

**Songbird
ReMix**

Second Edition

9 Species from Across the Globe

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

Songbird ReMix

Second Edition

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Songbird ReMix

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Introduction

Songbird ReMix “Second Edition” (formerly known as “Songbird ReMix 2”) was originally released as an upgrade to the Songbird ReMix set. It moved the Songbird ReMix series from its single bird model to multiple hybrid models to better resemble more complex birds. Thanks to that innovation in 2005, the series matured to what you see today. Years later, to lessen confusion, it was decided that each set would be as a stand-alone product and this set was renamed to “Second Edition” and more birds were added to make it comparable to sets in the series.

Today’s “Second Edition” still contains the original groundbreaking content, which made it into one of the most popular sets in the series, as well as a number of additional birds to add even more value.

This set offers a wide variety of species from Kookaburras and Quail to as hummingbirds, pigeons, a raven and even a cockatoo.

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)**
 - **Hummingbirds and Swifts (Order Apodiformes)**
 - **Kingfishers (Order Coraciiformes)**
 - **Parrots and Cockatoos (Order Psittaciformes)**
 - **Perching Birds (Order Passerines)**
 - **Pigeons and Doves (Order Columbiformes)**
- **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”. 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).

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.

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.
- 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.

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.

Where to find your birds

Type Folder	Bird Species
Gamebirds (Order Galliformes)	California Quail
Hummingbirds and Swifts (Order Apodiformes)	Anna's Hummingbird Ruby-throated hummingbird
Kingfishers (Order Coraciiformes)	Laughing Kookaburra Blue-winged Kookaburra
Parrots and Cockatoos (Order Psittaciformes)	Lesser Citron Cockatoo
Perching Birds (Order Passeriformes) Crows, Jays and their Allies	Common Raven
Perching Birds (Order Passeriformes) Finches, OW Sparrows & their Allies	Lesser Goldfinch
Pigeons and Doves (Order Columbiformes)	Rock Pigeon

Where to find your poses

Type Folder	For what species?
Gamebirds (Order Galliformes)	All Gamebirds
Hummingbirds and Swifts (Order Apodiformes)	All Hummingbirds
Kingfishers (Order Coraciiformes)	All Kingfishers
Parrots and Cockatoos (Order Psittaciformes)	All Parrots
Perching Birds (Order Passeriformes) Poses can be found in "Universal Poses" & "type" folders	All Passerines
Pigeons and Doves (Order Columbiformes)	All Pigeons and Doves

Songbird ReMix
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Field Guide

Laughing Kookaburra

Blue-winged Kookaburra

Lesser Citron Cockatoo

California Quail

Rock Pigeon

Lesser Goldfinch

Common Raven

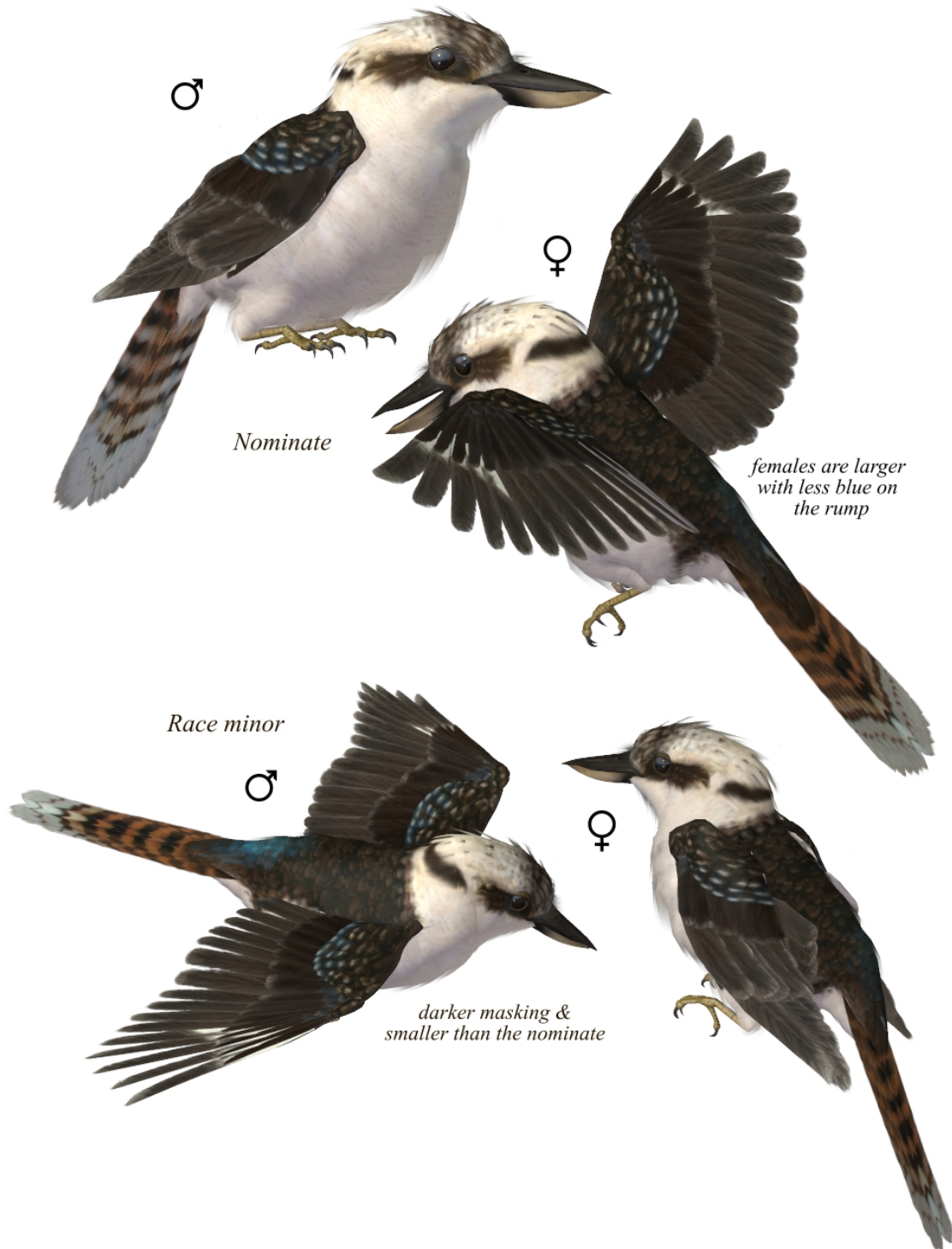
Anna's Hummingbird

Ruby-throated Hummingbird

Common Name: Laughing Kookaburra
Scientific Name: *Dacelo novaeguineae*

Size: 15.3-16.5 inches (39-42 cm)

Habitat: Australia; found throughout eastern Australia. They have been introduced to Tasmania. There is some overlap in Queensland with the Blue-



winged kookaburra, although this species is more coastal.

Common habitat includes eucalypt forest and woodland, using riparian trees along major watercourses to extend inland or into primary forest. It also uses wooded and cleared farmland, city parks and suburban gardens, provided that tree hollows available for nesting. It can sometimes be found at forest edges, wetlands, pine plantations and forest regrowth areas. It is sympatric with the Blue-winged Kookaburra (*D. leachii*) on Magnetic Island (eastern Queensland) where the species are interspecifically territorial. In other areas, the Blue-winged Kookaburra keeps to drier habitats.

Status: Least Concern. **Global population:** 65,000,000 mature adults with a stable population trend. It is common over most of its range, and has benefited from human settlement. Apart from successful introductions to southwestern Australia, Kangaroo Island, Flinders Island, Tasmania and New Zealand, its distribution has not changed in historical times. It has no real threats, but density declines are happening in areas where farmland is being converted to residential blocks.

Diet: Insects, worms and crustaceans, although small snakes, mammals, frogs and birds may also be eaten.

Prey is seized by pouncing from a suitable perch. Small prey is eaten whole, but larger prey is killed by bashing it against the ground or tree branch. It occasionally digs in ground for prey. It has been known to steal prey from hawks or snakes. Undigested food regurgitated as pellets, which may accumulate under roosting places.

Breeding: It's a very large, distinctive kingfisher with a very distinctive call. The male of the nominate race has a mostly a white head, dark crown and eye band, a dark nape patch with dark brown upper parts. There is a small blue rump patch and bluish-white tips of wing-coverts. The upper tail coverts are rufous and tail banded with black. The under parts are white with faint brown barring on the feathers. The upper mandible brownish-black while the lower mandible is horn-colored with a brown base. The iris is dark brown and the legs and feet are pale yellow-green to gray-flesh color. The female is larger, with less blue on rump. Juveniles are darker and more barred than adults. It differs from the Blue-winged Kookaburra (*D. leachii*) in having much less blue on the wings and rump and a much darker eye-mask and dark eye.

Laughing Kookaburras are believed to pair for life. The nest is a bare chamber in a naturally occurring tree hollow or in a burrow excavated in an arboreal (tree-dwelling) termite mound. Both sexes share the incubation duties and both care for the young. Other Laughing Kookaburras, usually offspring of the previous one to two years, act as 'helpers' during the breeding season. Every bird in the group

shares all parenting duties. Two to four white eggs are laid in September through January.

Cool Facts: If you've ever seen a "Jungle" movie you've heard the characteristic call of the Laughing Kookaburra. Hollywood has made the Kookaburra almost synonymous with what you expect to hear in the jungle. The laugh is actually a warning call to other Kookaburras.

C. H. Eden in 1872 described the Kookaburra by its other, more "colorful" common name, *"At daylight came a hideous chorus of fiendish laughter, as if the infernal regions had been broken loose- this was the song of another feathered innocent, the laughing jackass- not half a bad sort of fellow when you come to know him, for he kills snakes, and is an infallible sign of the vicinity of fresh water..."*

The Kookaburra is also the star of a popular Australian nursery rhyme written by Marion Sinclair, "Kookaburra sits in the old gum tree".

*Kookaburra sits in the old gum tree
Merry, merry king of the bush is he
Laugh, Kookaburra! Laugh!
Gay your life must be*

*Kookaburra sits in the old gum tree
Eating all the gum drops he can see
Stop, Kookaburra! Stop!
Leave some there for me!*

*Kookaburra sits in the old gum tree
Counting all the monkeys he can see
Stop, Kookaburra! Stop!
That's not a monkey that's me*

*Kookaburra sits on a rusty nail
Gets a boo-boo in his tail
Cry, Kookaburra! Cry!
Oh how life can be!*

Kookaburras method of parenting is unique among birds and is only found with two others species within the animal kingdom, primates and humans. Once their young have fledged, they stay around the nest and help the parents with the next clutch. In fact, if a parent dies, one of its children will take up its responsibilities. Most other birds will leave the nest to mate and start their own families.

Kookaburras are also known for their adaptation skills, surviving on what foodstuffs are available. Being in the Kingfisher family, of course it displays similar behaviors such as hovering above water, searching for its prey and dive-bombing it. It also catches snakes and lizards by the head and drops them from great heights or beats them on tree limbs before consuming them. Many Kookaburras have learned to interact with humans and have become “tame” as their habitats give way to human populations.

There are two subspecies:

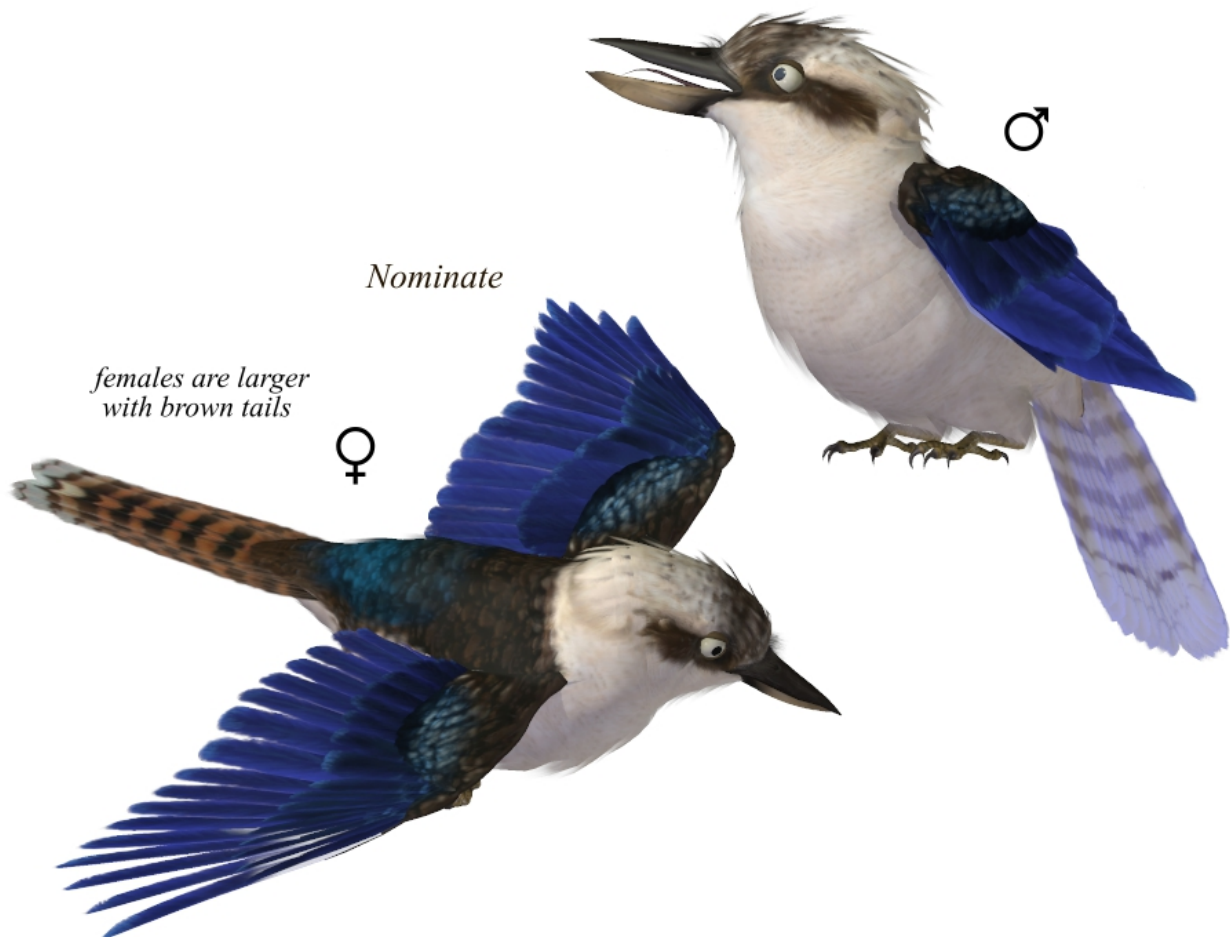
- *D. n. minor*. It is found in northeastern Australia from Cape York Peninsula south to Cooktown (Northeastern Queensland). It is smaller than the nominate and its crown is slightly darker.
- *D. n. novaeguineae*. The nominate subspecies is found in eastern Australia from the southern Cape York Peninsula southwards to Flinders Range (South Australia) and Cape Otway (Victoria).

Common Name: Blue-winged Kookaburra
Scientific Name: *Dacelo leachii*

Size: 15-16.1 inches (38-41 cm)

Habitat: Australia; endemic to coastal and subcoastal areas in northwest and northeast Australia, Torres Strait and Southern New Guinea. It is widespread in the Gulf Country of Queensland extending South to about Toowoomba. It is also widespread in the top end of Northern Territory. It is absent from the Eighty Mile beach area in Western Australia separating the Pilbara population.

Typically found in savanna woodland and eucalypt open woodlands and forests, tall trees and woodlands along watercourses, riverine and littoral mangroves and monsoon forests. It avoids areas with dense under-storey. Also, it can be found in pasture and cultivated lands with stands of trees, or in plantations far from



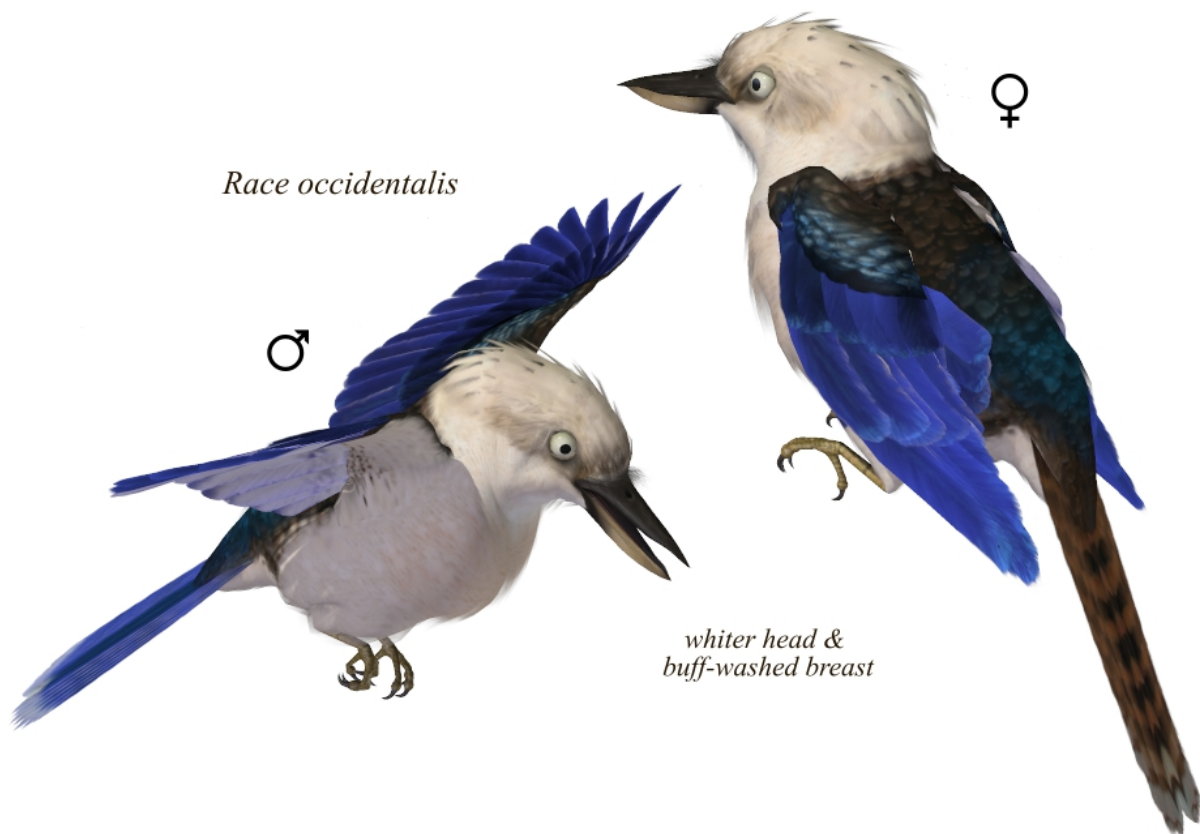
water, and large suburban parks and gardens. It mainly is found in the lowlands in New Guinea, but locally to 600 m. Where overlaps with the Laughing Kookaburra (*D. novaeguineae*), is usually more common away from water.

Status: Least Concern. **Global population:** 7,190,000 mature adults with a stable population trend. Blue-winged Kookaburras have suffered from loss of habitat resulting from land clearing, and are often killed on roads in Australia however have been expanding their territory in New Guinea with forests being cleared.

Diet: Mainly insects, reptiles and frogs in the wetter months, and fish, crayfish, scorpions, spiders, snakes, earthworms and small birds and mammals at other times.

After a controlled dive with their bill open, food is grabbed from the ground. The bill has a special groove near the end of the upper mandible which helps in holding prey. After returning to a perch, the prey is beaten and then swallowed. They show extra care when snakes are the prey. Pellets of undigested items are regurgitated and found beneath daytime perches, roosting sites and nests.

Breeding: A very large, distinctive kingfisher, with pale head and eye, blue wings and rump. The male of the nominate race has a faintly dark-streaked head, a gray-brown mantle and scapulars, a blue tail with blue-barred white outer



feathers. The white under parts are faintly vermiculated gray. The upper mandible is brownish-black with the lower mandible a creamy horn to pale yellow

color with dark basal triangle. It has a white or pale yellow iris. Its legs and feet pale flesh-brown to greenish-gray. The female is slightly larger than male, with a rufous tail and upper tail-coverts. The tail barred with blue-black stripes. The juvenile is like the female, but its crown paler, and the breast feathers are edged with dusky brown.

The nest site of the Blue-winged Kookaburra is mostly high (to about 25 m) up in natural tree hollows, sometimes in tree termite nests, or in a hole cut into the soft wood of a baobab tree. Typically, the floor of the chamber is lower than the entrance, with an overall length of 50 cm. The breeding pair share the incubation of the eggs and subsequent feeding, which extends for one to two months, and are often assisted by auxiliaries (helpers), mainly from the previous year's clutch. Two to four white eggs are laid in September through January.

Cool Facts: The scientific name commemorates the British zoologist William Elford Leach. Blue-winged Kookaburra family groups are often larger than those of the Laughing Kookaburra, with up to 12 members.

Their call is a loud maniacal screeching cackle developing into loud trills and then ending abruptly. Also a variety of trills, 'ow' notes, barks and hoarse screeches. Often call in groups from a high perch.

There are four subspecies:

- *D. I. intermedia*. It is found in southern and southeastern New Guinea from the Mimika River to the Fly River and from the Eloa River to Amazon Bay. Race *intermedia* is larger and darker above than the nominate, with the head strongly streaked, a blackish back, plain white below, and the upper mandible is blackish.
- *D. I. occidentalis*. It is found in western Pilbara and the Gascoyne regions of Western Australia. Race *occidentalis* has a whiter head, and buff-washed under parts.
- *D. I. cervina*. It is found on the Tiwi Islands (Melville, Bathurst) and adjacent mainland coastal areas of Northern Territory, in Northern Australia. Race *cervina* is smaller, darker above and below with its upper breast buffy colored.
- *D. I. leachii*. The nominate race is found in northern Australia east to Cape York Peninsula, south to Broome (North Western Australia) in west and to Brisbane (southeastern Queensland), rarely found to Byron Bay (northeastern New South Wales), in East.

Common Name: Yellow-crested Cockatoo
Scientific Name: *Cacatua sulphurea*

Featured Subspecies: Lesser Citron Cockatoo (*C. c. citrinocristata*)

Size: 13.4 inches (34 cm)

Habitat: Asia; endemic to East Timor and Indonesia's islands of Sulawesi and the Lesser Sundas. Race *citrinocristata* is found on Indonesia's Lesser Sunda Islands and Sumba.

It inhabits forest (including evergreen, moist deciduous, monsoon and semi-evergreen), forest edge, scrub and agriculture up to 500 m on Sulawesi, and 800 m (sometimes 1,500 m) in Nusa Tenggara. On, at least some islands (e.g. Sumba), it appears heavily dependent on closed-canopy primary forest. On others, it survives despite the total

clearance of original vegetation, indicating that its habitat requirements are somewhat flexible.

The nominate species is found in areas of woodland and cultivation, but not found inside forests. It occurs from sea-level up to 500 m on Sulawesi, and sometimes up to 1200 m elsewhere.

Status:
Critically Endangered.
Global Population:
1,000-2499 mature adults with a declining population trend. It was formerly thought to be "common", but



all races have been seriously reduced in numbers due to widespread trapping for the avicultural trade, in combination with habitat destruction and persecution as a crop pest. There have been dramatic population declines, particularly in late 20th century and they are now extinct on many islands and close to extinction on most others. Whereabouts of populations large enough to supply so many birds unknown to scientists. The trapping of roosting birds with sticky poles may eliminate whole populations.

Race *abbotti* is critically endangered, with only 10 birds encountered in 2008. It is probably extirpated on Lombok and close to extinction on Sulawesi, Sumbawa and Flores. There were seven separate sightings of 2–19 birds in Rawa Aopa Watumohai National Park, SE Sulawesi in autumn 1995. It has not been seen on Nusa Penida (East of Bali) since 1986. Occurrence on considerable number of islands over extensive area may mask serious decline throughout most of range. It is still fairly common on Komodo, in the national park.

Race *citrinocristata* is vulnerable, due to habitat loss and trapping, combined with expected further loss of nest-sites. Global population estimated at fewer than 7000 individuals: 3200–5000 on Sumba, 500 on Komodo (despite estimated decline of 60% between 2000 and 2005), 200–300 on Timor Leste, 200–300 on Sulawesi, 20–50 on West Timor, 40–70 on Flores, 50–100 on Sumbawa, 100 on Rinca and 700 other birds in total BirdLife International (2015). The huge decline almost entirely attributable to the caged bird trade, but now exacerbated by large-scale logging and habitat destruction. Illegal trapping continues in many areas including Rawa Aopa Watumohai National Park, Buton and Kadatua Islands. It was previously considered Endangered, but its rapid ongoing population decline, caused by unsustainable trapping for the cagebird trade, led to uplisting to Critically Endangered in 2000. Significant increase recorded however in Sumba in 2002, attributable to trade ten years before. Each subspecies should now be managed as a separate unit of conservation concern. Law enforcement in the caged bird trade must be improved.

Diet: Mainly seeds, buds, fruits, nuts, and herbaceous plants.

It tends to roost communally and to feed in groups.

Breeding: The nominate species is a white cockatoo with long, forward-curving yellow crest feathers, yellow ear-coverts, and yellow under-surfaces of wings and tail. The bill is black and the feet are gray. The iris is dark brown in male and red-brown in female. The bare periophthalmic skin is pale blue. Immatures are similar to adults, but iris is pale gray.

Races are separated on location, size, intensity of yellow on ear-coverts, and crest color.

Cockatoos are monogamous. Breeding occurs in September and October with nests being built in tree-hollows. One to three eggs are laid with the incubation period lasting 27 days and performed by both parents. Chick has sparse yellow down when born. Nestlings remain in the nest for about 10 weeks and are fed by both adults.

Cool Facts: Cockatoos raise their crests when alarmed. This crest and flash of color acts much as the Native American's war bonnets, hopefully scaring off enemies. They may also extend their wings and flap them wildly and letting out ear-piercing shrieks to frighten off enemies. Cockatoos are the loudest of the parrot family. When content, they

run their tongues across their ridged inner beaks creating a slurping-like sound. Their throat feather will also cover the majority of their lower beak. Cockatoos are particularly gregarious, traveling in small flocks. They generally mate for life, living sixty to eighty years.

They are very intelligent birds and are noted for their problem solving abilities. They love to play and chew on things. Cockatoos aren't great talkers among the parrot family. Their vocabularies tend to be between ten to twenty human words or phrases and as with all parrots, the words are usually backed by associations. While the illegal pet trade has harmed the wild population by poaching, captive breeding has made the Lesser Citron Cockatoo is favorite among bird breeders. Many countries (including the UK) require papers to authenticate that the bird was captively bred. While difficult to find, the Lesser Citron is an excellent companion bird for those who have the time to invest in a very social and needy pet.

This SBRM Cockatoo was inspired by Elsa, Ken Gilliland's (Songbird ReMix Creator) Lesser Citron Cockatoo. Visit [Elsa's Cockatoo Corner](#)

The commonest call is a harsh grating note on an even pitch or slightly modulated, "grrreh". When perched, vocabulary more diverse, with most notes having similar tonal quality to flight call, combined with nasal squeals and squawks.

Traditionally, four subspecies have been recognized, but there is going consensus that there are actually seven subspecies.

Subspecies and distribution:

- *C. s. abbotti*. First reported by Abbott. Abbott's lesser sulphur-crested cockatoo is endemic to the Masalembu Islands
- *C. s. citrinocristata*. First reported by unknown. The Lesser Citron-crested cockatoo is endemic to Sumba. It has a more orangish tint the crest and ear patch.
- *C. s. parvula*. First reported by unknown. Timor sulphur-crested cockatoo is endemic to Sumbawa, Komodo, Flores, Timor, and various other islands in the Lesser Sundas
- *C. s. sulphurea*. First reported by unknown. The nominate subspecies is endemic to Sulawesi and nearby smaller islands
- *C. s. djampeana*. First reported by unknown. This subspecies is endemic to Tanah Jampea.
- *C. s. occidentalis*. First reported by unknown. This subspecies is endemic to the Lesser Sundas from Lombok to Alor (thereby restricting *C. p. parvula* to Timor)
- *C. s. paulandrewi*. First reported by unknown. This subspecies is endemic to the Tukangbesi Islands

Common Name: California Quail
Scientific Name: *Callipepla californica*

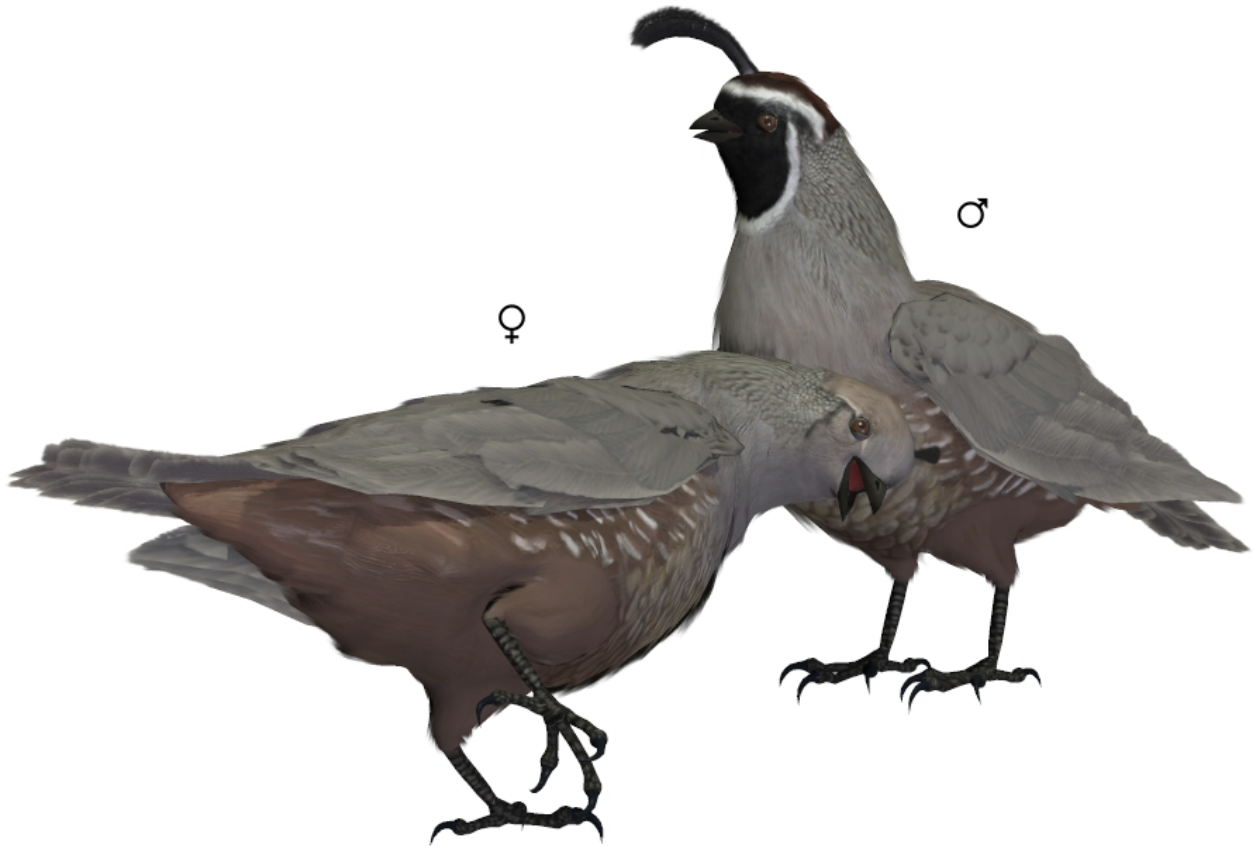
Size: 9.4 -10.6 inches (24-27 cm)

Habitat: North America; The California Quail are primarily found in California though they can be found in southern Oregon and east into Nevada. They also have been imported as a game bird in the Hawaiian Islands Grasslands, foothills, woodlands, canyons and at the edge of deserts.

It likes areas with lots of brush and in particular, *Atriplex lentiformis brewerii* also known as “Quail bush”.

Status: Least Concern. **Global Population:** 990,000 mature individuals. Quail are not endangered in their range although continual development fragmenting their nesting and foraging areas is causing population declines. In the wild, they can live about 7 years, although they face many natural and man-made threats.

Diet: Seed, berries, rose hips and some insects



Breeding: Sexes dichromatic and slightly dimorphic. Females are slightly smaller than males. The breeding male has boldly patterned black-and-white face with

buffy-yellow forehead, brown patch on rear crown and nape, and set of 6 forward-facing, comma-shaped black plumes (topknot) arising from center of crown; remaining upper parts brownish gray with black-and-white vermiculations on neck, breast gray, sides and flanks streaked with white, and remaining underparts buffy with black "scaling," and chestnut patch at center of belly. The adult female is similar but duller and browner, with head entirely brownish gray and belly without chestnut patch. Immatures distinguished from adults of their sex by presence of retained Juvenile primary coverts and outermost 2 primaries (P9, P10; see Appearance, below). Juveniles similar to adult female, but topknot shorter and browner.

Males compete for a mate and will mate with only one female. The female usually has only one brood a year. Females usually lay between 12-16 brown/cream speckled eggs. Their nest is usually a shallow bowl or hollow in the ground lined with grasses. Incubation takes about three weeks. Both parents will care for the chicks, taking turns standing guard. The chicks leave the nest shortly after birth. They make their first attempts at flight when they are about 10 days old. They will stay on the ground for about a month and then will roost in trees with the rest of the flock.

Cool Facts: The California quail lives in coveys of 10 to 200 birds in the winter. They will stay in these flocks until they pair off during mating season. Male California quails will perch on a tree or post and call out to claim their territory and will also stand guard watching vigilantly for predators. The scientific name *Callipepla californica* is thought to be derived from Greek *Kallos* "a beauty" + *peplos* "a robe", and of course *californica* refers to the primary range.

The California Quail is the state bird of California.

- *C. c. californica*. First reported by Shaw in 1798. The nominate race is a resident from southern Oregon, except in the coastal areas, southward across the Modoc Plateau and Siskiyou Mountains and continuing south through California-east of the coastal fog belt, west of the Sierra Nevada Mountains, and generally west of the deserts-to northwestern Baja California. It is also found on Islas Los Coronados. It has been introduced widely to north and east of this range and to other parts of the world. Its dorsum is grayish brown with the breast of the male being medium gray. The belly patch is a deep chestnut and fairly extensive. The width of streaks on flanks and under tail coverts are moderate. The "scaling" on the breast is narrower against a brownish background. The buff patch in center of vent is fairly extensive and the inner webs of the secondaries are buff. It is of moderate size for the species.
- *C. c. brunnescens*. First reported by Ridgway in 1884. A resident along humid coastal areas (generally to inland limit of summer fog) from southwestern-most Oregon south to the Santa Cruz region in central coastal California. It has been introduced to Vancouver Island and the nearby

mainland of British Columbia, and even to New Zealand. It is similar to the nominate race, but the dorsum is darker and browner (olive brown to brown) and the breast of male is a darker gray.

- *C. c. canfieldae*. First reported by van Rossem in 1939. It is a resident in Owens Valley of east-central California. It is like the nominate race, but the male is paler and more grayish dorsally and with a paler and more restricted (at times obsolete) chestnut belly patch.
- *C. c. catalinensis*. First reported by Grinnell in 1906. It is a resident on Santa Catalina Island, off Southern California, where perhaps it was introduced 12,000 years ago. It is like the nominate race, but the dorsum less brown, the belly patch browner and more extensive, streaks on flanks and under tail coverts broader; the "scales" of lower breast are broader with background more ochraceous. It averages larger for the races, with the toes and tarsi stouter, the bill heavier, and the rectrices longer and broader.
- *C. c. achrustera*. First reported by Peters in 1923. It is a resident on the Baja California peninsula from the Vizcaíno Desert south to the Cape. It is similar to the nominate, but the dorsum grayer and paler, the breast is paler, the buff patch on the vent is quite small or even absent. The chestnut belly patch smaller or absent, the flanks are paler and surrounded by white streaks, and the inner webs of the secondaries are whitish.

Common Name: Rock Pigeon
Scientific Name: *Columba livia*

Size: 11.8-13.8 inches (30-35 cm)

Habitat: Worldwide; The Rock Pigeon has a restricted natural resident range in western and southern Europe, North Africa and into southwest Asia and throughout the Americas. Its habitat is natural cliffs, usually on coasts. In its domesticated form, the feral pigeon has been widely introduced elsewhere and is



common, especially in cities, over much of the world. In Britain, Ireland, and much of its former range, the Rock Pigeon probably only occurs pure in the most remote areas. A rock pigeon's life span is anywhere from 3-5 years in the wild to 15 years in captivity, though longer-lived specimens have been reported.

Wild pigeons roost and nest in crevices, caves in rocky seaside cliffs or interior uplands, especially near open scrub vegetation or human agriculture. In the Algerian Sahara, they can be found at sites where rocks, some vegetation and a source of water occur together while in Tunisia, they actually can inhabit deep wells. In Israel, they are found on steep rocky slopes and in canyons. Pigeons tend to avoid areas of tall and dense vegetation.

The North American feral pigeons are also found in such habitats, but most are well-adapted to human cohabitation, using farm buildings and small-town architecture to the centers of high-density cities, where skyscrapers are cliff-substitutes. The species has been increasingly using highway infrastructures (e.g., overpasses, bridges), facilitating its spread to more remote areas, given adequate food sources.

Status: Least concern. **Global Population:** 260,000,000 mature individuals with a declining population. The European population was estimated at 22,100,000-45,200,000 mature individuals in 2015. The greatest threat to the wild species is that natural populations are interbreeding with feral pigeons in many areas and pure populations are already confined to the remoter cliffs and islands (e.g. off northern and western Scotland, but even here domestic pigeons often join the flocks). The same fate is likely to befall all populations in areas with human habitation of any extent in the vicinity. Studies in Israel have revealed that populations are much smaller nowadays than in historical times.

Breeding population numbers in North America ignored by formal censuses until 1966. Breeding Bird Survey data for 1966 through 2011 show a statistically significant survey-wide annual -0.3% decline.

Diet: Seeds and man-made food products.

Breeding: It is a medium-sized pigeon with males measuring 30–36 cm and females, slightly smaller, at 29–35 cm. The tail with blue-black with a subterminal band. The outer rectrix are white on proximal 2/3 of the outer vane. The rump is gray or white. The wings have usually two dark bars on greater coverts and inner secondaries. The under wing mostly white. Its basic color is bluish gray in most birds, being darkest on the head and rump and palest on the wing-coverts. The color can be bluish black in some, rusty red in a few, and a fraction are mostly white or speckled. Many have albinotic feathers almost anywhere. The neck and upper breast are suffused with purple and green iridescence, with each feather bifurcated. The iris can vary from golden orange to orange to red-orange. The orbital skin is blue-gray. The bill is black with a white cere white. The legs can be red to purplish red. Females are slightly duller gray with less neck iridescence. Juveniles are duller still, with dull eyes and feet. There is some iridescence on each side of the neck in male but not female.

In the wild, the nest is usually on a ledge in a cave; it is a slight structure of grass, heather, or seaweed. Like most pigeons it lays two white eggs. The eggs are incubated by both parents for about 18 days. The nestling has pale yellow down and a flesh coloured bill with a dark band. It is tended and fed on "milk" like other doves. The fledging period is 30 days.

Cool Facts: Rock Doves come in five basic variations; Natural, Checkered, Brown, Dark and Pied. Many domestic birds have escaped or been released over the years, and have given rise to the feral pigeon. These show a variety of plumages, although some look very like the pure Rock Pigeons. The scarcity of the pure wild species is due to interbreeding with feral birds.

The pigeon was introduced to North America in 1604 by explorers and settlers.

Pigeons are one of the few birds that can swallow water without having to lift its head back, allowing the bird to drink much more water.

There are nine subspecies, based on plumage color and body size. The saturation of gray varies with wear, fresher birds being paler. Feral birds everywhere are polymorphic in color, via artificial selection within domesticated ancestors, but this and clinal size variation is nowhere recognized subspecifically. Proposed races *atlantis*, *canariensis* and *nigricans* appear to refer to feral populations.

- *C. l. livia*. First reported by Gmelin in 1789. The nominate race is found in the British Isles, western Mediterranean and northern Africa eastward to the southern Urals, western Kazakhstan, northern Caucasus and Iraq.
- *C. l. atlantis*. It is found on the Madeira, Azores and Cape Verde Islands.
- *C. l. canariensis*. It is found on the Canary Islands and islands off Morocco.
- *C. l. gymnocycla*. First reported by Gray in 1856. It is a resident in western Africa from Mauritania and Senegal east to southern Mali and Nigeria. It is similar to the nominate, but darker (slate-gray rather than ash-gray). Also, it has an extensive red orbital skin and a white patch on back, but some birds are paler, with gray orbital skin.
- *C. l. targia*. First reported by Geyr von Schewppenburg in 1916. A resident in the highlands of the central Sahara from Hoggar Mountains of northern Mali and southern Algeria east to western Sudan. It is similar to the nominate, but smaller and the ventrum is the same shade as the dorsum and the rump is gray (not whitish).
- *C. l. dakhlae*. First reported by Meinertzhagen in 1928. A resident at oases in west-central Egypt (Dakhla Oasis in the Libyan Desert). It is similar to the nominate race, but considerably paler (it's the palest subspecies), with its mantle almost whitish and the rump pure white.
- *C. l. schimperi*. First reported by Bonparte in 1854. It is found in the Nile Valley of Egypt and Sudan (south to Khartoum) east to the Red Sea (to

Eritrea) It is similar to the nominate, but much paler and the rump is pale gray and does contrast with the mantle. Its body size is small as well.

- *C. l. palaestinae*. First reported by Zeditz in 1912. A resident on the Sinai and Arabian peninsulas, north to Israel and Jordan. It is similar to Race *schimperi*, but the rump is whitish-gray and the body size is moderate, nearer to that of the nominate. Also, it is overall darker than Race *schimperi*.
- *C. l. gaddi*. First reported by Zarudnyi and Loudon in 1906. It is a resident in southwestern Asia from Azerbaijan and western Iran east to southern Uzbekistan, western Turkmenistan, and northern Afghanistan. It is similar to Race *schimperi*, but darker overall and the body size is much larger. Also, it is similar to Race *palaestinae* but larger with a paler back.
- *C. l. neglecta*. First reported by Hume in 1873. A resident in the highlands from eastern Kazakhstan, eastern Uzbekistan, and eastern Turkmenistan east across Pakistan and northern India to southwest Tibet. It is like Race *gaddi*, but distinctly darker with a slate-gray rump.
- *C. l. intermedia*. First reported by Strickland in 1844. It is a resident across India and on Sri Lanka. It is like the nominate, but its dorsum is dark gray and its rump is dark blue-gray.
- *C. l. nigricans*. First reported by Strickland in 1844. It is a resident across Mongolia and northern China (Shanxi, Jilin and Gansu).

Common Name: Common Raven
Scientific Name: *Corvus corax*

Size: 22-27 inches (56-69 cm)

Habitat: North America and Eurasia, southward into Central America and northern Africa.

Status: Least Concern. **Global Population:** 137,000,000 mature individuals with an increasing population trend. The Common Raven had nearly disappeared from the northeastern United States in the early part of the 20th century. Its numbers in that area increased markedly in the last half of the century, and it is reoccupying much of its former range. Because of small population sizes in much of the East, it is listed as endangered or threatened in a number of states. Populations have been increasing all across the range, especially in the West where it has taken advantage of human-modified habitats.

Diet: Omnivorous; meat, eggs, insects, grain, fruit, garbage and carrion.



Actively scans for carrion, investigates locations of gunshots, wolf howls, and calling conspecifics. It watches foraging birds and mammals for cues. It actively hunts from perch, in flight and on foot. Where large animal carcasses are a primary food, and when carcasses are especially widely dispersed and ephemeral, naive ravens follow their roost mates to newly discovered food bonanzas.

Breeding: The nominate race is black, with greenish gloss on head and tail, primaries and under-parts, more bluish-purple gloss on upper-parts and rest of wing.

The raven often uses sheep wool to line its nest. When the female leaves the nest for a while she may cover the eggs with the wool. The nest is usually placed on a cliff or in tree, but has also been found in man-made structures such as telephone poles and abandoned cars.

Cool Facts: The largest of the songbirds, the raven is one of the most widespread species in the world. The raven is perhaps the smartest of all birds. It has been documented that Ravens carry “favorite” sticks with them that they use as tools to spear grubs. They are known to drop hard-to-crack nuts into crosswalks, let the cars run them over and then wait for a red light to collect their meal.

Breeding pairs will hold territories and try to exclude all other ravens throughout the year. Intruders who discover food within another bird's territory may call to other ravens to swamp the territory's defenses to steal the food.

Continued urban development has helped the raven populations to increase causing significant negative effects on the populations of endangered desert tortoises and Least Terns. Ravens have also been implicated in causing power outages by contaminating insulators on power lines, fouling satellite dishes at the Goldstone Deep Space Site, peeling radar absorbent material off buildings at the China Lake Naval Weapons center, pecking holes in airplane wings and even stealing golf balls.

- *C. c. principalis*. First reported by Ridgway in 1887. It is found in Alaska eastward across ice-free portions of Canada to coasts of Greenland, southward in USA to Pacific coast of Oregon and Washington and, in the east, in Appalachian Mountains southward to northern Georgia. A large race but slightly smaller and with less massive limbs, skull, and bill than *kamtschaticus*. The ravens of the Alaskan tundra approach the *kamtschaticus* size.
- *C. c. sinuatus*. First reported by Wagler in 1829. It is found from the west-central USA to southern Baja, the Revillagigedo Islands and northwestern Nicaragua. It intergrades with *principalis* in central-south British Columbia, Washington, and Oregon. Intermediates are with shorter wing and tail, a slenderer and

shorter bill, smaller feet and skull. The southern-most populations (southern Mexico, Central America) may average larger than northern *sinuatus*.

- *C. c. varius*. It is found in Iceland and Faroe Island.
- *C. c. corax*. First reported by Linnaeus in 1758. The nominate subspecies is found in Europe and the Mediterranean islands to western Asia.
- *C. c. laurencei*. First reported by Hume in 1873. It is found in eastern Greece and Cyprus eastward through Middle East to eastern Kazakhstan, western China (except in the mountain regions) and northwestern India. This race is slightly larger than the nominate, and often has worn, brown plumage on the nape, mantle and throat. It integrates with the nominate in central Europe.
- *C. c. tingitanus*. First reported by Irby in 1874. It is found in the Canary Islands and coastal Morocco to Egypt. It is small, with a very short, stout bill, long wings and a short tail. It has short and less lanceolated throat plumes. The plumage appears glossy and "oily."
- *C. c. tibetanus*. First reported by Hodgson in 1849. It is found in central Asia from Tien Shan and Pamirs southward to Himalayas and the mountains of western. It is very large and highly glossy, with the longest of the throat hackles.
- *C. c. kamtschaticus*. First reported by Dybowski in 1883. It is found in Siberia eastward to Kamchatka, Commander Island and the coastal regions of Sea of Okhotsk, southward to northern Mongolia, northeastern China, Sakhalin, Kurils and northern Japan (Hokkaido).

Common Name: Lesser Goldfinch
Scientific Name: *Spinus psaltria*

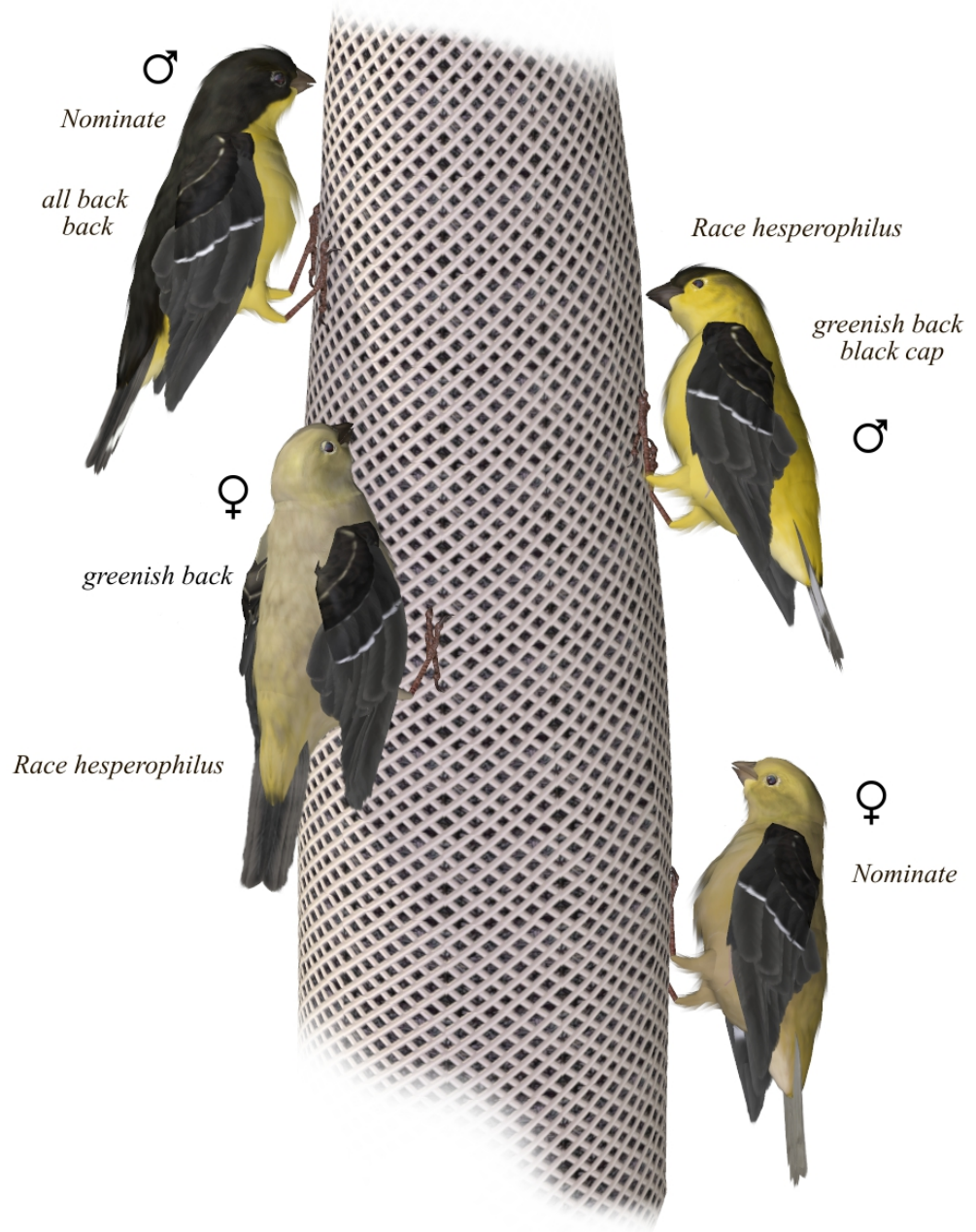
Size: 4 - 4.5 inches (10-11cm)

Habitat: North & South America; Throughout the Western United States Mexico and Western Central America and isolated areas of Northern South America.

It is found in almost any habitat with trees or shrubs with the except for dense forests. Populations in colder areas will migrate.

Status: Least Concern. **Global**

Population: 3,000,000 mature individuals with a increasing population trend. Occurrence of this species in weedy fields and suburban habitats suggests that some types of human modification of habitat have helped Lesser Goldfinch. Clearly, increases in irrigation and planting of introduced trees and shrubs can be credited with the expansion of Lesser Goldfinch populations in California. On the negative side, capture for the cage bird trade may be responsible for decreases in populations in Central America and Venezuela, who found it to be the most



commonly offered bird in the markets and noted significant decreases in sightings in its native areas.

Diet: Seeds (thistle, in particular), flowers, buds, fruits, and infrequently insects such as plant lice.

They usually feed in small flocks moving through a patch of weeds, each bird clinging to and feeding from a different plant. They remove the seed coats with their bills, shaking their heads to loosen husk, and then swallow the seeds. It often perches next to seed heads, bending the stems horizontal and sometimes hanging upside down to reach over to the seeds. It will eat berries such as redberry (*Rhamnus crocea*) or coffeeberry (*Rhamnus californica*) by pecking at fruit on stem and eating small bites of pulp. It will also nibble at leaf margins and eats small new leaves on plants such as the coast lilac (*Ceanothus ramulosus*).

Breeding: Male Lesser Goldfinches in the most eastern part of their range in the United States tend to have black backs and napes. Those found to the westward have green backs and only a black cap. The amount of black varies throughout the range, with many birds having partly-green backs. The amount of black shown by males can vary within a given locality too. South of central Mexico, all of the males are black-backed.

The female on average is smaller than the male. The females upper parts are more or less grayish olive-green; their underparts are yellowish. They have only a narrow strip of white on the wings (with other white markings in some forms) and little or no white on the tail. Juveniles similar to adult females, except are more buffy.

It lays three or four bluish white eggs in a cup nest made of fine plant materials such as lichens, rootlets, and strips of bark, placed in a bush or at low or middle levels in a tree. Nesting occurs during the summer.

Cool Facts: It comes in two forms (Races) in the United States; a dark-backed one in Texas, and a greenish-backed one along the western coast.

- *S. p. psaltria*. First reported by Say in 1823. The nominate race is chiefly a resident from eastern Colorado and western Oklahoma southwards to Guerrero, Oaxaca, and central Veracruz in southern Mexico. The populations in the northern part of this breeding range are partly migratory. The dorsum is variably black to green, the auriculars are black or partly black, the malar is yellow and the ventrum is a medium yellow. Its flanks are unstreaked and the under wing coverts are whitish to yellow-white with the tips of the inner secondaries being white.
- *S. p. hesperophilus*. First reported by Oberholser in 1903. It is largely resident from southwestern Washington east to northeastern Utah and south to Baja California Sur and southern Sonora. Similar to the nominate, but the

dorsum and auriculars are largely green (some are nearly as black as the nominate and ventrum is a somewhat duller yellow. The Rocky Mountains and the Sierra Madre Occidental constitute a region of clinal transition between the two subspecies in the United States, but in general breeding and molt cycles of these subspecies differ markedly.

- *S. p. witt.* First reported by Grant in 1964. This race is a resident on Islas Tres Marias off of Nayarit in western Mexico. It is similar to the nominate race, but the black on head extends ventrally to include the malar and the tips of inner secondaries are a pale yellow. It also averages smaller overall.
- *S. p. jouyi.* First reported by Ridgway in 1898. It is a resident on the Yucatan Peninsula and on Isla Mujeres, Mexico. It is like the nominate race, but the ventrum is a brighter yellow and it averages smaller.
- *S. p. columbianus.* First reported by Lafresnaye in 1843). It is a resident from the Isthmus of Tehuantepec in southern Mexico south through Central America to northern Venezuela, western Colombia, western Ecuador, and northwestern Peru. It is also similar to the nominate, but its ventrum is a brighter yellow, the flanks are streaked black, the under wing coverts are partly black, and inner webs of the outer rectrices have little or no white on them.

Common Name: Anna's Hummingbird
Scientific Name: *Calypte anna*

Size: 4 inches (10 cm)

Habitat: North America; West coast from Canada to Mexico, but primarily California. They live in chaparral near open woodland, and urban and suburban areas.

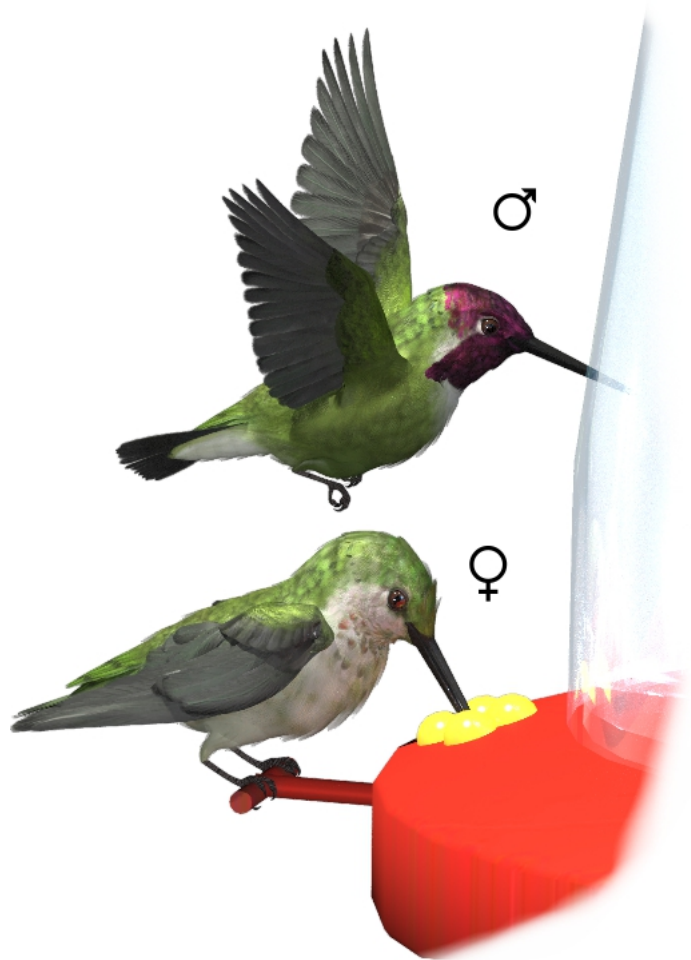
Status: Least Concern. **Global Population:** 1,500,000 mature individuals with an increasing population trend. It has expanded its range dramatically since the mid-1930s. It once nested only on the Pacific slope of northern Baja California and California north to the San Francisco Bay area, but now breeds north to Vancouver Island, British Columbia, eastward through southern Arizona, and it has an increasing presence in West Texas. This species' effective use of widely cultivated urban and suburban exotic plants and hummingbird feeders has contributed to its increased numbers and expanded range. In many localities Anna's is present throughout the year, although it is rarely known if nesting birds are resident or if they are replaced by individuals from another region.

Diet: Pollen and small insects.

At times, hummingbirds will fly-catch by diving into clouds of gnats.

Breeding: It is a medium sized, stocky hummingbird that is an iridescent bronzy-green dorsally and grayish below with straight bill of medium length and fairly broad tail.

Adult males (and some young males) have both a rose to magenta gorget (with elongated feathers projecting to the sides) and crown which is unlike any other



North American hummingbird. They have dark sepia tails. Adult females may have some rose feathers in the center of their gorget, but only very rarely have any magenta feathers on the crown. Juveniles may have some gorget color, and lack rufous in tail (the central rectrices are green, outer ones blackish subterminally with whitish tips as in adult females).

Male Anna's Hummingbirds attract attention through their elaborate dive displays, in which they ascend about 35 meters and then plummet toward their target; a female Anna's Hummingbird or other bird. Males sing more conspicuously than any other North American hummingbird, and their songs are learned and complex, unusual in nonpasserine birds.

Female Anna's Hummingbirds are less conspicuous than males and sometimes defend feeding territories, but usually away from those of males. They associate with males only long enough to copulate

Females construct tiny nests out of leafy material, feathers and are bound together with spider webs. The nests are placed on crotches of branches. Once the nest is completed, the female begins courtship with a male. Unlike most hummingbirds, the Anna's sings during courtship. After courtship, the male leaves and the female incubates two eggs. She cares for the hatchlings by herself. Young hummingbirds are born naked and blind and fledge after about three weeks.

Cool Facts: The Anna's Hummingbird was named after the 19th century Italian duchess Anna De Belle Massena. Naturalist, Rene Primevere Lesson, discovered the first specimen and named it after his patron's name. It is also the largest of the hummingbirds of North America.

The Anna's hummingbird is the only hummingbird that stays put. Though some winter in Mexico and some travel as far as Canada, most Anna's Hummingbirds stay year round in California.

Mishaps can occur trying to get lunch... bees and wasps may become impaled on the bill, causing the bird to starve to death. The male Anna's hummingbird is extremely territorial.

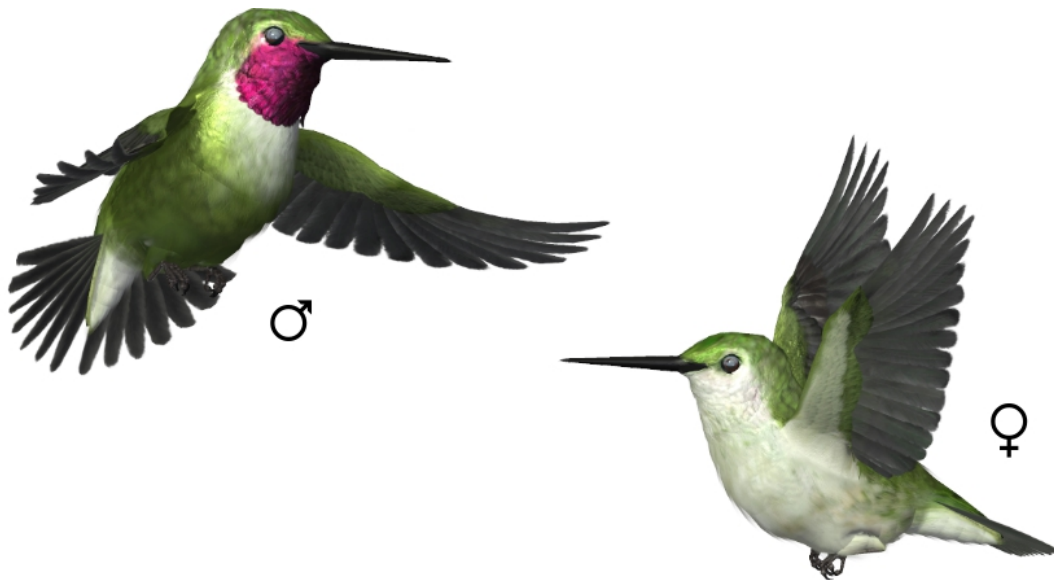
Common Name: Ruby-throated Hummingbird
Scientific Name: *Archilochus colubris*

Size: 3-3.75 inches (7.5-9 cm)

Habitat: North America; Eastern United States to Central America. Migration follows favorite pollen and insect sources.

It is found in mixed woodlands and eastern deciduous forests. It can also be found in woodland clearings and at forest edges, gardens, and orchards. In the southeastern United States, it nests regularly in pine and mixed-pine forests, as well as deciduous forests. In Fundy National Park, New Brunswick, Canada, it is common in mature sugar maple, yellow birch, and red spruce forests, as well as forest edges and old fields. In western Canada, it is associated with boreal forest and aspen stands. In Louisiana, it often nests in mature black tupelo, black gum and bald cypress.

Status: Least Concern. **Global Population:** 34,000,000 mature individuals. Populations are stable, however loss of key plant species could put this bird at risk.



Diet: Floral nectar and small insects; also tree sap when nectar is scarce or unavailable. It also eats small insects.

At times hummingbirds will fly-catch by diving into clouds of gnats.

Breeding: A small hummingbird that is metallic green dorsally. The male gorget covers entire throat and is typically brilliant metallic red. Males show a blackish mask between the gorget and crown. Lower underparts are whitish with extensive green and gray mottling to sides. Wings and tail are blackish. The

females throat is dull grayish white (although some 5-yr-old and 6-yr-old females can develop up to 5–6 red feathers in center of throat). The black mask between the gorget and crown is dark grayish in females. The female tail shows the 3 outer rectrices on each side broadly tipped with white; this does not occur in males.

Ruby-throat's nesting is determined by the location of its key feeding plants. Females construct the tiny nest out of leafy material and are bound together with spider webs and tent caterpillar nests. They sometimes decorate their nests with lichens. The nests are placed on downward sloping limbs that are protected by other branches. Once the nest is completed, the female begins courtship with a male. After courtship, the male leaves and the female incubates two eggs. She cares for the hatchlings by herself. Young hummingbirds are born naked and blind and fledge after about three weeks.

Cool Facts: The Ruby-throated Hummingbird, the only breeding hummingbird species in eastern North America, is a familiar summer inhabitant of woodlands, parks, and gardens from central Canada to the Gulf Coast that occupies the largest breeding range of any North American hummingbird.

Ruby-throated Hummingbirds have one of the longest migration paths of any hummingbird. Wintering in Central America and migrating through Mexico and Texas in the Eastern US coast. It is believed that some Ruby-throated Hummingbirds do make the 500-mile shortcut across the Gulf of Mexico. During the spring migration, males travel ahead of females to set up forging territories. Males are very territorial.

The northern migration of this hummingbird appears to be linked to the flowering of various plants in the spring. The red buckeye (*Aesculus pavia*), the Canadian columbine (*Aquilegia canadensis*) and the Clove currant (*Ribes odoratum*) are among its favorites. It is believed that up to 19 species of plant have evolved specifically to partner with the Ruby-throated Hummingbird, influenced by its pollination.

The Ruby-throated Hummingbird beats its wings 53 times a second and due to its extremely short legs it can't walk or hop. It will shuffle along a perch. Nonetheless, it can scratch its head and neck by raising its foot up and over its wing. It also doesn't care about the traditional red feeder and dyed-sugar water. Instead, it prefers specific feeder locations.

In flight, wings emit humming sound, higher and more variably pitched in male.

Special Thanks to...

Barboo and Prodos... *without you two, and your Kookaburra request, the Songbird ReMix series would have been retired... instead it was been given new life and continues to this day.*

...my beta teams

2006 Original release: Jan and Sandra

2010 re-release: FlintHawk, Kat, Linda, Jan, and Sandra

2021 re-release: Alisa, FlintHawk and Tparo

Species Accuracy and Reference Materials

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.

The author-artist 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. Photographic references from photographs from various Internet searches and several field guides were used.

Field Guide Sources:

"The Sibley Guide to Birds" by David Allen Sibley.

Wikipedia (<http://wikipedia.com>)

Birds of the World (<https://birdsoftheworld.org/bow/home>)

BirdGuides.com (<http://www.birdguides.com>)

BirdLife International (<http://www.birdlife.org>)

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