but with a shorter and browner crest, they lack crimson ear-patch, much weaker breast band, and their under tail coverts are pink to orange rufous.

The breeding season is spread out and peaks from December to May in southern India and March to October in northern India. Breeding may occur once or twice a year. The courtship display of the male involves head bowing, spreading the tail and drooping wings. The nest is cup-shaped, and is built on bushes, thatched walls or small trees. It is woven of fine twigs, roots, and grasses, and embellished with large objects such as bark strips, paper, or plastic bags. Clutches typically contain two or three eggs. Adults (possibly the

female may feign injury to distract potential predators away from the nest. The eggs have a pale mauve ground color with speckles becoming blotches towards the broad end. Both parents take part in raising the young. Young birds are fed on caterpillars and insects which are replaced by fruits and berries as they mature. Eggs and chicks may be preyed on by the greater coucal and crows.

Cool Facts: During the 1960s, populations of introduced Red-whiskered Bulbuls became established in southern Florida and southern California, although these populations remain small and limited in distribution. In contrast, populations of bulbuls released during the same time period on Oʻahu Island, in the Hawaiian Archipelago, have undergone explosive growth and range expansion. Because Red-whiskered Bulbuls pose a potential threat to agricultural crops, the U.S. Department of Agriculture Code of Federal Regulation now prohibits their importation into the U.S. and its territories.

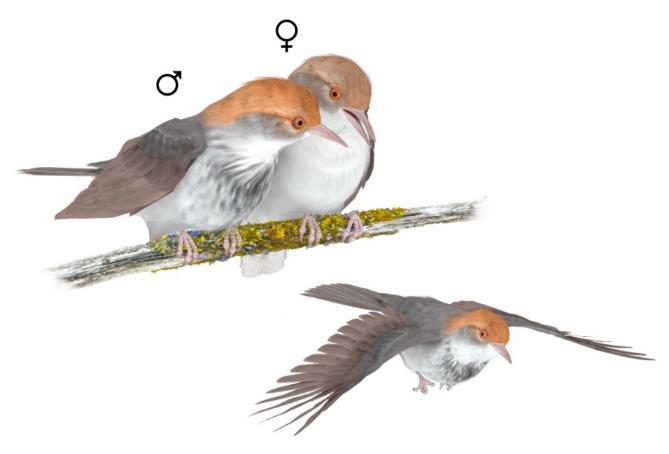
There are nine subspecies:

- *P. j. fuscicaudatus.* First reported by Gould in1866. This subspecies was originally described as a separate species. It is found in western and central India. Has a nearly complete breast band and no white tip to tail.
- *P. j. abuensis.* First reported by Whistler in 1931. This race is found in north-western India (type locality Mount Abu. It Is pale and has a broken breast band and no white tip to tail.
- *P. j. pyrrhotis.* First reported by Bonaparte in 1850. This race was originally described as a separate species in the genus *Ixos*. It is found in the Terai of northern India and Nepal. It is pale above with white tail tips and a widely separated breast band.
- *P. j. emeria.* First reported by Linnaeus in 1758. This subspecies was originally described as a separate species in the genus *Motacilla*. It is found from eastern India to south-western Thailand. Is warm brown above with a slim bill and a long crest (also introduced into Florida.
- *P. j. whistleri.* First reported by Deignan in 1948. It is found in the Andaman Islands and has a warm brown plumage above, a heavier bill and a shorter crest than Race *emeria*.
- *P. j. monticola.* First reported by Horsfield, 1840. Originally described as a separate species in the genus Ixos. Found from eastern Himalayas to northern Myanmar and southern China and has darker upperparts than P. j. pyrrhotis
- *P. j. jocosus.* First reported by Linnaeus in 1758. The nominate subspecies is found in southeastern China.
- P. j. hainanensis. First reported by Hachisuka in 1939. This race is endemic to Hainan Island (off south-eastern China).
- P. j. pattani. First reported by Deignan in 1948. This race is found from southern Myanmar and northern Malay Peninsula through Thailand, southern Indochina and even in java and Sumatra.

Common Name: Cambodian Tailorbird Scientific Name: Orthotomus chaktomuk

Size: 4.3-4.7 inches (11-12 cm)

Habitat: Asia; this species is endemic to the floodplains of the Mekong River, the Tonle Sap River and the Bassac River, in south-central and southeast Cambodia.



It is confined to very dense humid evergreen scrub (multi-stemmed woody plants, 2–6 m tall) subject to seasonal flooding. It is sometimes admixed with long grasses or trees, on level ground within floodplains, at elevations up to 25 m. Trees are typically scarce in the landscape with the scrub forming a dense layer with occasional tree canopies emerging above it.

Status: Near Threatened. **Global population:** Unknown amount of mature individuals with a suspected declining population trend. Suitable habitat for this species is decreasing in extent with habitat destruction and damming of rivers appearing to be the main threats.

Diet: Largely or wholly insectivorous; small dipteran insects, spiders, caterpillars and katydids.

It forages within dense vegetation, gleaning and sally-gleaning from live and dead leaves of multi-stemmed bushes and occasionally vines, from ground-level to canopy. When the vegetation is flooded, it typically forages below the crowns of bushes, on hanging branches just above water. It never ventures into trees.

Breeding: The male has an entirely rich cinnamon-rufous crown with contrasting white cheeks. The upper parts and wings are a mid-gray. The tail has a dark gray sub-terminal band and whitish tips when in fresh plumage. The under parts are generally pale gray with profuse blackish throat streaks and white drop-shaped marks, and a white vent. It has whitish-cinnamon thighs. With the bare parts, the maxilla is dark horn, the mandible is a pinkish-horn, becoming paler and pinker at base and the tarsus and toes are pinkish with the soles becoming a pale pink. The iris is an orange-brown. The female differs from the male by having a paler cinnamon-rufous on head, which is restricted to fore-crown and the sides of the mid-crown, paler gray upper parts and wings and whitish under parts with usually faint dark streaking. Immatures have bright yellowish-olive fringes to the wing feathers, brownish upper parts and paler under parts, with reduced streaking.

Little is known about breeding habits. In March and April, only males respond strongly to playback of vocalizations, whereas females typically do not respond, or do so only briefly (behavior quite unlike other times of year), suggesting that females are on nests during this period. The tailorbird constructs its nest by sewing together the edges of leaves using its beak, creating a deep cradle for its young. This unique method involves making small holes in the leaves and threading plant fibers or spider silk through them to hold the nest securely in place.

Cool Facts: It was first discovered and recorded by scientists in 2009 in Phnom Penh, the capital of Cambodia, during avian influenza checks. In 2013, it was determined to be a unique species and formally described. The Cambodian tailorbird is known for its "loud call", which is similar to that of the dark-necked tailorbird.

"Rikki-Tikki-Tavi", one of Rudyard Kipling's Jungle Book stories, includes a tailorbird couple, Darzee (which means "tailor" in Urdu) and his wife, as two of the key characters. Darzee's wife is said to have feigned injury, but this behavior is unknown in this species.

Common Name: Yellow-billed Tit-Tyrant **Scientific Name:** *Anairetes flavirostris*

Size: 4-4.7 inches (10-12 cm)

Habitat: South America; found from northernmost Peru south through the dry Andean Valleys of Bolivia, entering northernmost Chile and south to Argentine Patagonia.

It occupies arid montane scrub, desert scrub, thorn-scrub grassland, semi-arid brush, and semi-humid Polylepis-Gynoxys woodland. It generally occurs on more open habitat than Pied-crested (*Anairetes reguloides*) and Black-crested (*Anairetes nigrocristatus*) tit-tyrants, and in less humid regions than Tufted Tit-Tyrant (*Anairetes parulus*).

The elevational range in Peru primarily is 1900-4100 m, but locally almost to sea level, on lomas and in river valleys, in central and southern Peru (perhaps during the non-breeding season).



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a suspected stable population trend. It is considered to be fairly common to common.

Diet: Mostly insects; grass seeds occasionally eaten.

While foraging, this flycatcher is constantly moving, flicking its tail, pivoting, and holding its wings slightly drooped at the sides; often holds itself in a horizontal posture, sometimes with tail slightly cocked; occasionally flicks the wings upright over the back while foraging; at least sometimes movements may simply be balancing actions. It makes short, frequent flights to capture prey, often from branch to branch at the tops of shrubs. It primarily plucks insects from plants, using a perch-glean foraging strategy, but it also takes prey from foliage with hover-gleans, or, occasionally, from the air with a short sally.

Breeding: Sexes are alike in plumage. The forecrown feathers black and greatly elongated into thin, bifurcated crest overlying large, pure white crown patch. The forecrown and face dusky gray, faintly streaked with white. Narrow white supercilium. Upper-parts medium gray-brown, faintly streaked blackish. Wings blackish, wing-coverts broadly tipped cinnamon-buff (forming two conspicuous wingbars), secondaries broadly edged cinnamon-buff except at base, innermost remiges broadly edged and tipped buffy white. The tail dusky brownish, outer web of outermost feather pair and tips of remaining pairs paler. Sides of head, throat, and breast white, boldly streaked with black, streaks becoming broader on lower breast and upper belly; flanks, lower belly and under-tail coverts unstreaked yellowish.

Breeding in Argentina generally is from October to January. The nest is a neat, shallow cup made of plant fibers, thistle down, and lichens, lined with feathers. A cloutch of 2-3 eggs are laid. Incubation lasts about 13 days.

Cool Facts: It is most likely to be confused with Tufted Tit-Tyrant (*Anairetes parulus*). Yellow-billed differs in having a shorter crest which is less wispy than Tufted, having broader streaks on the breast and flanks, and having a dark iris. The Tufted Tit-Tyrant also has an unstreaked back. In addition, the base of the mandible is yellow in Yellow-billed Tit-Tyrant, compared to the solidly dark bill in Tufted.

There three subspecies:

- A. f. arequipae. First reported by Chapman in 1926. It is endemic to the West slope of the Andes of southwestern Peru (south from Lima) south to northwestern Chile (Arica, Tarapacá). The outer web and tip of inner web of outer rectrices are dull brownish, only slightly paler than rest of tail, and somewhat less yellowish on belly. A. f. cuzcoensis. First reported by Chapman in 1924. Known with certainty from southeastern Peru (Cuzco); populations in other inter-Andean valleys north to Junín possibly this taxon as well. It is larger than other subspecies, with a darker brown and more strongly striped back, it also has a more heavily and broadly striped breast and has the least extensive white in crown.
- A. f. flavirostris. First reported by Sclater and Salvin in 1876. The nominate
 is found in the High Andes of Bolivia and in western Argentina (south to
 Mendoza and northern Chubut); east to Buenos Aires and Entre Ríos in
 non-breeding season.

Common Name: Chocolate-vented Tyrant **Scientific Name:** *Neoxolmis rufiventris*

Size: 8.6-9 inches (22-23 cm)

Habitat: South America; It breeds in southern Argentina, Chile and Tierra del Fuego; during the austral winter it migrates north to the Pampas.

Its natural habitat is temperate grassland. Semi-open and open grass and scrub-covered steppe with scattered tussocks and Berberis or Verbena bushes; hummocks of Azorella and crow-berry, and agricultural fields or pastures. It is mostly found below 500 m elevations.

Status: Least Concern. **Global population:** Unknown amount of mature individuals. It is unclear whether the population is experiencing local fluctuations or an overall decline at this time.



Diet: Insects, including large beetles and small vertebrates (lizards).

It is usually seen in widely spaced pairs, but in non-breeding season, it occurs in small flocks. It is primarily terrestrial, but often perches on low bushes; mostly walking or running quickly, then pausing and standing erect on ground or low mound, nervously flicking wings and tail. Its flight is swift and direct, with pair-members or small groups often chasing one another.

Breeding: Sexes are alike. It is a large and handsome terrestrial flycatcher. Its head is an ashy gray with a blackish fore-face and ocular region. Its upper parts are brownish-gray with the wing-coverts mostly white, the greater coverts and tertials edged white or pale sandy brown, the secondaries rufous basally, broadly tipped white, and the remaining remiges black (in flight, wings look long and sharply pointed, white and rufous pattern striking). The tail is notched, black, with the outer web of outer rectrices white. The throat and breast pare gray with the lower breast becoming sharply cinnamon continuing to vent. The iris is dark and the bill and legs are black. The juvenile has its ear-coverts tinged rufous, the breast, sides and upper belly broadly streaked dark gray.

Breeding occurs in November and December in Argentina. Nests are a bowl-shaped cup, lined with grasses and feathers, diameter about 10–10·4 cm, depth 5–6·9 cm. This nest is placed on the ground, partially concealed by low shrub or tussock. The clutch is 2–3 eggs.

Cool Facts: It performs an aerial display that covers a large amount of airspace, more akin to a shorebird display than a passerine display. In winter it migrates north to the Pampas; curiously it has been observed at times foraging within flocks of Tawny-throated Dotterel (*Oreopholus ruficollis*) further accentuating that it is a flycatcher that ecologically behaves more like a plover.

The species was first scientifically described by Vieillot in 1823.

Common Name: Pompadour Cotinga **Scientific Name:** *Xipholena punicea*

Size: 7.9 inches (20 cm)

Habitat: Southern America; it is found from eastern Colombia, Venezuela, and the Guianas south to central Amazonian Brazil and northeastern Bolivia; there also are isolated populations in eastern Ecuador and northern Peru.

Status: Least Concern. **Global population:** Unknown amount of mature individuals with a declining population trend. This species is suspected to lose 11.5-12.6% of suitable habitat within its distribution over three generations (10 years) based on a model of Amazonian deforestation. It is therefore suspected to decline by <25% over three generations. The species is most numerous north of the Amazon, from eastern Colombia east to the Guianas.



Diet: Primarily frugivorous, although will take insects and likely small vertebrates. There are very limited data on the types of fruit consumed, but palm fruits (including *Euterpe sp.; Arecaceae*), Pagamea plicata (*Rubiaceae*), figs (*Ficus sp.; Moraceae*), and Brosimum (*Moraceae*) appear to be its favorites. Also, it occasionally sallies for flying ants and termites.

It primarily forages in the upper canopy at fruiting trees, where multiple individuals sometimes congregate.

Breeding: The male Pompadour Cotinga is highly distinctive, and is very unlikely to be confused with any other species within its range. Its head and body are a shining crimson-purple, paler (more crimson to deep pink), on the tertials, upper tail coverts, and rectrices. The secondary wing-coverts are crimson-purple, with the greater coverts elongated and stiffened, pointed at their tips, shafts white. The rest of the wing is white, but the tips of the primaries are dusky black (more extensively so on the outer vane). The under wing is white with black tips on the primaries. The tail is largely pale pink to white, with more more crimson-purple towards outer edges. The tarsi and toes are brownish black or black, with buff or yellow soles.

The female is ash-gray, paler on the throat and, especially, on the belly and under tail coverts. The wings and tail are blacker with the outer edges of the greater wing coverts and secondaries being white. It has a very narrow white eye ring.

In breeds in March (Guyana and Venezuela), and July-September (Northern Brazil). Nests are high (18–35 m) above the ground, in the canopy of a tree, or in tall bamboo. Nests are placed in the fork of a branch or bamboo shoot. It is constructed entirely by the female. It is a very simple open cup. It is very small, barely fitting the incubating female, and constructed mostly of small sticks and moss. Females lay a single egg and appear to do all the incubation. Only the female broods the nestlings.

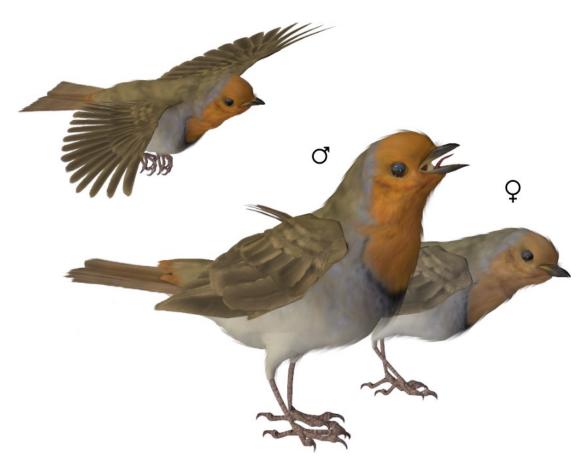
Cool Facts: The Pompadour Cotinga is one of those birds that makes the Neotropical avifauna one of the gaudiest collections of organisms on the planet.

Common Name: Japanese Robin Scientific Name: Larvivora akahige

Size: 5.5-5.9 inches (14-15 cm)

Habitat: Asia; it breeds in montane forests from Sakhalin to southern Japan, with most populations then migrating southwest as far as southern China and Indochina.

The Japanese robin lives in natural habitats such as islands, lakes, mountains, and temperate forests. These habitats are abundant with species of small insects and plants that the Japanese robin eats. More specifically, this species lives in damp, dense, and shady areas such as undergrowth along valleys and streams. Many Japanese robins are located in broadleaf and deciduous forests throughout the Japanese islands of Honshu, Shikoku, Hokkaido and the Sakhalin Islands, and Yakushima, and during the winters in Southeast Asia.



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a declining population trend. This species is considered to have a medium dependency on forest habitat, and tree cover is estimated to have declined by 4% within its mapped range over the past 10 years. Therefore, as a precautionary measure, it is tentatively suspected that this loss

of cover may have led to a decline of between 1-19% in the species' population size over the same time frame.

Diet: Omnivorous; beetles, insects, milled worms, small crickets, fruits, and other small insects.

Breeding: This bird species is mainly gray and bright orange. The male Japanese robin is olive brown from the top of the head to rump, with an orange face and neck, and a gray breast and underside. Their tail is reddish-brown, their legs are pinkish brown, and they have a black bill. The female Japanese robin looks very similar to the male, but their orange and brown color characteristics are much duller and less extensive. The juvenile Japanese robin also looks very similar to the adult, but has dark spotting on the breast, pale rufous feathers from crown to mantle, and a rufous buff.

The Japanese robin reproduces throughout May and June in central Japan. Their nest typically consists of moss, twigs, dry leaves, ferns, and roots. When the female is ready, she lays about 3-5 eggs of greenish color, one egg per day, and incubates them for roughly 2 weeks. Once born, the young chicks are nurtured for a month, or 31 days, before they leave the nest and become independent. The robin does not mate for life and only finds a partner during the spring mating season.

Cool Facts: Although locally quite common, the Japanese Robin is usually shy and elusive, keeping to dense undergrowth (both in the species' predominantly montane breeding grounds and lowland wintering areas). When breeding; however, its song—a loud, far-carrying trill—usually betrays its presence. On migration, it is sometimes also found in parks and gardens, where the species may be surprisingly accessible.

This species was formerly named *Erithacus akahige*, or Komadori.

Common Name: Metallic Starling **Scientific Name:** *Aplonis metallica*

Size: 9.8 inches (25 cm)

Habitat: Asia and Oceania; a wide range extending from east Indonesia, through Papua New Guinea, to the Solomon Islands and south to Queensland, Australia.

The species inhabits lowland areas such as rainforests, coastal woodlands, and mangroves, usually occurring below 1,000 m. It is also known to occur across forest edges, clearings, gardens, and savannas. It is therefore thought to be tolerant of some habitat degradation due to commonality in plantations and secondary habitats



Status: Least Concern. **Global population:** Unknown amount of mature individuals with a declining population trend. The species is described as locally common to abundant (especially in lowland forests across the Melanesia Islands), although uncommon or rare on the Tanimbar islands and Sulu Islands in Indonesia. Declining populations are due to habitat destruction.

Diet: Mainly frugivorous; also takes nectar and some insects. Fruits recorded as taken in Australia include those of native trees *Carallia brachiata, Myristica insipida, Schefflera actinophylla, Terminalia seriocarpa, Glochidion harveyanum, Glochidion ferdinandii, Polyscias elegans, Polyscias murrayi, Phycosperma elegans, Archontophoenis alexandrae, Scaevola koenigii. It feeds on caterpillars, hawks flying ants and wasps and mayflies.*

It forages usually in small to large flocks of up to several hundred individuals, very occasionally in ones or twos. It commonly associates with fruit doves, sometimes in mixed-species flocks with other starling species. It roosts communally, often performing complex aerial manoeuvres in flocks.

Breeding: Sexes are alike. It is a medium-sized starling with long graduated tail, and with long, lanceolate feathers on nape, and a prominent red eye. It has black plumage with variable gloss. The nominate race has its crown glossed purple, the nape with a glossy satin-green with long, lanceolate feathers. The mantle ia a glossy purple, and its rump a glossy emerald-green. The wings are brownish-black with some bluish iridescence and the tail black with some gloss. Its throat is a glossy satin-green, the upper breast a glossy purple, and the lower breast and belly a glossy emerald-green. Its iris is red to orange-red. Its bill and legs are black. The juvenile is chocolate-brown above, the wings blackish-brown with a little gloss, the tail chocolate-brown, the chin and throat buffy with brown shaft streaks, the breast and belly brown with broad pale buff feather margins. Its iris is dark brown, changing progressively through olive-yellow, yellowish-green and greenish-orange to adult color.

It is presumed monogamous; and is a co-operative breeder at times (three adults working on one nest). It is a colonial breeder, with 4–400 nests often in single tree; adjoining nests can coalesce to form single structure. It is a domed nest with side entrance, made from twigs, vine tendrils and bark strips, lined with strips of palm frond and fresh green leaves, suspended 10–30 m above ground from ends of twigs in canopy. The clutch is 1–4 eggs with the incubation performed by the female alone. Chicks fed by both sexes, both by regurgitation and with food carried in bill.

Cool Facts: There are five subspecies:

- A. m. circumstripta. The "Violet-hooded" Starling is endemic to the eastern Lesser Sundas (Damar and Tanimbar Islands). It is glossed reddish-purple on the head, mantle and breast.
- A. m. inornata. It is found in Numfor and Biak, in Northern Geelvink Bay (Northwestern New Guinea). It is smaller and duller than nominate, lacking green on nape, having head, neck and mantle tinged purple, with almost no purple on upper breast.
- A. m. metallica. The nominate race is found on the Sula Islands, the Moluccas, New Guinea and most satellite islands, Aru Islands, and northeastern Australia (Northeastern Queensland).
- A. m. nitida. This race is endemic to the Bismarck Archipelago (except northwest) and Solomon Islands. It has bronze (rather than green) iridescence
- A. m. purpureiceps. It is endemic to the Admiralty Islands (Northwestern Bismarck Archipelago). It is smaller and shorter-tailed, less glossy on head, and lacks purple on mantle.

Common Name: Long-billed Gnatwren Scientific Name: Ramphocaenus melanurus

Size: 4.1-5.3 inches (10.5-13.5 cm)

Habitat: North and South America; it is found from southern Mexico, through the lowlands of Middle America, and across much of northern South America. It occurs both east and west of the Andes, with a disjunct population in the Atlantic Forest of Brazil.

It is found in the undergrowth and vines of dry forest and secondary woodlands.



Status: Least Concern. **Global population:** 5,000,000 - 50,000,000 mature individuals with a declining population trend. It is estimated that this species will decline 30% in the next ten years due to habitat destruction.

Diet: Mainly insects, insect eggs and spiders.

They usually occur in pairs or family groups.

Breeding: Sexes are alike They have a long, thin bill and a short cocked tail. The upper parts are gray-brown, with rufous on the sides of the head. The throat is white, shading to buff on the rest of the underparts. The tail is black with white tips to all but the central feathers.

They build a deep cup nest very low in a small plant or sapling. The two white eggs are incubated by both parents for 16–17 days to hatching, with a further 11–12 days to fledging.

Cool Facts: There are two aspects of Long-billed (or "Trilling") Gnatwrens behavior that are remarked upon more frequently than any other. The first is its seemingly magical ability to forage about while remaining hidden from a human observer. The second is the aforementioned, curious, and distinctive habit of cocking its tail up into an angle roughly perpendicular to its back and waving it about in a very distinctive manner. The manner with which the tail moves gives the impression that it is attached to the body with a flexible spring, moving in reaction to the bird's movement rather than being moved. This may occur while moving about or while perched and, as of yet, there is apparently no explanation for this behavior.

Thirteen subspecies are recognized:

Rufiventris Group

- *R. m. rufiventris.* First reported by Bonaparte in 1838. It is found in south Mexico to west Ecuador. It is similar to the nominate but is grayer above with a more contrasting crown and more prominent white tips on the tail. feathers. Below it is more buffy than nominate *melanurus*.
- R. m. ardeleo. First reported by Van Tyne & Trautman in 1941. It is found in Yucatán Peninsula (southeast Mexico) and north Guatemala. Very similar to Race rufiventris, but has a smaller bill and is paler overall (especially on the breast, sides of head, and upper parts).
- *R. m. sanctaemarthae.* First reported by Sclater in 1862. It is found in north Colombia and northwest Venezuela. It is overall paler and browner than Race *rufiventris* and the nominate subspecies.
- R. m. griseodorsalis. First reported by Chapman in 1912. It is found in west Colombia. This race is most similar to Race rufiventris, but has the back slaty gray, the head slightly tinged with cinnamon that is brighter on the forehead, the sides of head paler, and the underparts are a richer ochraceous buff.
- R. m. panamensis. First reported by Phillips in 1991. It is found in central and east Panama.

Trilling Group

- R. m. pallidus. First reported by Todd in 1913. It is found in Zulia Valley (north central Colombia) and west Venezuela. The palest of subspecies. It is most similar to Race trinitatis, but significantly paler below (almost pure white), with the sides and flanks only very lightly washed with buff. The upper parts are less rufescent, and the mantle is smoky gray.
- R. m. trinitatis. First reported by Lesson in 1839. It is found in east
 Colombia to north Venezuela, Trinidad. It has paler underparts, and buff
 flanks and head sides. It is most similar to the nominate form, but differs in
 the smoky or earthy brown coloration of the back that contrasts with the
 decidedly rufescent crown, and also by the more richly ochraceous sides
 of the head and neck.

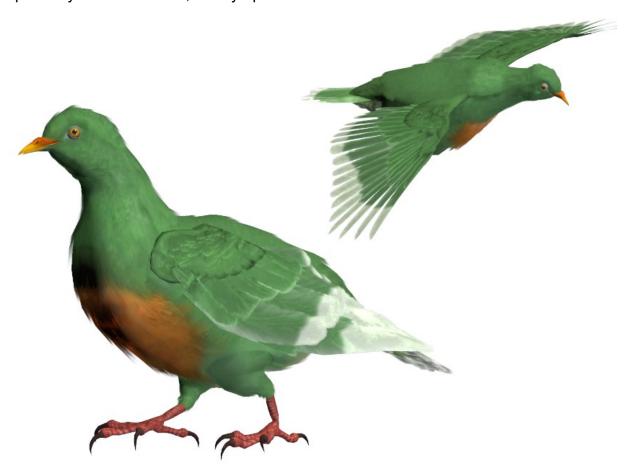
- R. m. albiventris. First reported by Sclate in1883. It is found in east Venezuela, the Guianas and north Brazil. It is similar to Race trinitatis, but differs from both trinitatis and the nominate in having the whole under-surface pure white, with the innermost portions of the flanks pale gray. The sides of the head are whitish with a pale buff wash to the posterior portions of the ear coverts and an ochraceous buff tinge to the sides of the neck.
- R. m. duidae. First reported by Zimmer in 1937. It is found in northeast Ecuador to south Venezuela. It is most similar to Race *trinitatis*, but has darker upper parts. The top of the head is less strongly contrasted with the back, the flanks are deeper ochraceous, and the white central portion of the underparts is more distinctive when contrasting with the darker flanks...
- R. m. badius. First reported by Zimmer in 1937. It is found in northeast Peru and southeast Ecuador. It is most similar to Race amazonum (south of the Amazon River), which also has duller flanks, but those of Race badius average duller and grayer. The central portions of the under parts of badius are also less purely white and its upper parts are a brighter, warmer brown. The auriculars are darker, more ochraceous or brownish, less whitish than in Race amazonum.
- R. m. amazonum. First reported by Hellmayr in 1907. It is found in east Peru to north central Brazil. It is similar to Race albiventris, sharing with it the cheeks and ear-coverts pale brownish streaked with whitish. It is larger than albiventris and much darker brown on the upper parts, completely lacking rufous on the nape and sides of the neck, leaving the top of the head a dull sepia brown like the back. The sides of the neck are much paler than in Race albiventris, approaching creamy buff
- R. m. austerus. First reported by Zimmer in 1937. It is found in east Brazil south of the Amazon. Closely resembling the nominate, this subspecies is similar to that form in having bright ochraceous lateral under parts, but the upper parts are much duller, grayish instead of tawny. Similarly, the present subspecies differs from Race amazonum in being much grayer above. In addition, the bright flanks of austerus separate it from the duller amazonum
- R. m. melanurus. First reported by Vieillot in 1819. The nominate race is endemic to east central Brazil.

Common Name: Orange-bellied Fruit-dove **Scientific Name:** *Ptilinopus iozonus*

Size: 7.9-8.7 inches (20–22 cm)

Habitat: Oceania; endemic to New Guinea, the Aru Islands and western Papuan islands.

It inhabits a variety of forest types and wooded areas, especially open habitats; typically in second growth, forest edge, mangroves, gallery woodland and savanna near forest. It is less commonly in primary forest areas. It is found primarily in the lowlands, locally up to 1000 m.



Status: Least Concern. **Global population:** Unknown amount of Mature individuals with a decreasing population trend. It is described as common to abundant on mainland New Guinea, common on Kariru island and scarce on other islands such as Karkar. It is common in the lowlands of Papua New Guinea, where is usually the most abundant member of the genus. Tolerance of, and even preference for, relatively open areas and secondary forest, together with frequent appearance in the vicinity of towns, should ensure survival of this species.

Diet: Frugivorous; it depends on figs for most of its food with figs constituting 84% of its diet by volume. Other important food sources include palm fruit, nutmeg and custard apples.

It is a gregarious species, often found in flocks of dozens, up to 60 or more. They congregate in the canopy of fruiting trees, often in the company of other species.

Breeding: It is mostly dull green in color with a large orange patch on its belly. The under-tail-coverts and vent are yellow to white, marked with green. There is a small grayish mauve patch on the bend of the wing. The secondaries and greater-coverts are narrowly edged with yellow, while the primaries are a dark iridescent green. It has blue-gray spots on its lower back. The tail is dark green with a gray-green terminal band. Its bill is a dark gray with a cream-colored tip. The legs are purple. The female is similar but has a less bronzy tinge to green plumage and a more pronounced gray tinge on the chin. Juveniles lacks the adult's gray and orange markings, and has narrow yellow fringes to most of its green feathers, and broad yellow ones to those of belly patch area.

Breeding occurs year round, although the peak appears to be November through January. Nests are built high in mangroves and rarely seen. Nests are typically a slight platform of twigs with a single egg laid.

Cool Facts: There are 5 subspecies:

- P.i. finschi. First reported by Mayr in 1931. It is endemic to the Huon Peninsula and Fly River east to southeastern New Guinea. Race finschi is very similar to the nominate but with a gray throat;
- *P.i. iobiensisi.* First reported by Schlegel in 1873. It is found on Yapen Island, and northern New Guinea from the Mamberamo River eastward (including islands of Tarawai, Kariru, Manam and Karkar) to Astrolabe Bay. It differs only in a greener throat and a poorly marked apical tail band.
- *P.i. iozonus*. First reported by Gray in 1858. The nominate subspecies is endemic to the Aru Islands.
- P.i. humeralis. First reported by Wallace in 1862. It is found on the Western Papuan Islands, and Western New Guinea lowlands from Vogelkop east along the southern coast to the Fly River. It has mauve-gray feathers on bend of wing broadly edged with dark purple, and gray spots on wing.
- *P.i. pseudohumeralis.* First reported by Rand in 1938. It is found in the upper Fly River area, around junction of Palmer River and along Black River. It has mauve-gray feathers on bend of wing broadly edged with dark purple, and gray spots on wings.

Acknowledgments:

Thank-you to my betatesters... Alisa and FlintHawk

Species Accuracy & Reference Materials

The author has tried to make these species as accurate to their real life counterparts as possible. Many birds of the same species do vary considerably in color. This package tries to emulate the colors and markings in the most commonly found variants.

With the use of one generic model to create dozens of unique bird species, some give and take is bound to occur.

The model was created in Modo. The model rigs in Poser and DAZ Studio. The texture maps were created in Painter.

Field Guide Sources:

- "The Sibley Guide to Birds" by David Allen Sibley
 https://www.sibleyguides.com/
- Wikipedia (https://www.wikipedia.com)
- BirdGuides.com (https://www.birdguides.com)
- BirdLife International (https://www.birdlife.org)
- Birds of the World (https://birdsoftheworld.org)
- All About Birds (https://www.allaboutbirds.org)

