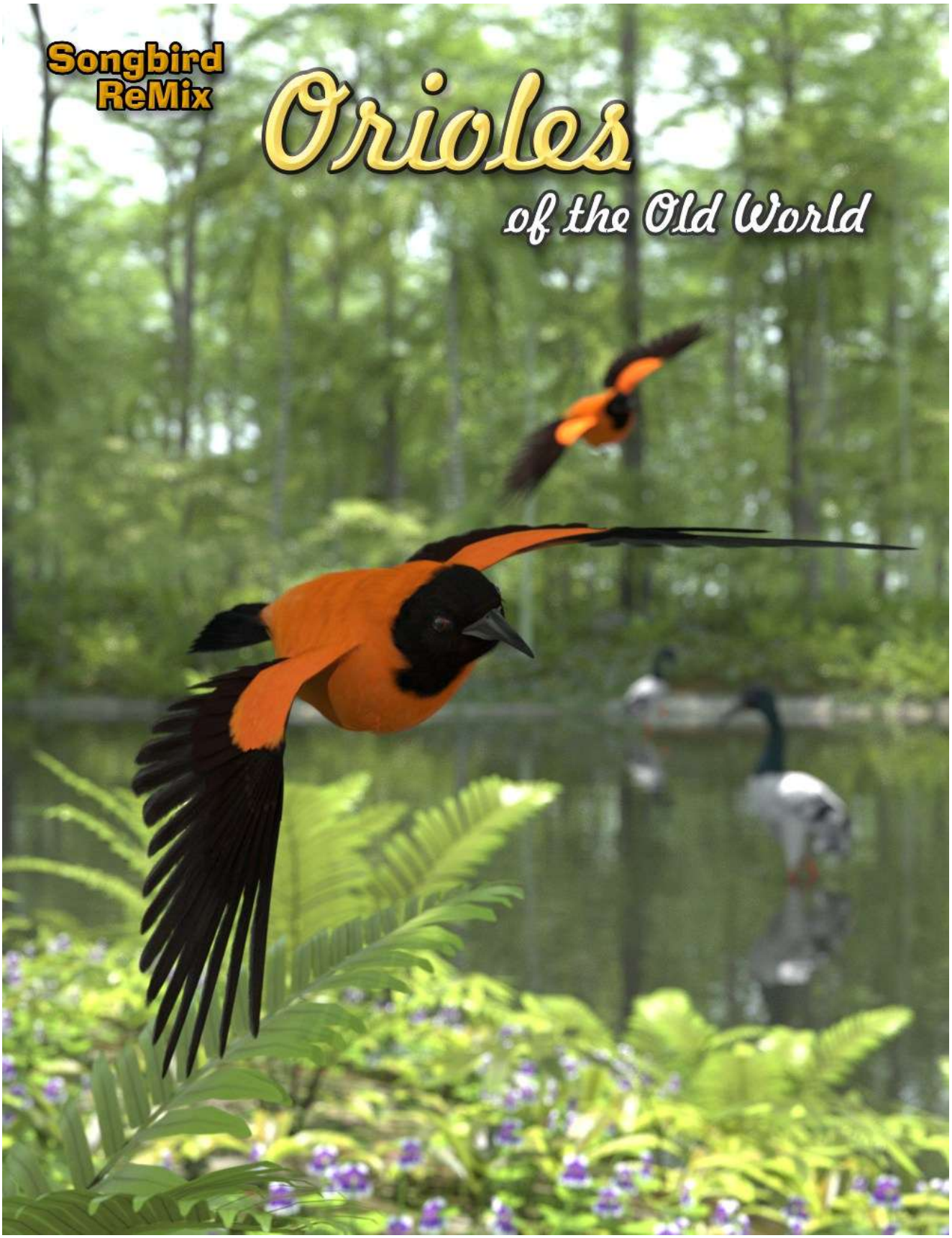


Avian Models for 3D Applications

Characters and Procedural Maps by Ken Gilliland

Songbird ReMix

Orioles of the Old World

Manual

Field Guide

Songbird ReMix

Orioles of the Old World

Introduction

The family *Oriolidae* comprises the Piopios, Figbirds, Pitohuis and the “Old World” Orioles. This family is not closely related to the “New World” Orioles, despite their similar size, diet, behavior and contrasting plumage patterns. The similarities between “Old World” and “New World” Orioles are an example of convergent evolution. Old World Orioles are found across Europe, Africa, Asia, and Australia.

The set of “Old World” Orioles has a mix of commonly found and unique-looking orioles. It has well-known orioles such as the Eurasian Golden Oriole, and rarities like the critically endangered Isabela Oriole, which is endemic to Luzon in the Philippines. It also has unique birds such as the Hooded Pitohui of New Guinea. It is one of the only poisonous birds in the world. Its skin and feathers contain homobatrachotoxin, which is 250 times more toxic than strychnine.

There are two versions of this set for native support in Poser and DAZ Studio. Materials have been tuned to support Iray, 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):
  - **Perching Birds (Order Passeriformes)**
    - **Vireos. Whipbirds & their Allies**
- **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 and Poses

Type Folder	For what species?
Perching Birds (Order Passeriformes) **Vireos. Whipbirds & their Allies**	Hooded Pitohui Green Oriole Dark-throated Oriole White-lored Oriole Isabela Oriole Philippine Oriole African Golden Oriole Eurasian Golden Oriole Black-naped Oriole Green-headed Oriole African Black-headed Oriole Silver Oriole Black Oriole Maroon Oriole

Other Orioles in Songbird ReMix Format:

Here are the "Old World" Orioles which are available in other Songbird ReMix sets (non-included in this set):

- Olive-backed Oriole (found in Songbird ReMix Australia v2)

Here are the "New World" Orioles which are available in other Songbird ReMix sets (non-included in this set):

- Baltimore Oriole (found in Songbird ReMix Cool & Unusual Birds v1)
- Hooded Oriole (found in Songbird ReMix Cool & Unusual Birds v2)
- Orange Oriole (found in Songbird ReMix Yucatan)
- 14 Other Orioles (found in Songbird ReMix Orioles of the New World)

Songbird ReMix

Orioles of the Old World

Hooded Pitohui
Green Oriole
Dark-throated Oriole
White-lored Oriole
Isabela Oriole
Philippine Oriole
African Golden Oriole
Eurasian Golden Oriole
Black-naped Oriole
Green-headed Oriole
African Black-headed Oriole
Silver Oriole
Black Oriole
Maroon Oriole

Common Name: Hooded Pitohui
Scientific Name: *Pitohui dichrous*

Size: 8.7–9.1 inches (22–23 cm)

Habitat: Asia; endemic to the islands of New Guinea. It is found widely across the main island, and also on the nearby island of Yapen.

It inhabits rainforest, forest edge habitats and secondary growth, and sometimes mangrove forests. It is most commonly found in hills and low mountains, between 350–1,700 m (1,150–5,580 ft), but is found locally down to sea-level and up to 2,000 m (6,600 ft).

Status: Least Concern. **Global Population:** Unknown number of mature individuals with a decreasing population. In one study of the effects of small subsistence gardens, populations of hooded pitohui were lower in disturbed agricultural habitat in the lowlands, compared to undisturbed forest, but actually increased in disturbed habitat higher in the mountains.

Diet: Omnivorous; dominated by fruit, particularly figs, grass seeds, some insects and other invertebrates, and possibly small vertebrates. Among the invertebrates found in their diet are beetles, spiders, earwigs, bugs (Hemiptera, including the families Membracidae and Lygaeidae), flies, caterpillars and ants.

They feed at all levels of the forest, from the forest floor to the canopy, and are reported to do so in small groups, presumably of related birds. They regularly joins mixed-species foraging flocks, and on Yapen and between 1,100–1,300 m (3,600–4,300 ft) above sea-level, they will often act as flock leaders. This leadership role, and indeed their participation in mixed flocks, is not true across all of their range.

Breeding: Sexes are alike. The adult has a black upper-wing, head, chin, throat and upper breast and a black tail. The rest of the plumage is a reddish brown. The bill and legs are black, and the irises are either reddish brown, dark brown or black. Juvenile birds look like adults, except that the rectrices of the tail and remiges of the wing are tinged with brown.

Nests with eggs have been found from October through to February. The nest that has been described was 2 m (7 ft) off the ground. The nest is a cup of vine tendrils, lined with finer vines and suspended on thin branches. The clutch is one to two eggs. The incubation period is not known, but the species is thought to be a cooperative breeder, as more than two birds in a group have been observed defending the nest from intruders and feeding the young. Young birds, which are covered in white down as nestlings before developing their adult plumage, have been observed being fed acorn-shaped red berries and insects. Young birds will make a threat display when approached in the nest, rising up and erecting their head feathers. As chicks develop directly into adult plumage, it has been suggested that this display may be signalling its identity as a toxic species, even though young birds have not developed toxicity at that age.

Cool Facts: In 1990, scientists preparing the skins of the Hooded Pitohui for museum collections experienced numbness and burning when handling them. It was reported in 1992 that this species and some other pitohuis contained a neurotoxin called homobatrachotoxin, a derivative of batrachotoxin, in their tissues. This led to them being more broadly known outside New Guinea, considered by some to be the first documented poisonous birds, other than some reports of coturnism caused by consuming quail (although toxicity in quails is unusual), and the first bird discovered with toxins in the skin. The same toxin had previously been found only in Central and South American poison dart frogs from the genera *Dendrobates*, *Oophaga* and *Phyllobates* (family *Dendrobatidae*). The batrachotoxin family of compounds are among the most toxic compounds by weight in nature, being 250 times more toxic than strychnine. Later research found that the hooded pitohui had other batrachotoxins in its skin, including batrachotoxinin-A cis-crotonate, batrachotoxinin-A and batrachotoxinin-A 3′-hydroxypentanoate.

Poisonous pitohuis, including the hooded pitohui, are not thought to create the toxic compound themselves but instead sequester them from their diet. The presence of the toxins in the internal organs as well as the skins and feathers rule out the possibility that the toxins are applied topically from an unknown source by the birds.

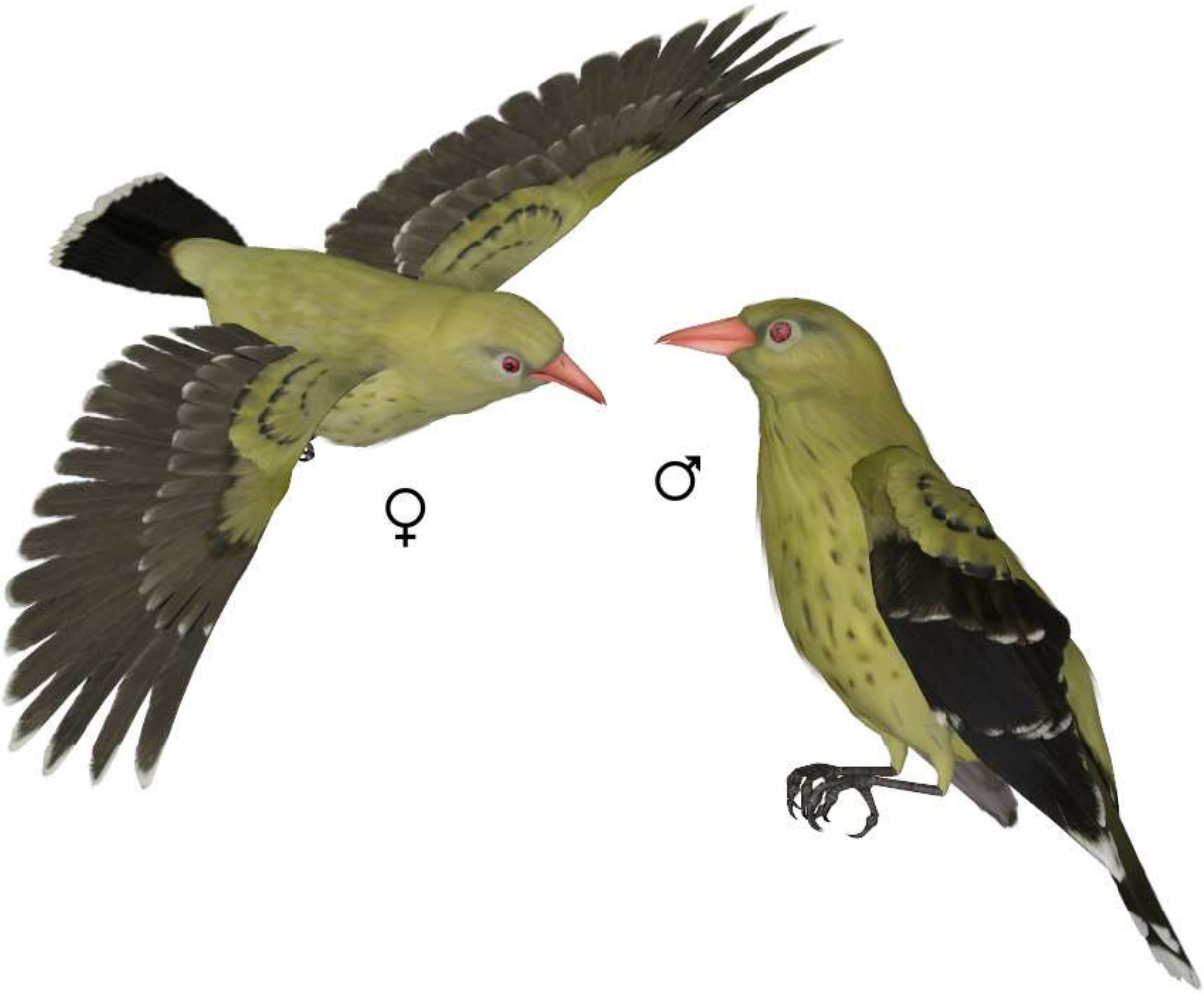
One possible source has been identified in the forests of New Guinea: beetles of the genus *Choresine* (family *Melyridae*), which contain the toxin and have been found in the stomachs of Hooded Pitohuis.

Common Name: Green Oriole
Scientific Name: *Oriolus flavocinctus*

Size: 9.8-11.6 inches (25–30 cm)

Habitat: Asia and Oceania; it is an inconspicuous inhabitant of lush tropical vegetation throughout Australia and New Guinea.

They are often difficult to locate, as their yellow-green plumage blends with the foliage and only their deep bubbling musical calls can be heard. They are nevertheless common in suitable habitat: rainforests, mangroves, thickets along watercourses, swamps, and lush gardens.



Status: Least Concern. **Global Population:** Unknown number of mature individuals with a decreasing population. It is common within its range. It is, to some degree

dependent on large tracts of undisturbed rainforest, and apparently cannot survive in small and isolated rainforest remnants.

Diet: Omnivorous; chiefly fruits, also some seeds, nectar, insects and rarely, the nestlings of small birds. Berries and fruits include especially figs, but also paw-paws, alien mulberries and Japanese peppers, among others. Insects recorded in diet are ants and lepidopteran caterpillars.

Green orioles forage slowly and methodically through the middle and upper strata of dense forests, taking fruit in the main. Typically, it is found alone or in pairs, they sometimes form small flocks in the nonbreeding season.

Breeding: Sexes are alike, but the female is duller and usually more streaked. The male of the nominate race is yellowish-olive above, with light dusky streaking on the crown, and heavier streaking on the mantle. Its lores are dark. The upper-wing is dark, the wing-coverts edged and broadly tipped creamy white to -yellow (appearing as wing bars on folded wing), the secondaries and the greater coverts are edged greenish-olive. The tail is a blackish-brown, the feathers are tipped creamy white to yellow, the pale tips are larger on the inner webs. The chin is olive, mottled dark, the throat and the chest are olive with dark streaks, becoming lighter and yellower and variably streaked on the lower breast and belly. The under-tail-coverts are pale yellow with grayish-olive feather centers (appearing variably mottled). The iris is red to bright orange and the bill is orange or red. Its legs are gray. The immature has a narrow yellow supercilium, is more heavily streaked on the crown, nape and back, the back is a duller green, the under-parts are yellower and it has heavier black streaks from the chin to the upper belly. Also, the yellow tail tips are smaller and the eye is a gray-brown with a blackish bill.

Breeding takes place during the wet season (October to March). A neat, deep cup is constructed from strips of bark and vines, lined with rootlets, and slung between leafy branches, usually 5–15 m up. They typically lay two eggs.

Cool Facts: Alternate names for the green oriole include the Australian yellow oriole, yellow oriole and yellow-bellied oriole. Six subspecies are recognized:

- *O. f. migrator.* First reported by Hartert in 1904. It is found in eastern Lesser Sundas. This race resembles race *tiwi*, but with smaller yellow tail tips.
- *O. f. muelleri.* First reported by Bonaparte in 1850. It was originally described as a separate species and is found in south-central New Guinea. Thijs race is poorly known. It is smaller than the nominate race, with edgings and tips of the wing-coverts that are pure white.
- *O. f. flavocinctus.* First reported by King in 1826. The nominate race is found in northern Australia

- *O. f. tiwi.* First reported by Schodde & Mason in 1999. It is found on Bathurst and Melville Islands (off northern Australia). It is slightly smaller than the nominate race, slightly duller yellowish-olive, including on the belly, with bolder blackish-brown or blackish streaking on the crown and upper-parts. It has slightly bolder blackish-brown streaking on the under-parts.
- *O. f. flavotinctus*. First reported by Schodde & Mason in 1999. It is found on Cape York Peninsula (north-eastern Australia). It is larger than nominate, much brighter yellow, and much less heavily streaked above, with large yellow tail tips.
- *O. f. kingi.* First reported by Mathews in 1912. It is found in north-eastern Queensland (north-eastern Australia). It is large, but paler yellow than race *. flavotinctus* and moderately spotted.

Common Name: Dark-throated Oriole
Scientific Name: *Oriolus xanthonotus*

Size: 6.9-7.5 inches (17.5–19 cm)

Habitat: Asia; found in southeast Asia and the Greater Sundas, from extreme southern Myanmar south through the Thai-Malay Peninsula to Sumatra (including Bangka and Mentawai Islands), Java, and southern and western Borneo.

This is a species principally of lowland forest, occurring in primary and tall secondary evergreen forest, edge and mature second growth, principally below 500 m, but with records extending up to 1,200 m.

Status: Least Concern. **Global Population:** Unknown number of mature individuals with a decreasing population. Undoubtedly declining in response to conversion of forest habitats to plantations, although this species is tolerant of some degradation. The principal threat to this species is the conversion of forest to plantations, particularly oil palm, and the associated timber extraction. Both threats are thought to be causing slow declines (equivalent to 10-20% over three generations), although this species' tolerance of some habitat degradation buffers it from steeper declines.

Diet: Omnivorous; berries, fruits of jambu tree (*Eugenia jambos*) and fig trees. It will also take insects, fly larvae and adult and larval moths and butterflies.

It forages alone or in pairs, from middle story to canopy; sometimes joins mixed-species flocks.

Breeding: It is sexually dimorphic. The male of the nominate subspecies has its head to neck, upper mantle and breast all black. The rest of the mantle to the upper-tail coverts are golden-yellow. The upper-wing is black with the primaries narrowly fringed whitish. The secondaries are indistinctly edged yellowish and the tail is black (all except the central feathers with yellow terminal patch on inner webs). The border of the black chest is tinged yellow on the sides, while the belly is creamy white and heavily streaked black. The under-tail coverts are golden-yellow. Its iris is blood-red; the bill a dull orange, red or red-brown, and the legs a blue-gray. The female has an olive crown, lightly streaked grayish, its mantle yellowish-olive and rump yellower. The upper-tail is olive-green, the upper-wing dark, the primaries edged whitish, the secondaries, tertials and upper-wing coverts a dull olive, fringed brighter olive. It is whitish or creamy below, throat and breast suffused with dark gray, the belly heavily streaked dark brown (almost as heavily as on the male). It is blacker on the flanks, the under-tail coverts are yellow, and the under-tail as with the male.

Nesting recorded in May in extreme southern Thailand (Narathiwat), and in February (Perak) and June (Johor) in Peninsular Malaysia, where begging juveniles also seen in August (Negeri Sembilan). Nestlings were seen in June in Sumatra (Bengkulu). The breeding season is February–September in Borneo. The nest is a deep open-cup structure of grasses and bamboo and other leaves, suspended hammock-like high in forest-edge tree, one on a creeper and the other on a branch. The clutch 2 eggs, white to pale creamy pink, with yellowish-brown, chestnut-brown or dark purplish-brown spots with underlying lavender concentrated at obtuse end. Both adults incubate the eggs.

Cool Facts: Two subspecies are recognized:

- *O. x. xanthonotus.* First reported by Horsfield in 1821. The nominate race is found on the Malay Peninsula, Sumatra, Java and south-western Borneo.
- *O. x. mentawi.* First reported by Chasen and Kloss in 1926. This race is found on the Mentawai Islands archipelago off the west coast of Sumatra, in Indonesia. Subspecies *mentawi* is smaller than nominate, and female has a darker crown with much broader blackish feather centers.

Common Name: White-lored Oriole
Scientific Name: *Oriolus albiloris*

Size: 7-7.9 inches (18–20 cm)

Habitat: Asia; endemic to the Mountains of northern and central Luzon (provinces of Benguet, Cagayan, Ilocos Norte, Nueva Ecija and Bataan), in the northern Philippines.

Status: Least Concern. **Global Population:** Unknown number of mature individuals with a stable population. It is a restricted-range species; present in Luzon EBA, where it is estimated to be confined to about 85,000 km2. Although relatively large forest tracts remain in northern Luzon, where this species can also utilize degraded forests, it is presumed to have undergone a population decline since only 25% of original forest

cover on Luzon remained by 1988, with lowland forests particularly affected, and most surviving forest areas under logging concessions; even montane forest above 650 m is beginning to suffer from human encroachment, further increasing forest loss, degradation and fragmentation. It occurs in several protected areas, e.g. the Northern Sierra Madre Protected Area, Quezon ational Park, and the lowland forest in the Subic Bay Protected Area.

Diet: Omnivorous; fruit, nectar and insects.

It is typically seen alone, in pairs or small groups in the middle story to the canopy. It is seen in mixed flocks with other birds such as bar-bellied cuckoo shrikes, black-and-white trillers, Isabela oriole, blackish cuckoo shrikes and other forest birds.

Breeding: Sexes are alike. Overall yellow in color, slightly darker on the wings and tail, with a reddish bill and a white mark between the bill and the brown eye. Similar to the Isabela Oriole (*Oriolus isabellae*), but slightly smaller, and distinguished by the red bill and the white spot in front of the eye.

Breeding season appears to be in May and June with young seen in August.

Cool Facts: It was formerly conspecific with the Philippine oriole (*Oriolus steerii*) but has since been separated as its own species. It was also formerly theorized that the critically endangered Isabela oriole was this species until it was rediscovered and proven otherwise

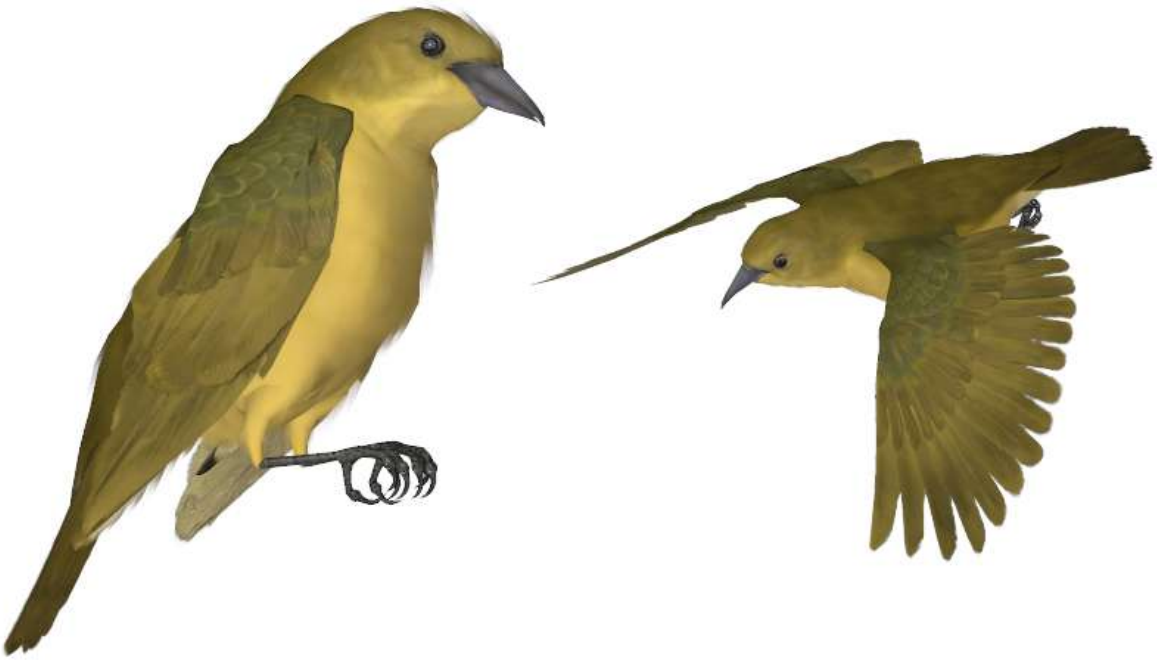
Common Name: Isabela Oriole
Scientific Name: *Oriolus isabellae*

Size: 8.2-9 inches (21–23 cm)

Habitat: Asia; endemic to Luzon in the Philippines.

It frequents the canopy and middle storeys of forests, especially thick bamboo forest, but also forest edge, from 50-440 m. Constraints on its distribution and relative abundance are unknown, but it appears to tolerate secondary growth. Three of the localities that have produced recent records (Ambabok, Dunoy and Mansarong) are characterized by degraded and secondary forests.

Status: Critically Endangered. Global Population: 50-249 mature individuals with a decreasing population. The species is suspected to be declining at an unquantified rate owing to the extensive loss of forest habitat on Luzon. Organizations such as Buhay-Ilang, ORIS Project and the Mabuwaya Foundation are working to conserve them with educational programs and festivals celebrating this bird. The oriole is now a Flagship species for the North Sierra Madre National Park.



Since 2015, a research and conservation project for the Isabela Oriole has been implemented in Baggao by the Mabuwaya Foundation. Information, education and communication, community consultations are held in Baggao with the local government, the Department of Environment and Natural Resources and local residents. Plans are

underway to declare the oriole site in Baggao a Critical Habitat and to encourage ecotourism.

Under the Philippine law RA9147, it is completely illegal to hunt these birds or to capture and keep them as pets. As it is critically endangered species on the Philippine Red List, any violations have harsher punishments including "imprisonment of a minimum of six years, and one day to twelve years and/or a fine of One hundred thousand pesos (100,000.00) to One million pesos (1,000,000.00), if inflicted or undertaken against species listed as critical".

Diet: Omnivorous; feeds mostly on fruit, but also insects such as larvae and caterpillars. It is typically seen alone, in pairs or small groups in the middle storey to the canopy. It is seen in mixed flocks with other birds such as bar-bellied cuckoo shrikes, black-and-white trillers, blackish cuckoo shrikes and other forest birds.

It was recently observed in mixed-species flocks in fruiting trees.

Breeding: Sexes are alike. The plumage is uniformly yellowish-olive above; indistinctly brighter yellow around eye. The lores are yellowish-olive (as is the crown). The upper-wing is yellow-olive, the remiges have dull brown inner webs. The tail is an uniform yellowish-olive above, yellower below, narrowly tipped pale yellowish. The chin, throat and under-parts are uniformly plain yellow. The iris is dark brown to reddish-brown with a gray orbital ring. The bill is bluish-gray, paler along the cutting edges. The legs are gray to blue-gray or grayish-horn.

Fledglings were observed in June with breeding suspected during the dry season in April/May.

Cool Facts: This species was presumed to be extinct for many years until its rediscovery in December 1993 near Diffun, Quirino, and in Mansarong in September 1994. Additional sightings were made in San Mariano, Isabela. and Baggao, Cagayan Valley.

Common Name: Philippine Oriole
Scientific Name: *Oriolus steeri*

Size: 7.1-7.9 inches (18-20 cm)

Habitat: Asia; this species is endemic to the Philippines.

It is found in forests, forest edges and secondary growth, below 1200 m.

Status: Least Concern. **Global Population:** <10,000 mature individuals with a decreasing population. Race *assimilis* is thought probably extinct with the last recorded sighting on Cebu in 1906. There has been an unconfirmed report there in 2000, but no sightings during dedicated surveys of forest birds in 2001–2004.

Deforestation in the Philippines continues throughout the country due to slash and burn farming, mining, illegal logging and habitat conversion. This species is still trapped for the pet trade.

It is found in multiple protected areas such as Pasonanca Natural Park, Rajah Sikatuna Protected Landscape, Northern Negros Natural Park and Samar Island Natural Park but like all areas in the Philippines, protection is lax and deforestation continues despite this protection on paper

Diet: Omnivorous; mainly small invertebrates and fruits.

It forages alone or in pairs, mainly in the canopy. Sometimes, it joins mixed-species flocks during non-breeding season.

Breeding: Sexes are alike, although females tend to be slightly smaller in size. The nominate race has its crown, neck and most of upper-parts bright olive-green and the rump is yellow. Its lores are gray, ear-coverts washed greenish tint. The upper-wing is gray, the primaries edged grayish white, the secondaries dull greenish, and the wing-coverts gray, Its central tail feathers blackish green, with the other rectrices a black with yellow terminal patch on inner webs. Its chin, throat and upper breast are an uniform gray, while its lower breast and belly are white, boldly streaked black with its undertail-coverts yellowish. Its is iris red to reddish brown, its bill a dark red or red-brown and its legs a dark grayish brown.

There is no information on breeding.

Cool Facts: It is also called the Grey-throated Oriole. There are five subspecies:

Steerii Group:

- *O. s. samarensis.* First reported by Steere in 1890. This race is found Samar, Leyte, Bohol and eastern Mindanao, in east-central and the southeastern Philippines. This race is yellower above than the nominate race, so that rump only slightly yellower than its mantle and back. It has its upper chest a paler gray and slightly mottled with brown. The lower chest and flanks are washed with yellow. The wing-coverts and edging of the remiges are concolorous with its back.
- *O. s. basilanicus.* First reported by Ogilvie-Grant in 1896.This race is endemic to Basilan and western Mindanao, in the southern Philippines. It is similar to the nominate race but rather smaller, and its rump is a duller yellow.
- *O. s. steerii.* First reported by Sharpe in 1877. The nominate race is found in Masbate and Negros, in the central Philippines.

Cebu Group:

- *O. s. assimilis.* First reported by Tweeddale in 1878. This race is found in Cebu, in the central Philippines (possibly extinct). It is uniformly darker olive-green above than the nominate race. It has its lower breast and belly grayer, ear-coverts dark gray, tail all black with only very small terminal yellowish-white spots on inner webs.

Sulu Group:

- *O. s. cinereogenys.* First reported by Bourns and Worcester in 1894. This race is endemic to the Sulu Archipelago (Tawitawi and Bongao, possibly also Baliungan). It is similar to race *samarensis*, but yellower above, especially on the rump (which also streaked with olive), the ear-coverts are gray (not gray-green). It is also much whiter below, but streaked grayish on chin, throat and upper breast.

Common Name: African Golden Oriole
Scientific Name: *Oriolus auratus*

Size: 9.5-9.8 inches (24-25 cm)

Habitat: Africa; it is a resident breeder in Africa south of the Sahara Desert.

It is a bird of thick bush and other well-wooded areas.

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

Diet: Omnivorous; insects and fruit, especially figs.

It forages alone or in pairs, also in small groups after breeding season. Sometimes, it joins mixed-species flocks during non-breeding season. It is found mainly in the canopy, sometimes in small to large groups in fruiting trees, especially figs. It fly catches insects (e.g. flying termites) in air or forages on ground (e.g. for earthworms, caterpillars,

beetles). It may hover briefly before dropping to ground, much like a raptor, especially in treeless areas. Hairy caterpillars vigorously shaken and beaten against vegetation to remove hairs before consumption.

Breeding: Sexes are dimorphic. The nominate male is striking in the typical oriole black and yellow plumage, although the plumage is predominantly yellow, with solid black only in the flight feathers and tail center. There is a great deal of gold in the wings, which is a distinction from the Eurasian golden oriole, which winters in Africa. The female is a drabber green bird, distinguished from the European species by more contrasting wings and black around the eye.

The hanging basket-shaped nest is built in a tree, and contains two eggs. The incubation period is about 17 days and the young fledge after 15 days. The yound are fed by both sexes.

Cool Facts: Orioles are shy, and even the male is remarkably difficult to see in the dappled yellow and green leaves of the canopy. The flight is somewhat like a thrush, strong and direct with some shallow dips over longer distances.

The call is a screech like a jay, but the song is a beautiful fluting *fee-ooo fee-ooo*, unmistakable once heard.

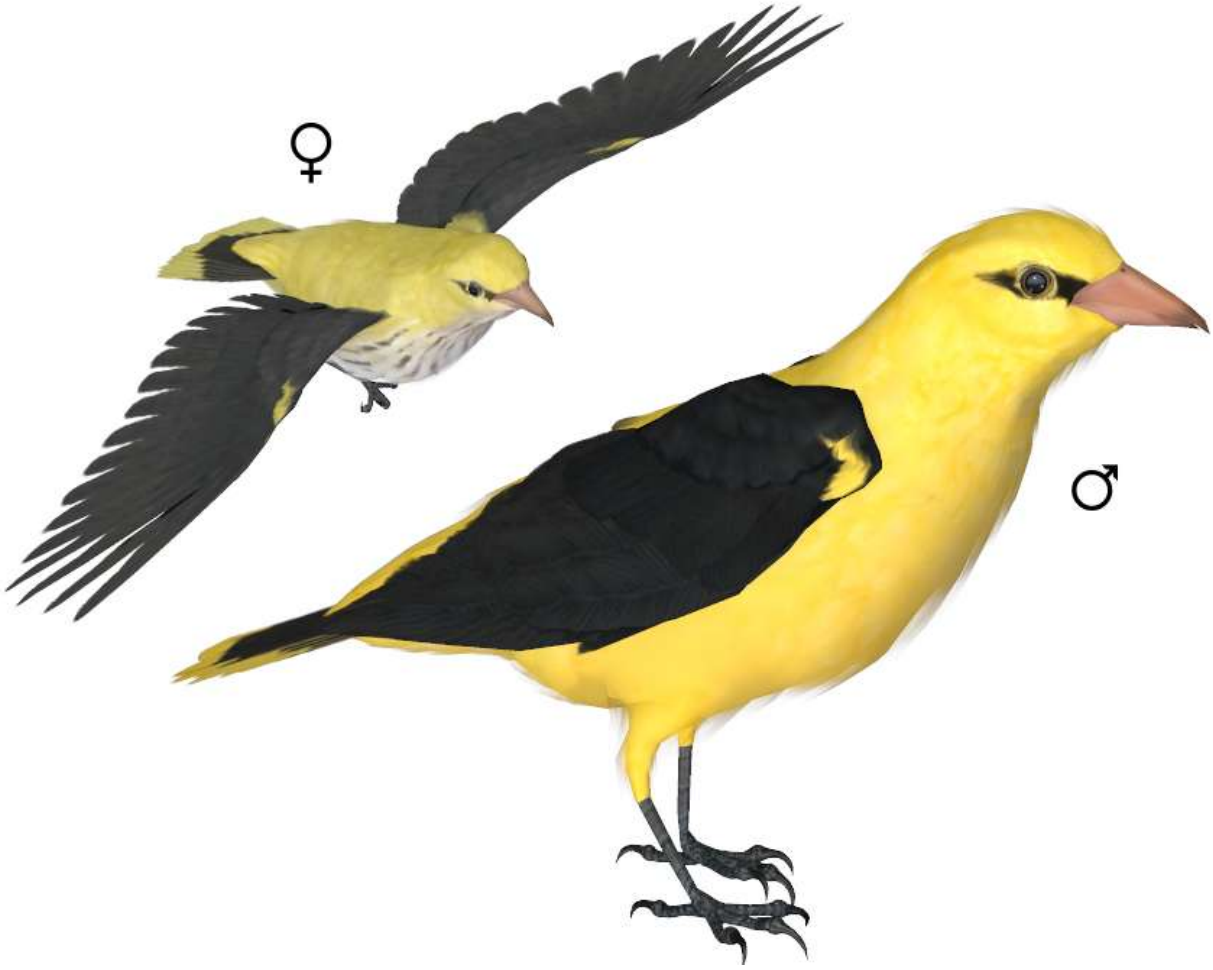
Two subspecies are recognized:

- *O. a. auratus.* First reported by Vieillot in 1817. The nominate race (called the Senegal Golden Oriole) is found from Senegal and Gambia to western Ethiopia and southern Somalia.
- *O. a. notatus*. First reported by Peters in 1868. This race (South African Golden Oriole) was originally described as a separate species. It is found from Angola to central Mozambique. It has broader yellow edges and tips on the secondaries, tertials and primary coverts, so that the closed wing looks even yellower than that of nominate.

Common Name: Eurasian Golden Oriole
Scientific Name: *Oriolus oriolus*

Size: 9.5-9.8 inches (24-25 cm)

Habitat: Eurasia and Africa; it is found in western, central and southern Europe (south from southern Finland) and northern Africa (Morocco to Tunisia) eastward to the Altai Mountains (southern Siberia, western Mongolia and extreme northwestern China) and, in the south, to northern Iran and locally to the northern Arabian Peninsula; non-breeding in sub-Saharan Africa. The northern limit of its range has moved slowly north over the last hundred years.



It inhabits a range of habitats. In Western Europe they prefer open broadleaf forests and plantations, thickets of young trees, riverine forests, orchards, large gardens; in Eastern Europe they may inhabit more continuous forests as well as mixed or coniferous forests. They generally avoid treeless habitats but may forage there. In their wintering habitat they are found in semi-arid to humid woodland, tall forests, riverine forest, woodland/savannah mosaic and savannah.

Status: Least Concern. **Global Population:** 13,400,000-22,500,000 of mature individuals with a stable population. Autumn migrants gathering in the eastern Mediterranean are considered a pest by some fruit-farmers, as they consume large quantities of fruit.

Diet: Omnivorous; mainly small invertebrates and fruits. It will occasionally take seeds, nectar, pollen; rarely, small lizards, small mammals, eggs and nestlings. The diet during early part of breeding season is mainly invertebrates and especially their larvae (earthworms, leeches, snails, spiders, damselflies and dragonflies, crickets, katydids and grasshoppers, termites, shield bugs, jewel bugs, stink bugs, cicadas, beetles, snakeflies, mantid flies, caddis flies, gadflies, hoverflies, craneflies, sawflies, wasps, hornets, bumblebees, bees, ants, moths and butterflies (especially their caterpillars). During later part of breeding season (when young 8–10 days old), during migration and on wintering grounds, they consume more fruits and berries (about 75% of their diet). These include bilberries, blackberries, elderberries, mulberries, raspberries, strawberries, blackcurrants, redcurrants, cherries, dates, figs, grapes, loquats, olives, peaches, pears, plums, European yew, rowan, wild service tree, Transvaal saffron wood and exotic neem. Rarely, it takes barley, oats, seeds, oak flowers, flowering shoots, leaf buds, pollen and nectar.

It forages alone or in pairs, also in small groups after breeding season. Sometimes, it joins mixed-species flocks during non-breeding season. It is found mainly in the canopy, sometimes in small to large groups in fruiting trees, especially figs. It fly catches insects (e.g. flying termites) in air or forages on ground (e.g. for earthworms, caterpillars, beetles). It may hover briefly before dropping to ground, much like a raptor, especially in treeless areas. Hairy caterpillars vigorously shaken and beaten against vegetation to remove hairs before consumption.

Breeding: Sexes are dimorphic. The male has its head, upper-parts and entire under-parts a rich golden-yellow. The lores are black and the wing is a velvet-black, with broad yellow tips on the primary coverts (forming small carpal patch on folded wing). The remiges have narrow yellowish-white tips, while the outer primaries and outer secondaries have narrow yellowish-white edges on outer webs (when fresh). The tail is velvety black with the central pair of feathers with narrow yellow tips. The terminal third of outer feathers conspicuously golden-yellow. The under-wing-coverts are yellow. The iris is red-brown to deep maroon or dark blood-red. The bill is dark pink and the legs are slaty blue. The female can be variable. Most commonly, it has its head, neck, mantle and back a bright greenish-yellow, the rump yellower, the lores dark, the wings green or brownish, and the tail brown-black. The outer rectrices have yellowish tips. The chin to upper breast is pale gray, becoming yellowish-white on the belly. It is all streaked blackish (most heavily on the chest). The under-tail-coverts are bright yellow-green. Its bare parts are similar to the male, but duller. Some (older) females are similar to males but a duller yellow and usually with at least faint streaking on the under-parts. The immature is similar to the female, but generally duller above and more heavily streaked below.

Eurasian golden orioles may delay breeding until they are 2 or 3 years of age. Males usually arrive at breeding area several days before the females. The fidelity to a territory or even to a specific nest site suggests that the pair-bond may continue from one breeding season to the next. The nest is placed high in a tree towards the edge of the crown. The deep cup-shaped nest is suspended below a horizontal fork of thin branches. It is built by the female, but the male will sometimes gather some of the material. The nest is held in place by plant fibers up to 40 cm (16 in) in length and lined with fine grass, feathers and wool. The clutch is usually between 3 and 5 eggs. These are laid at daily intervals early in the morning. The eggs are mainly incubated by the female but the male will incubate for short periods to allow the female to feed. The eggs hatch after 16–17 days. The young are fed by both parents but are mostly brooded by the female. The young fledge after 16–17 days.

Cool Facts: The name "oriole" was first used in the 18th century and is an adaptation of the scientific Latin genus name, which is derived from the Classical Latin "*aureolus*" meaning golden. Various forms of "oriole" have existed in Romance languages since the 12th and 13th centuries. Albertus Magnus used the Latin form *oriolus* in about 1250 and erroneously stated that it was onomatopoeic because of the golden oriole's song. In medieval England, its name, derived from the song, was the *woodwele*.

Common Name: Black-naped Oriole
Scientific Name: *Oriolus chinensis*

Size: 9-11 inches (23-28 cm)

Habitat: Asia; it found in southeastern Asia.

It is found in open primary and secondary evergreen forests, mixed broadleaf forests and deciduous forests, dryland forests, forest edges, forest groves (e.g. beach casuarinas, bamboo), plantations (e.g. coconut palm, rubber), parks, orchards, gardens, and wooded suburbs. It also inhabits mangroves, coastal forest and scrub, and even scattered trees in open country, along roads and in villages. It is found in lowlands and hills, up to 1600 m in China and Thailand.

.
Status: Least Concern. **Global Population:** 25,000-250,000 mature individuals with a decreasing population. The status in Borneo is uncertain, and the few records possibly involve migrants of the nominate race from the Philippines. There are two records from northern Borneo (Sabah) that are considered likely to be escaped cagebirds. This bird is regularly sold in cagebird trade. It may be a pest in some areas, where sometimes it causes visible damage in commercial fruit orchards. It occurs in various protected areas throughout its range, and considered not to be at any immediate risk.

Diet: Omnivorous; berries and fruits (such as macaranga, papaya, mango, star-fruit, low fruiting ornamental palms, but especially figs). It also takes insects and their larvae (alate termites, caterpillars, grasshoppers, mantids, wasp and hornet nests (in order to extract larvae)).

It forages alone, in pairs or in small groups, usually in the canopy. It only rarely comes down low or ground-level, when searching for insects and larvae. It sometimes joins mixed-species flocks in fruiting trees. Most items are taken while perched, but will hover. Many insects are habitually wiped on branch before consumption.

Breeding: Sexes are dimorphic. The male nominate subspecies has its head, upper-parts and under-parts entirely golden-yellow, apart from black on lores and in broad band through eye and across hind-crown. Most of the wing is black, with the secondary coverts a golden-yellow, the primaries narrowly edged white, and the tertials tipped yellow. The tail feathers are black, with the outer pair a distal half yellow, the central pair with yellow tips, and other feather pairs with decreasing amount of yellow from outers inwards. The iris is reddish-brown or gray and the bill is livid pink, which is paler on cutting edges and tip. The legs are slaty blue. The female is similar to male, but its mantle yellowish-olive. The immature has its upper-parts yellowish-green, the under-parts creamy white with black streaks, the under-tail-coverts are yellow and the bill is black.

It breeds in May and June in the north of its range (southeastern Russia), June and July in China (May–July in Hong Kong), April through June in the Andaman Islands, December through June) in Peninsular Malaysia, March–August in Sumatra, February–June in Java, and February through June in the Philippines. During pair formation, the male sings and chases after the female (while chasing away other males). An open cup-nest is built solely by the female. The male sometimes collects some material. The nest is constructed of leaves, grasses, strips of bark, straw, rootlets, fine banyan roots, pine needles and small twigs, bound with cobwebs, and usually decorated on outside with small climbing asclepiad leaves. It is suspended hammock-like in thin, horizontal forked branch, usually high up and well concealed in well-foliaged tree, and often close to nest of drongo. The clutch is 2–4 eggs and the incubation period 14 days. The chicks tended by both parents.

Cool Facts: Twenty subspecies are recognized. Subspecies vary extensively in size and color.

- *O. c. diffusus.* First reported by Sharpe in 1877. It was originally described as a separate species. It is endemic to the eastern Palearctic. It is like the nominate race, but the tertials and inner secondaries are entirely yellow on the outer edge, with the yellow tips of primary coverts forming a small yellow patch.
- *O. c. andamanensis.* First reported by Beavan in 1867. It is originally described as a separate species. It is endemic to the Andaman Islands. It is much smaller, has a yellow of crown extending much farther back onto the nape, leaving only a narrow black hind-collar.

- *O. c. macrourus.* First reported by Blyth in 1846. It is originally described as a separate species. It is endemic to the Nicobar Islands. It is slightly smaller than the nominate race. The yellow of the crown extending farther back to leave narrower hind-collar (but broader than in race *andamanensis*). The wing feathers have a narrow yellowish edging and the primary coverts are tipped yellow (creating a small yellow wing spot).
- *O. c. maculatus.* First reported by Vieillot in 1817. It is originally described as a separate species. It is found on the Malay Peninsula, Sumatra, Belitung, Bangka Island, Nias, Java, Bali and Borneo. It is smaller than the nominate race, with a greater extent of yellow on its crown as the preceding race, but its yellow upper-parts tinged are greenish, the secondaries and tertials have broader yellow edging and the yellow-tipped primary coverts form a large patch.
- *O. c. mundus.* First reported by Richmond in 1903. It is originally described as a separate species. It is found on Simeulue and Nias Islands. It differs from the nominate race in being slightly smaller and generally a brighter lemon-yellow.
- *O. c. sipora.* First reported by Chasen & Kloss in 1926. It is found on Sipora (off western Sumatra). It is *s*imilar to race *mundus* but has more extensive yellow on the crown with a yellow primary-covert spot.
- *O. c. richmondi.* First reported by Oberholser in 1912. It is endemic to Siberut and Pagi Island (off western Sumatra). It has a greater extent of yellow on its hind-crown than the nominate race and its posterior upper-parts tinged olive. It resembles race *maculatus* but the yellow of remaining upper-parts is more orange-tinged. The wing is shorter, and the secondaries and tertials are less broadly edged yellowish.
- *O. c. lamprochryseus.* First reported by Oberholser in 1917. It is found on Masalembu and Keramian Islands (Java Sea). It is slightly smaller than the nominate race and resembles race *maculatus* but is less greenish above, the primaries are narrowly edged grayish-white, the inner primaries tipped buff-white, the secondaries and tertials broadly edged pale yellow, and the primary coverts less broadly tipped lemon-yellow.
- *O. c. insularis.* First reported by Vorderman in 1893. It is originally described as a separate species. It is found on Sapudi, Raas and Kangean Islands (northeast of Java). It has the yellow of its crown extending farther back to leave only a narrow black hind-collar. The yellow of upper-parts and under-parts are suffused with orange.
- *O. c. melanisticus.* First reported by AB Meyer and Wiglesworth in 1894. It was originally described as a separate species. It is found on Talaud Islands (south of the Philippines). It is larger and with a heavier bill than the nominate race. It has its entire crown and nape black, leaving only a small area of yellow on the forehead, a broad yellow collar on the hind-neck, the mantle black-mottled dark olive-green or sometimes entirely black and its wing feathers are all black.
- *O. c. sangirensis.* First reported by AB Meyer and Wiglesworth in 1898. It is found on the Sangihe Islands (off north-eastern Sulawesi). It resembles race *melanisticus*, but its mantle is dark greenish-yellow, the secondaries and tertials broadly edged olive.

- *O. c. formosus.* First reported by Cabanis, 1872: It was originally described as a separate species. It is endemic to Siau, Tahulandang, Ruang, Biaro and Mayu Islands (off north-eastern Sulawesi). It is very similar to race *sangirensis* but is slightly larger, with larger area of yellow on its forehead
- *O. c. celebensis.* First reported by Walden in 1872. It is originally described as a separate species. It is found on Sulawesi and nearby islands. It is smaller than the nominate race, has the top of its head entirely yellow so that the black occipital band very narrow and sometimes broken on the nape. The mantle is greenish-tinged yellow, the primaries narrowly edged grayish-white, and the tertials broadly edged greenish-yellow.
- *O. c. frontalis.* First reported by Wallace in 1863. It is originally described as a separate species. It is found on Banggai and Sula Islands (east of Sulawesi). It is smaller in size than the nominate race. The yellow on its head is confined to the small forehead patch. The mantle is a deeper golden-yellow, often with some orange suffusion and the wing is entirely black.
- *O. c. stresemanni*. First reported by Neumann in 1939. It is found on Peleng (off eastern Sulawesi).
- *O. c. boneratensis*. First reported by AB Meyer and Wiglesworth in 1896. It was originally described as a separate species. It is endemic to Bonerate, Djampea and Kalao Islands (Selayar Islands). It is larger than the nominate race, a yellow color on its crown, the mantle and under-parts is often a pure orange.
- *O. c. broderipi.* First reported by Bonaparte in 1850. It was originally described as a separate species. It is found on Lombok, Sumba, Sumbawa, Flores, and Alor Island (Lesser Sunda Islands). It is same size as the nominate race, the forehead has a small patch (as with Race *frontalis*) but is deep orange-yellow in color, the mantle and under-parts are also deep orange-yellow, the primary coverts with yellow tips (forming a wing spot), and the tertials are tipped yellow.
- *O. c. chinensis.* First reported by Linnaeus in 1766. The nominate race is found on Palawan, Luzon, Mindoro and satellite islands (western and northern Philippines)
- *O. c. yamamurae.* First reported by Kuroda Sr in 1927. It is found on the Visayan Islands, Mindanao and Basilan (central and southern Philippines). It is like the nominate race but shorter-winged, and the yellow tips of the central tail feathers much narrower.
- *O. c. suluensis.* First reported by Sharpe in 1877. It is found in the Sulu Archipelago (south-western Philippines). It has the yellow on the head confined to the small forehead patch, the mantle is rather pale yellow, the wing is entirely black, and there is extensive yellow on the outer tail feathers.

Common Name: Green-headed Oriole
Scientific Name: *Oriolus chlorocephalus*

Size: 8.2-11 inches (21–28 cm)

Habitat: Africa; it has a fragmented distribution, restricted to lowland and mid-altitude forests in the Eastern Arc Mountains in Tanzania, three isolated mountains in northern Mozambique, and two highlands in southeastern Malawi. In addition, it occurs in a few lowland coastal forests in the extreme southeast of Kenya.

Its natural habitats are subtropical or tropical, dry lowland forests and subtropical or tropical moist montane forests.

Status: Least Concern. **Global Population:** Unknown number of mature individuals with a decreasing population. It is relatively common to very common in parts of its range, especially in Tanzania, but elsewhere it is generally uncommon and highly localized. Although the species occurs in various protected areas and Key Biodiversity Areas, this is no guarantee that the species or its forest habitat is protected. Continuing habitat loss through deforestation and increasing human settlements threatens the species' survival, especially in Malawi (the nominate subspecies) and Mozambique (the range-restricted race *speculifer*).

Diet: Omnivorous; fruit, seeds, nectar and insects or insect larvae.

It forages alone or in pairs, at all levels, but mainly in the middle story to just below the canopy. Small groups may sometimes gather at fruiting trees such as Ficus trees, or

nectar-producing trees such as the alien silky oak (*Grevillea robusta*). It sometimes joins mixed-species flocks.

Breeding: Sexes are alike. It is a large oriole, unmistakable with its sage green head, throat, and back, and a broad yellow neck collar. The under-parts are bright yellow, and the wings are plain silvery-gray in the nominate race.

The available data suggest breeding takes place at the end of the dry season. The nest is a deep, thick-walled cup, made mainly from *Usnea* lichens where available, but also other plant material such as small twigs and plant fibers. The nest is suspended like a hammock in a thin, horizontal forked branch, typically in the canopy of a leafy tree. The clutch size is usually two eggs.

Cool Facts: Three subspecies are recognized, distinguished primarily by size and subtle plumage differences.

- *O. c. amani*. First reported by Benson in 1946. It is found in south-eastern Kenya and eastern Tanzania. It looks identical to the nominate race but is smaller.
- *O. c. chlorocephalus*. First reported by Shelley in1896: The nominate race is found in Malawi and central Mozambique.
- *O. c. speculifer*. First reported by Clancey in 1969. It is found in southern Mozambique. It is not only slightly larger than the nominate race and substantially larger than race *amani*, it also has a distinctive white patch on its wing that the others lack.

Common Name: African Black-headed Oriole
Scientific Name: *Oriolus larvatus*

Size: 7.8-8.2 inches (20-21 cm)

Habitat: Africa; It breeds in much of sub-Saharan Africa from South Sudan and Ethiopia in the north to South Africa in the south.

It inhabits dry tropical forests, especially acacia and broad-leaved woodlands, and dense shrubland areas, where it is more often heard than seen despite the brightness of its plumage.

Status: Least Concern. **Global Population:** Unknown number of mature individuals with an increasing population. It occurs in various protected areas, and regarded therefore as not at any immediate risk.

Diet: Omnivorous; small fruits and berries (aloes, *Trema*, figs, loquats, grapes, mulberries). Also, it takes nectar, pollen of aloes and *Erythrina* species, as well as hard, dry seeds. In addition, invertebrates, including grasshoppers and locusts, beetles, mantids, dragonflies, honeybees, and both hairless and hairy caterpillars. The nestling

diet is mostly caterpillars of increasing size as young grow, also some adult insects and dried calcium-rich millipede rings.

It forages alone or in pairs, mostly in canopy, but sometimes in small groups in flowering or fruiting trees. It regularly (especially immatures) joins mixed-species flocks. Invertebrates mostly gleaned with some winged termites caught by aerial flycatching. Occasionally, it feeds low in fruiting shrubs or on ground for caterpillars, which are habitually beaten before being swallowed.

Breeding: Sexes are similar. The nominate race has its head and neck to upper breast a glossy black. The mantle is bright yellow, the scapulars and back are yellowish olive-green, and the rump, yellower. The remiges are black, with the primaries edged and tipped gray-white, the secondaries are edged yellowish-gray, the tertials are tipped yellow and edged olive. The lesser and median coverts are yellowish-olive, the greater coverts are broadly fringed yellowish-olive, the primary coverts are black, tipped white (forming conspicuous white patch on wing). The central tail feathers are greenish-olive to black, the remainder are black with bright yellow terminal patches (the amount of yellow increasing towards the outer feathers). The lower breast and the rest of the under-parts are an intense bright yellow. The iris is red, the bill is coral-red or brownish-red and the legs slate-gray. The immature is like the adult, but the top and side of the head are blackish-olive, mantle olive (yellower at side) with darker streaks, chin and throat black, streaked with yellow, breast yellow, streaked with black. The iris is brown, the bill blackish and the legs light blue-gray.

Breeding Season is March–June and November in Kenya, January–May in Uganda, September–December in Tanzania, October–November in the Democratic Republic of the Congo, September–December in Angola, August–January in Zambia, August–March in Malawi, Apr–May and Sept–Feb in Zimbabwe, Sept–Dec in Botswana and Sept–Oct in Mozambique; in South Africa, September–January in the north and northeast and November–January in the Eastern Cape. Possible courtship displays include male standing near female with tail held fanned, wings spread and head held low, while emitting subdued notes, and noisy aerial chases.

The nest is built mostly or entirely by the female, in 3–10 days, while male sings or calls often from nearby. It is a shallow to deep, open cup-nest woven mostly from old-man's beard lichen (*Usnea*) where this available, or from grasses, mosses, tendrils and strands of pliable inner bark, lined with fine rootlets, grasses and hair, exterior camouflaged with grasses, lichens, bark, wool, string, cloth and acacia flowerheads, and sometimes bound with small amounts of spider web. It is suspended hammock-like in thin, horizontal forked branch, usually in well-foliaged tree canopy at 3–20 m, away from center of tree. A clutch of 2–3 eggs is laid and incubated by the female. She is fed on nest by the male for a period of 14–16 days. The chicks are brooded mainly or entirely by the female and fed by both sexes. The nestling period is 14–20 days.

Cool Facts: Five subspecies are recognized:

- *O. l. rolleti.* First reported by Salvadori in 1864. This race was originally described as a separate species. It is found from southern Sudan and southern Ethiopia to eastern Democratic Republic of Congo and central Kenya. It is smaller than the nominate race and with brighter yellow upper-parts.
- *O. l. reichenowi.* First reported by Zedlitz in 1916. This race is found from Somalia to eastern Tanzania. This race is the smallest, and differs from all others in having the yellow areas more golden.
- *O. l. angolensis.* First reported by Neumann in 1905. The Kenya black-headed oriole or tropical blackhead oriole is found from Angola and Namibia to western Tanzania and northern Mozambique. It has upper-parts greener than the nominate race, and a rather smaller bill and tail.
- *O. l. tibicen.* First reported by Lawson in 1962. It is found from coastal southern Tanzania to coastal southern Mozambique. It is similar to race *angolensis*, but with shorter wings and a longer bill.
- *O. l. larvatus*. First reported by Lichtenstein in 1823. The nominate race, the Southern black-headed oriole is found from southern Zimbabwe to inland southern Mozambique and eastern South Africa
- *O. l. additus.* First reported by Lawson in 1969. The Eastern blackhead oriole is found in Eastern South African and southern Mozambique. Considered a synonym of *O. l. tibicen* and replacement name by the IOC.

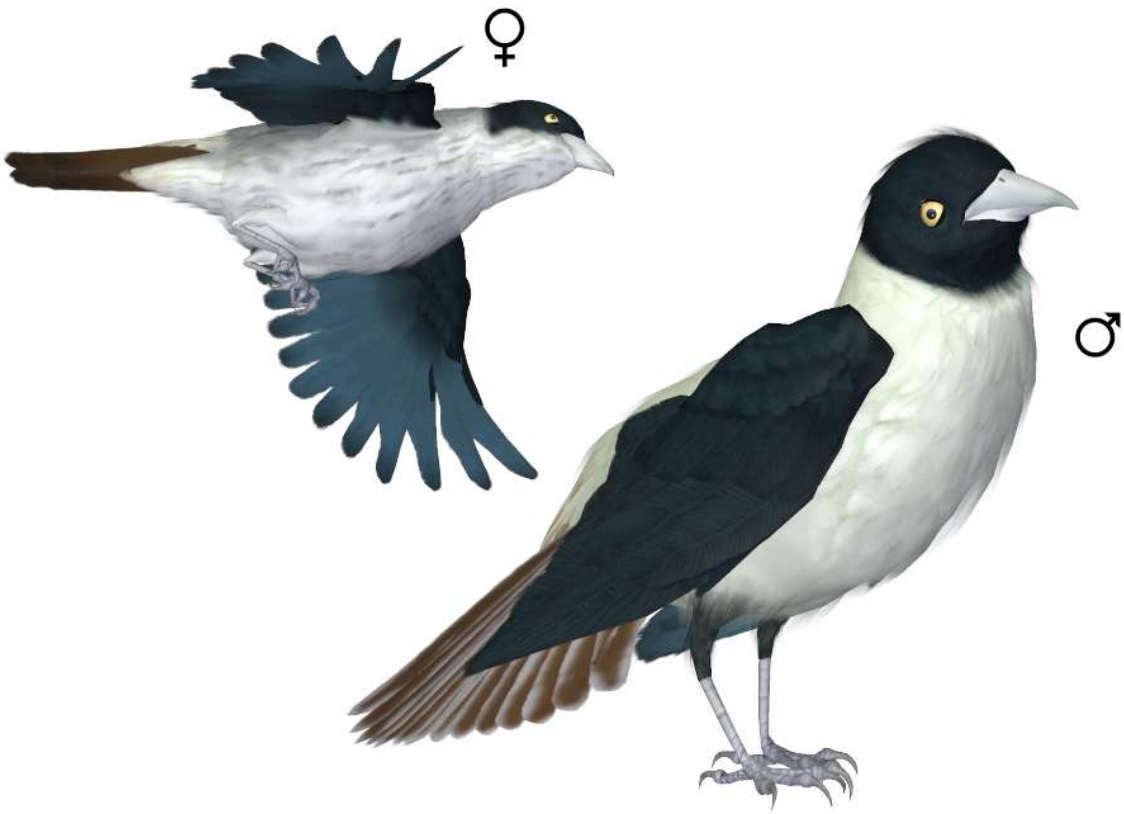
Common Name: Silver Oriole
Scientific Name: *Oriolus mellianus*

Size: 11 inches (28 cm)

Habitat: Asia; endemic to south-central China (south-central Sichuan, northeastern Yunnan, Guizhou, northern Guangxi, northern Guangdong); non-breeding southern Thailand and western Cambodia.

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

Status: Endangered. **Global Population:** 1,500-3,800 mature individuals with a declining population. It is threatened by widespread habitat loss, degradation and fragmentation in both breeding and wintering ranges. Was considered to be fairly to very common in 1930s, but recent extensive habitat loss implies that species has undergone a rapid population decline. The main threat is ongoing forest loss, degradation and



fragmentation in both breeding and wintering ranges through timber extraction (both legal and illegal), construction of hydro-electric power stations, conversion to agriculture and uncontrolled fires, even in some protected areas. Most of the remaining primary forests in southern Sichuan are scheduled for logging in the next 20 years, but a recent logging ban in upper Yangtze basin appears to have led to a complete halt to

deforestation. The species is legally protected in Thailand. It has been recorded from at least eight protected areas in China, e.g. Nanling National Nature Reserve (Guangdong) and Mao'er Shan Nature Reserve (Guangxi), and six in Thailand, but some protected areas are now completely isolated forest patches and face further degradation through human encroachment coupled with inadequate management.

Diet: Omnivorous; mostly insects and fruit. It takes nectar from Erythrina trees in non-breeding season (Thailand).

It forages alone or in pairs in canopy; sometimes, it joins mixed-species flocks.

Breeding: Sexes are dimorphic. The male has its head, neck and throat a glossy jet-black; the rest of its body is a silvery white, with some deep maroon spots (usually hidden). The under-tail-coverts are whitish to pink. The wing is all black and its tail feathers are maroon with silvery edging. The iris is pale yellow and its bill bluish-gray. Its legs are pale bluish-gray. The female has its head and neck black, contrasting sharply with a dark gray mantle with darker streaks. The rump is slightly browner. The wing is all dark blackish-brown and its tail is maroon. The chin and throat are white with heavy black streaking and spotting; the breast is white with dark gray streaks and the under-tail-coverts are pink. Its bare parts are the same as with the male. The immature is like the female but browner.

Breeding season occurs from April to August. Pre-breeding activities, such as dawn song, display, pair-bonding flights and territorial chases, observed from late Apr until early May in Nanling National Nature Reserve (Guangdong), and a female on nest as well as a nest under construction 20 m up in moderately mature *Sorbus folgneri* tree in May.

Cool Facts: Alternate names for the silver oriole include Mell's maroon oriole, Mell's oriole, Stresemann's maroon oriole and Stresemann's oriole.

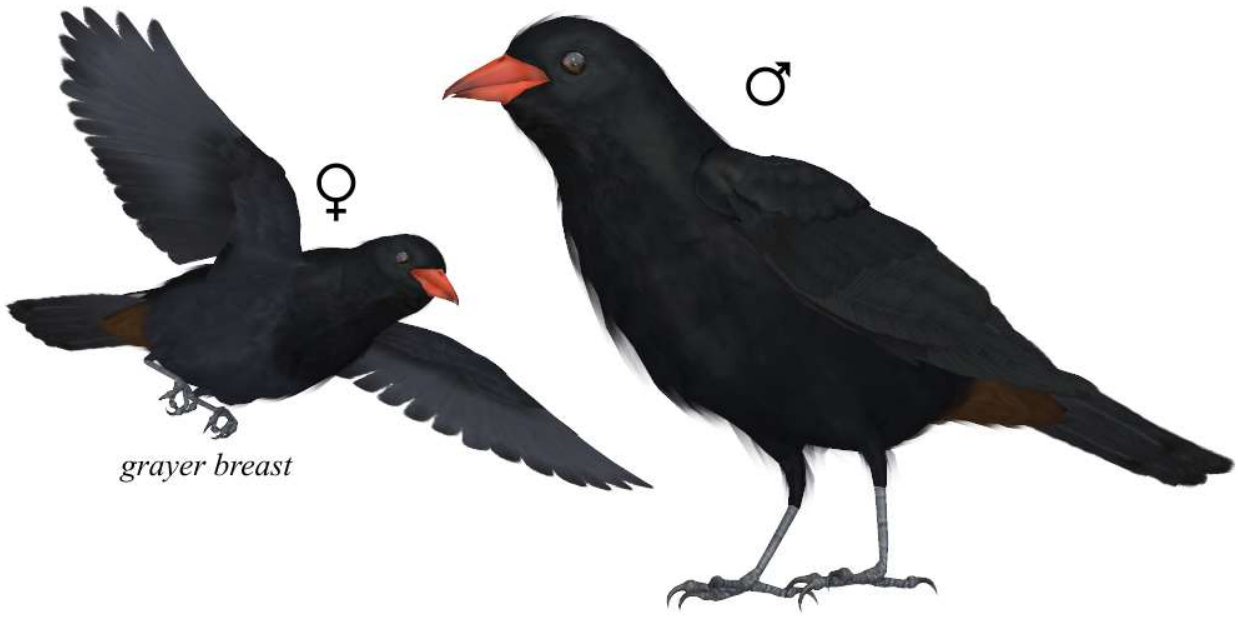
Common Name: Black Oriole
Scientific Name: *Oriolus hosii*

Size: 8.5 inches (21.5 cm)

Habitat: Asia; it is endemic to the montane forests of northwestern Borneo.

Its natural habitat is subtropical or tropical moist montane forests.

Status: Near Threatened. **Global Population:** Unknown number of mature individuals with a decreasing population. It is a restricted-range species. It is present in the Bornean Mountains EBA. It is confined to a small montane range in Sarawak, with records from only six localities. Most montane forests in region remain relatively pristine, but some recent human encroachment into this species' range may have caused some population decline. It should nevertheless be secure in several protected areas such as Gunung Mulu National Park, and several others that have been officially listed.



Diet: Omnivorous; fruits, berries, also invertebrates (e.g. termites).

It quietly forages alone, in pairs or in small groups, in the canopy. It rarely comes to the ground.

Breeding: The sexes are dimorphic. The male is entirely black with slight gloss, except for deep chestnut undertail-coverts. Its iris is dull crimson, the bill is dull pink and the legs gray to grayish black. The female is like the male, except that the lower chest and the belly are dark slate-gray, rather than black, and contrast (not sharply) with the black head, upper breast and upper-parts. The immature resembles the female. The juvenile has a gray throat and upper breast, grading into a silvery-gray belly, with a dark sooty-

grey head and upper-parts, and under-tail, with a pale orange-buff ventral region. The iris is dark, the bill blackish gray, and legs and feet pale gray.

There is no information on breeding habits.

Cool Facts: The binomial name is after Charles Hose who collected the first specimen of the species on Mount Dulit.

Common Name: Maroon Oriole
Scientific Name: *Oriolus traillii*

Size: 10-11 inches (25.5-28 cm)

Habitat: Asia; it is found in Bangladesh, Bhutan, Cambodia, India, Laos, Myanmar, Nepal, Taiwan, Thailand, Tibet, and Vietnam. In India, it is found from Himachal Pradesh east to Arunachal Pradesh and the hills of Manipur.

Its natural habitat is subtropical or tropical moist lowland forests.

Status: Least Concern. **Global Population:** Unknown number of mature individuals with a stable population.

Diet: Omnivorous; wild figs, berries, insects and nectar.

Breeding: Sexes are sexually dimorphic. It has maroon and black plumage with a black head, neck and wings with a bluish beak. The females have slightly darker bodies and the juveniles have lighter bodies. The adult male is glossy crimson-maroon in color, with black head, neck and wings and a chestnut-maroon tail. The females and immature males have a greyish-white underpart with black streaks. Coloration varies somewhat across the range, with those in the Indian Subcontinent having duller colors and those in Southeast Asia having brighter colors, also tending to somewhat reddish tones.

The maroon oriole lives alone or in pairs. The nesting season is from April to May. The nest is a deep massive cup of bast fiber that is bound with cobwebs. Both male and female birds share the parental duties.

Cool Facts: Four subspecies are recognized:

- *O. t. traillii.* First reported by Vigors in 1832. The nominate race occurs from the Himalayas to southern China, northern Indochina and northern Thailand.
- *O. t. ardens.* First reported by Swinhoe in 1862. It occurs in Taiwan
- *O. t. nigellicauda.* First reported by Swinhoe in 1870. It occurs on Hainan.
- *O. t. robinsoni.* First reported by Delacour in 1927. It is found in southern Indochina.

Special Thanks to…

...my beta team

Alisa and FlintHawk

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:

- **Wikipedia** (http://www.wikipedia.com)
- **Birdlife International** (http://www.birdlife.org)
- **Handbook of the Birds of the World Alive** (https://www.hbw.com)


Songbird
ReMix
Merchandise
PENGUINS
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