

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

# Songbird ReMix Asia

### Volume I: Storks to Bee-Eaters

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# Songbird ReMix Asia

### Volume I: Storks to Bee-Eaters

#### Introduction

The Songbird ReMix Asia Series features birds found throughout the Asian continent, from India to China and Indonesia. Each volume has a mix of bird species based on ornithological category, with a focus on either commonness, or rarity, or overall attractiveness.

Volume I has a mix of wading birds and cranes, game birds, parrots, cuckoos, swifts, trogons, kingfishers and bee-eaters.

#### **Overview and Use**

Select **Figures** in the Runtime Folder and go to the **Songbird ReMix** folder. Here you'll find an assortment of files that are easily broken into 2 groups: **Conforming Parts** and **Bird Base models**. Let's look at what they are and how you use them:

- Bird Base Models included in this volume:
  - **Songbird ReMix3 Waterfowl4 Base** This model is used with all Wading Birds and Gruiformes included in this set.
  - **Songbird ReMix3 Gamebird Base** This model is used with all Gamebirds, Pigeons and Doves included in this set.
  - **Songbird ReMix3 Parrot Base** This model is used with all Parrots included in this set.
  - **Songbird ReMix3 Gamebird Base** This model is used with all Gamebirds, Pigeons and Doves included in this set.
  - **Songbird ReMix3 Zygodatyl Base** This model is used with all Cuckoos, Coucals and Trogons included in this set.
  - **Songbird ReMix3 Syndatyl Base** This model is used with all Kingerfishers included in this set.
  - **Songbird ReMix3 Base** This model is used with all other birds included in this set.

## **Base Model Quick Reference**

Load Model(s)	To Create (apply MAT/MOR files)
Waterfowl 4 Base	Oriental Stork Eurasian Spoonbill Hooded Crane Demoiselle Crane
G Songbird	King Quail Black-Chinned Fruit Dove Cinnamon-headed Green Pigeon
Parros Base	Red-breasted Parakeet Moluccan King Parrot
Zygodactyl Zygodactyl Z Songbird- ReMit	Asian Emerald Cuckoo Pied Crested Cuckoo Sunda Coucal Sumatran Trogon Red-headed Trogon
Kingfisher Base redactyl S Congbind Remits	Crested Kingfisher
Songbird Base Songbird Remits	Whiskered Treeswift Red-bearded Bee-eater

### **Creating a Songbird ReMix Bird**

**1.** Choose what you want to load. For this example, we'll create an Oriental Stork. **2.** Load Poser or DAZ Studio. For Poser, select **FIGURES** and the Songbird ReMix folder. DAZ Studio users will select the "Poser Formats"  $\rightarrow$  "My Library"  $\rightarrow$  "FIGURES"  $\rightarrow$  "Songbird ReMix".

**3.** To create an Oriental Stork, use the **"Songbird ReMix Waterfowl4**" base model.

**4.** Go to the **POSES** folder and **Songbird ReMix** Master folder, and then select the appropriate Songbird Remix library. For DAZ Studio users, this will be found in the "Poser Formats" file section.

**5.** Select the Oriental Stork (or the bird of your choice) and load/apply it to the Songbird ReMix Waterfowl4 base model by clicking the mouse. This species pose contains both the morph and texture settings to turn the generic model into the selected bird. It will automatically apply the correct DAZ Studio material settings if you are using DAZ Studio. All character presets that use the Birds of Prey model will have a Birds of Prey (**WF4**) symbol in the lower left corner of their icons

### **Bird Characteristics**

Long-necked shorebirds will fly and stand differently depending on their species; some fly with their necks out stretched while other fly with their necks bunched in a "U" shaped position. These birds often have the same neck pose when not in flight.

Here's a guide to help you choose the correct pose:

Out-stretched Neck	Cranes, Ibises, Spoonbills and Storks
"U"-shaped Neck	Egrets and Herons

#### How to build a Songbird ReMix Character with a Conforming Crest in Poser



- 1. In the Figures section, load a Bird base Model. Then load the appropriate conforming part for the bird you're trying to create.
- 2. Conform it to the bird base model.
- 3. Select the Base Model and go to **POSES.** Select and apply the appropriate Character/Material pose setting for the bird you're creating.





- 4. The Conforming part will look wrong. That's okay—we're going to fix that now. Select the conforming part and apply appropriate Character/Material pose for the part.
- 5. Voila! Your bird is done. Just remember to select the bird base when posing and often there are additional morphs in the conforming part you can use.



# How to build a Songbird ReMix Character with a Conforming Crest in DAZ Studio

In the **Runtime** folder, select **Figures** and load the Songbird ReMix Model and the appropriate Conforming Crest in Studio. Select the Conforming Crest by selecting on the screen or in the **Scene** Tab.

Now, using the "FIT TO" command in the Parameters Tab, Select the Songbird ReMix Model. Go back to the **Scene** Tab and select the Songbird ReMix Model.



significantly and change the shape of the bird.

Now that the bird is sized, select the conforming part and apply the conforming part character settings.

Voila! Your bird is done. Just remember to select the bird base when posing and often there are Select the Studio **Content** Folder and go to the **Animals** : **SBRM** : **!CreateYour Own** : **Characters** folder and select the appropriate Songbird Remix library. Apply the Character setting to the bird base. It will probably reduce the size



additional morphs in the conforming part you can use.





### Morphs and their Use

All Songbird ReMix models have morphs that change the look of the loaded model to achieve additional movements and expressions that joint movements can't achieve. These are referred to in the Songbird ReMix model as "Action Morphs". Other morphs that are included can subtly or sometimes dramatically, alter the model to resemble specific species. These morphs are referred to as "Creation Morphs".

# Songbird ReMix Asia

## Volume I: Storks to Bee-Eaters Field Guide

Wading Birds Oriental Stork Eurasian Spoonbill

**Gruiformes** Hooded Crane Demoiselle Crane

> Gamebirds King Quail

**Pigeons and Doves** Black-Chinned Fruit Dove Cinnamon-headed Green Pigeon

> Parrots and their Allies Red-breasted Parakeet

Moluccan King Parrot

**Cuckoos** Asian Emerald Cuckoo Pied Crested Cuckoo

Swifts Whiskered Treeswift

Sunda Coucal

Trogons and Barbets Sumatran Trogon Red-headed Trogon

Kishfishers Crested Kingfisher

Bee-eaters Red-bearded Bee-eater

#### Common Name: Oriental Stork Scientific Name: Ciconia boyciana

Size: 40-51 inches (100-129 cm); Wingspan: 87 inches (195-200 cm)

**Habitat**: Asia; it breeds in the Amur and Ussuri basins along the border of Russia and mainland China, and small numbers breed in the lower reaches of the Wuyuerhe river in Heilongjiang province. It is a summer vagrant in eastern Mongolia. The main wintering grounds are in the lower Yangtze basin and southern China, as far south as Taiwan (China) and Hong Kong (China). Small numbers winter in North Korea, South Korea and Japan, and irregularly in the Philippines.

north-eastern India, Myanmar and Bangladesh.

It is found in marshes with scattered clumps of trees, wet grassland, riverbanks, preferably in woodland. In Japan used to forage extensively in cultivation. especially paddyfields, breeding in nearby woods. Foraging is generally in wetlands; those breeding at the Yellow River Delta, China, predominantly use reed swamps and open water areas.

#### Status: Endangered. Global population:

1,000-2,499 individuals with a decreasing population trend. Significant declines in breeding birds have been reported in Russia: its overall population is suspected



to be decreasing rapidly, in line with levels of deforestation and the drainage of

wetlands for agricultural development.

Deforestation and drainage of wetlands for agricultural development are the main causes of decline in its breeding grounds. In Russia, spring fires threaten breeding sites and kill nest trees. Reclamation of wetlands, particularly in the Yangtze basin, has reduced the area of habitat for wintering birds and caused disturbance. Over-fishing is a problem at many breeding and wintering sites in China. A satellite-tracking study indicated very high juvenile mortality on passage and in winter. Wintering birds move large distances between sites. Birds are hunted and collected for zoos, in Russia and China, despite legal protection. Dams on the Amur River and the Three Gorges Dam in China are likely to have detrimental impacts upon the species, although they may affect this species less severely than others as they feed on fish and are therefore less susceptible to changes in water levels.

**Diet:** Mainly fish, frogs, insects, small birds and reptiles, as well as rodents.

**Nesting:** Sexes are alike in appearance. A typical white-and-black stork with distinctive black bill. It is all white, apart from contrasting black lower scapulars, tertials, greater coverts, primaries and secondaries. The stork has red skin around its eye, with a yellowish iris and black bill. It has red legs. Females are slightly smaller than males. Juveniles have browner greater coverts, duller legs and orange bills.

The Oriental stork is a solitary bird except during the breeding season. It nests on tall trees and artificial structures such as electricity pylons. The female usually lays between two to six eggs.

**Cool Facts:** Reintroduction programs are underway in South Korea and Japan. In 2008, there were said to be about 100 individuals in Hyogo Prefecture, Japan, following the re-introduction of the species using chicks from Russia . A number of conservation actions have been implemented locally to protect birds breeding near Daqing City, Heilongjiang, China. In May 2007, a hatchling was reported in Japan for the first time in 40 years in the wild. It was offspring of two storks who were bred in captivity.

The Oriental Stork is closely related to the European white stork and was formerly treated as a subspecies.

#### Common Name: Eurasian Spoonbill Scientific Name: Platalea leucorodia

Size: 40-51 inches (100-129 cm); Wingspan: 87 inches (222 cm)

**Habitat**: Eurasia and Africa; breeding from the United Kingdom and Spain in the west through to Japan, and also in North Africa. In Europe, only The Netherlands, Spain, Austria, Hungary and Greece have sizable populations. Most birds migrate to the tropics in winter, with European breeders mainly going to Africa, but a few remaining in mild winter areas of western Europe south to the United

Kingdom.Palearctic breeding populations are fully migratory, but may only travel short distances while other populations are resident and nomadic or partially migratory. In the north of its range the species breeds in the local spring but in the tropics the timing of breeding coincides with the rains.

Spoonbills shows a preference for extensive shallow (less than 30 cm deep) wetlands with mud, clay or fine sand substrates, generally avoiding waters with rocky substrates, thick vegetation or swift currents . It inhabits either fresh, brackish



or saline marshes, rivers, lakes, flooded areas and mangrove swamps, especially those with islands for nesting or dense emergent vegetation (such as reed beds) and scattered trees or shrubs (preferably willow, oak or poplar). It may also frequent sheltered marine habitats during the winter such as deltas, estuaries, tidal creeks and coastal lagoons.

**Status:** Least Concern. **Global population:** 66,000-140,000 individuals with a uncertain population trend. The species is threatened by habitat degradation through drainage and pollution, and is especially affected by the disappearance of reed swamps due to agricultural and hydroelectric development. Over-fishing and disturbance have caused population declines in Greece, and human exploitation of eggs and nestlings for food has threatened the species in the past. The species is also susceptible to avian influenza so may be threatened by future outbreaks of the virus.

**Diet:** Mainly adult and larval insects (such as water beetles, dragonflies, caddisflies, locusts and flies), mollusks, crustaceans, worms, leeches, frogs, tadpoles and small fish. It may also take algae or small fragments of aquatic plants.

It is most active during the morning and evening, although in coastal areas. it forages at low tide regardless of the time of day.

**Nesting:** The breeding bird is all white except for its dark legs, black bill with a yellow tip, and a yellow breast patch like a pelican. It has a crest in the breeding season. Non-breeders lack the crest and breast patch, and immature birds have a pale bill and black tips to the primary flight feathers. Unlike herons, spoonbills fly with their necks outstretched. The Eurasian spoonbill differs from the African spoonbill with which in overlaps in winter, in that the latter species has a red face and legs, and no crest. Females look similar but are slightly smaller than males.

The species usually nests in monospecific colonies or in small monospecific groups amidst mixed-species colonies. When not breeding the species forages singly or in small flocks of up to 100 individuals and migrates in flocks of up to 100 individuals in Africa.

The nest is a platform of sticks and vegetation constructed on the ground on islands in lakes and rivers, or alternatively in dense stands of emergent vegetation, bushes, mangroves or deciduous trees. The species nests in colonies within which neighboring nests are usually placed 1-2 m apart or touching . Breeding colonies are sited within 10-15 km of feeding areas, often much less.

**Cool Facts:** They are mostly silent. Even at their breeding colonies, the main sounds are bill snapping, occasional deep grunting and occasional trumpeting noises.

The Eurasian spoonbill has three subspecies:

- *P. I. leucorodia.* First reported by Linnaeus in 1758. The nominate species occupies all the range (except for the regions stated in as below).
- *P. I. balsaci.* First reported by Naurois & Roux in 1974. It is found on the islands off the Banc d'Arguin, Mauritania.

• *P. I. archeri.* First reported by Neumann in 1928. It is found on the coasts of the Red Sea and Somalia.

#### Common Name: Hooded Crane Scientific Name: Grus monacha

Size: 39 inches (100 cm); Wingspan: 74 inches (197 cm)

**Habitat**: Asia; breeds in south-central and south-eastern Siberia and Mongolia. Over 80% of its population winters at Izumi, southern Japan. There are also wintering grounds in South Korea and China.

It breeds in remote, wooded, upland bogs on gently sloping foothills and flat river terraces, mostly within the permafrost zone. It winters in freshwater marshes, wet grassland, coastal tidal flats and farmland.



**Status:** Vulnerable. **Global population:** 11,600 individuals with a decreasing population trend. This species's population is suspected to be decreasing at a moderate rate, in line with levels of wetland loss and degradation in its wintering grounds, primarily as a result of reclamation for development and dam building. Based upon winter counts, it is increasing at Izumi in Japan and Suncheon Bay in South Korea but the species is declining at all seven of its other known wintering sites.

Conversion of rice-paddies to cotton fields at Longgan Hu and Dongting Hu has

caused declines. A newly discovered wintering site at Suncheon Bay, South Korea, is threatened by development. The artificially high concentration of birds at Izumi, as a result of supplementary feeding, risks a major population reduction from disease or another catastrophe. Other threats in China include pollution of coastal waters, invasive cordgrass (*Spartina alterniflora*) in tidal areas, pesticide poisoning, increased levels of human disturbance and over-fishing. Some poaching and hunting of breeding birds occurs.

Diet: Mainly fish, frogs, insects, small birds and reptiles, as well as rodents.

**Nesting:** Adult crowns are unfeathered, red, and covered with black hairlike bristles. The head and neck are snow white, which extends down the neck. The body plumage is otherwise slate gray. The primaries, secondaries, tail, and tail coverts are black. Eye color is hazel yellow to orange brown, legs and toes are nearly black. Males and females are virtually indistinguishable, although males tend to be slightly larger in size.

Juvenile crown are covered with black and white feathers during the first year, and exhibit some brownish or grayish wash on their body feathers.

Mated pairs of cranes, including Hooded Cranes, engage in unison calling, which is a complex and extended series of coordinated calls. The birds stand in a specific posture, usually with their heads thrown back and beaks skyward during the display. The male always lifts up his wings over his back during the unison call while the female keeps her wings folded at her sides. Hooded Crane males initiate the display and utter one call for every two female calls. All cranes also engage in dancing, which includes various behaviors such as bowing, jumping, running, stick or grass tossing, and wing flapping. Dancing can occur at any age and is commonly associated with courtship, however, it is generally believed to be a normal part of motor development for cranes and can serve to thwart aggression, relieve tension, and strengthen the pair bond.

Hooded Cranes nest in isolated, widely scattered bogs in the taiga and in other forested wetlands. Mossy areas are preferred with widely scattered larch trees. Nests are constructed of damp moss, peat, sedge stalks and leaves, and branches of larch and birch. Females usually lay two eggs and incubation (by both sexes) lasts 27-30 days. The male takes the primary role in defending the nest against possible danger. Chicks fledge (first flight) at approximately 75 days.

**Cool Facts:** Hooded Cranes nest in such remote forested wetlands in southeastern Siberia that it was not until early 1974 that the first nest was located by biologists.

Since the early 1950s, the Government of Japan has allocated funds to feed cranes in winter. From several hundred cranes after the Second World War, the numbers of Hooded Cranes at the feeding station near the town of Izumi in

southern Japan, has increased from several hundred to more than 8,000. Conservationists worldwide are concerned that an outbreak of disease at Izumi could destroy the majority of the world's Hooded Cranes estimated to number about 10,000. The <u>International Crane Foundation (ICF)</u> has repeatedly communicated their concerns to Japanese officials in Tokyo.

In South Korea a formerly unknown wintering population of about 100 Hooded Cranes was discovered in 1996 on Sunshon Bay, an estuary in the far south peninsula. ICF volunteer, Fran Kaliher, spent much of the winter of 2002 at the site and in concert with Korean colleagues studied the ecology and habitat needs of these cranes. At that time, the population had increased to 130 cranes, including at least 25 immature birds. This area has recently been protected as a special nature reserve.

The <u>International Crane Foundation</u> is also involved with the protection of wintering sites for Hooded Cranes in China.

Recently, with support from the Henry Luce Foundation, ICF is partnering with educators and nature reserve staff at the Zhalong Nature Reserve and Changlindao Nature Reserve in northeastern China to foster increased cooperation and understanding of the environmental issues affecting important breeding and migration corridors for Hooded, Red-crowned and White-naped cranes.

#### **Common Name:** Demoiselle Crane **Scientific Name:** *Anthropoides virgo*

Size: 34-39 inches (85-100 cm); Wingspan: 61-71 inches (155-180 cm)

**Habitat**: Eurasia and Africa; breeding in central Eurasia, ranging from the Black Sea to Mongolia and North Eastern China. There is also a small breeding



population in Turkey. These cranes are migratory birds. Birds from western Eurasia will spend the winter in Africa whilst the birds from Asia, Mongolia and China will spend the winter in the Indian subcontinent.

The demoiselle crane lives in a variety of different environments, including desert areas and numerous types of grasslands (flooded, mountain, temperate and tropical grassland) which are often within a few hundred meters of streams or lakes. However, when nesting, they prefer patchy areas of vegetation which is tall enough to conceal them and their nests, yet short enough to allow them look out for predators whilst incubating their eggs.

Status: Least Concern. Global population: 200,000-240,000

individuals with a decreasing population trend. While not listed as endangered, their range has decreased and their habitats are slowly being destroyed. Scientists record the last sighted breeding in Tunisia and Morocco was in the 1930s.

**Diet:** Mainly seeds (especially of grasses) and other plant materials; also insects, especially beetles (*Coleoptera*) in summer.

**Nesting:** Both sexes look alike. The demoiselle crane has long legs, a long neck and a long, compressed bill. Its body is light bluish gray with light gray on the crown and along the back of the neck and the nape. The face and front of the neck is dark gray with long, pointed feathers hanging over the breast area. White ear tufts circle the sides and back of head. The iris is red and the beak is olive at the base, yellowish at the middle and orange at the tip. The legs and toes are black, as are the primary and secondary flight feathers, and the tail feathers are gray with black tips.

The mating dance of crane is spectacular. The birds walk stiffly around each other with quick steps, wings half spread, alternately leaping high in the air. During this display, the cranes bow deeply and stretch. Next, the cranes pick up sticks or pieces of grass, throw them in the air, and stab at them with their beak as they come down. Both sexes, mature and immature, take part in the dances. Cranes form lifelong monogamous pair bonds.

In nesting areas, Demoiselle Cranes prefer patchy vegetation of sufficient height to conceal them and their nest, but short enough to allow them to look out while incubating. Small pebbles and some thin bedding may be gathered together, but eggs are often laid directly on the ground. Females usually lay two eggs and incubation (by both sexes) lasts 27-29 days. The male takes the primary role in defending the nest against possible danger. Chicks fledge (first flight) at 55-65 days, which is the shortest of any crane species.

**Cool Facts:** Demoiselle cranes are the smallest of all crane species and the second most abundant of the world's cranes (only the sandhill crane is more numerous).

Demoiselles will often fake a wing injury to distract predators from their nests.

During migration cranes fly with their head and neck straight and their feet and legs straight behind them. Demoiselle cranes have to take one of the toughest migrations in the world. In late August through September, they gather in flocks of up to 400 individuals and prepare for their flight to their winter range. During their migratory flight south, demoiselles fly like all cranes, with their head and neck straight forward and their feet and legs straight behind, reaching altitudes of 16,000-26,000 feet (4,875-7,925 m). Along their arduous journey they have to cross the Himalayan mountains to get to their over-wintering grounds in India. Many die from fatigue, hunger and predation from golden eagles. Simpler, lower routes are possible, such as crossing the range via the Khyber Pass. However, their presently preferred route has been hard-wired by countless cycles of migration. At their wintering grounds, demoiselles have been observed flocking with common cranes, their combined totals reaching up to 20,000 individuals. Demoiselles maintain separate social groups within the larger flock. In March and April, they begin their long spring journey back to their northern nesting grounds.

Demoiselle cranes are protected by a few cultures in many parts of its range. In several Islamic regions, the birds are held in high regard because the Koran mentions them. In Mongolia and parts of India they are considered lucky birds and are protected by local people. The demoiselle crane is known as the Koonj in the languages of North India, and figure prominently in the literature, poetry and idiom of the region. Beautiful women are often compared to the koonj because its long and thin shape is considered graceful. Metaphorical references are also often made to the koonj for people who have ventured far from home or undertaken hazardous journeys.

The flying formation of the koonj during migrations also inspired infantry formations in ancient India.

#### Common Name: King Quail Scientific Name: Synoicus chinensis

Size: inches (12-15 cm); Wingspan: inches (25 cm)

Habitat: Asia and Oceania; breeding in southeastern Asia to Oceania.

They prefer dense and swampy grasslands, shrub lands, swamp edges, cultivated areas such as rice paddies.



**Status:** Least Concern. **Global population:** Unknown amount of adult individuals. The population is suspected to be stable in the absence of evidence for any declines or substantial threats. This species is listed as threatened on the Victorian Flora and Fauna Guarantee Act (Australia 1988).

**Diet:** Mainly grass seeds, green blades and some small insects (especially termites), both adults and larvae. They forage on the ground.

**Nesting:** Sexes are dimorphic. Males are overall dark brownish-blue with a white and black face and throat. The breast is lighter bluish-gray, with a chestnut-red belly. The feet are yellow, bill is black. Hens are mottled brown overall and lack the white and black markings on the face and throat.

Clutch size varies anywhere from 5 to 13 eggs. Before incubation starts all the eggs composing the clutch will be laid. In captivity, if the female lays too many eggs, they should be taken, as after about 10 days they go cold and die. In captivity, the ideal number of eggs in a clutch is 6 to 8. The baby quails hatch after about 19 days and look a lot like chicken chicks but smaller.

**Cool Facts:** King quail are also known as the button quail, Chinese painted quail, Chung-Chi, Asian blue quail or blue-breasted quail.

This species is the smallest "true quail" and is quite common in aviculture worldwide. This quail has been very popular in aviculture and numerous mutations have been developed. These small quail are effective scavengers and keep the bottom of cages clean. They have been known to become hand-tame.

*Synoicus chinensis* and *S. adansonii* were previously placed in the genus *Coturnix* and lumped as *C. chinensis* following Dowsett and Forbes-Watson (1993) and a review by the BirdLife Taxonomic Working Group, and before then were split as *C. chinensis* and *C. adansonii* following Sibley and Monroe (1990, 1993).

There are nine recognized subspecies:

- *S. c. chinensis,* first reported by Linnaeus in 1766. The nominate species is found from India to Sri Lanka, Malaya, Indochina, southeastern China and Taiwan.
- *S. c. colletti,* first reported by Mathews in 1912. This subspecies is found in northern Australia.
- *S. c. lepida,* first reported by Hartlaub in 1879. This subspecies is found in Bismarck Archipelago
- *S. c. lineata,* first reported by Scopoli in 1786. This subspecies is found in Philippines, Borneo, Lesser Sundas, Sulawesi and Sula Islands.
- S. c. Lineatulus, , first reported by Rensch in 1931. This subspecies is found in W & C Lesser Sundas (Lombok E to Timor)
- *S. c. novaeguineae,* first reported by Rand in 1941. This subspecies is found in montane forests of New Guinea
- *S. c. palmeri,* first reported by Riley in 1919. This subspecies is found in Sumatra and Java
- *S. c. papuensis,* first reported by Mayr and Rand in 1936. This subspecies is found in southeastern New Guinea
- *S. c. trinkutensis,* first reported by Richmond in 1902. This subspecies is found in Andaman and Nicobar Islands. It is known as the Nicobar blue-breasted quail.
- *S. c. victoriae,* first reported by Mathews in 1912. This subspecies is found in eastern Australia

## **Common Name:** Black-chinned Fruit Dove **Scientific Name:** *Ptilinopus leclancheri*

Size: 10.2-11 inches (26-28 cm); Wingspan: inches ( cm)

Habitat: Asia; Taiwan and the Philippines.

This dove inhabits forest and dense second growth in the lowlands up to at least 700 m.



**Status:** Least Concern. **Global population:** Unknown amount of adult individuals. The population is suspected to be stable in the absence of evidence for any declines or substantial threats. It is fairly widely distributed over it's range, but considered to be generally uncommon on most islands.

Diet: Mainly fruit and seeds. Fruit taken taken directly from the branches.

**Nesting:** Sexes are dimorphic. The male is a colorful bird with a green belly and wings, a brown tail, a whitish gray head and neck with a purple base, red iris and a small black patch under its yellow bill. The female has a green head, neck and breast.

Nesting in Luzon takes place in April and on Camiguin Norte in April through June. The female lays 1-2 eggs in a typical pigeon nest (twigs and grasses) in large shrub or tree.

**Cool Facts:** It is also known as the Black-throated Fruit Dove or Leclancher's Dove.

This species has four subspecies:

- *R. I. taiwanus,* first reported by Ripley in 1962. This subspecies is found in Taiwan (mainly in south).
- *R. I. longialis,* first reported by Manuel in 1936. This subspecies is found in Lanyu Island (off southeastern Taiwan), and Batan, Calayan and Camiguin Norte (northern Philippines).
- *R. I. leclancheri,* first reported by Bonaparte in 1855. The nominate species is found in the Philippine Islands (except Northern isles, Calamian Group, Palawan, Basilan and Sulu Archipelago).
- *R. I. gironieri,* first reported by J. P. Verreaux & Des Murs in 1862. This subspecies is found in the southwestern Philippines: Calamian Group (Calauit, Busuanga and Culion) and Palawan.

## **Common Name:** Cinnamon-headed Green Pigeon **Scientific Name:** *Treron fulvicollis*

Size: 9.8-10.6 inches (25-27 cm); Wingspan: inches ( cm)

**Habitat**: Asia; confined to the Sundaic lowlands, where it is known from south Tenasserim, Myanmar, peninsular Thailand (very uncommon), Sabah, Sarawak and Peninsular Malaysia, Singapore (non-breeding visitor), Brunei (very uncommon) and Kalimantan (where not uncommon) and Sumatra (including the Riau and Lingga archipelagos, Bangka, Belitung, Siberut and Nias islands) and Indonesia.

It occurs in freshwater swamp forest, peat-swamp forest, mangroves, coastal



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forest, open scrub and secondary growth, including wooded gardens, to 1,200 m. Non-breeders occasionally visit higher elevation dry land forests.

**Status:** Near Threatened. **Global population:** Unknown amount of adult individuals with a declining population trend. Forest destruction in the Sundaic lowlands of Indonesia and Malaysia has been extensive (Kalimantan lost nearly 25% of its evergreen forest during 1985-1997, and Sumatra lost almost 30% of its 1985 cover), because of a variety of factors, including the escalation of logging and land conversion, with deliberate targeting of all remaining stands of valuable

timber including those inside protected areas, plus forest fires (particularly in 1997-1998), and declines are compounded by trapping for the cage-bird industry. However, the species's use of secondary growth and higher elevations implies that it is not immediately threatened.

**Diet:** Mainly fruit and seeds. Fruit taken taken directly from the branches.

**Nesting:** Sexes are dimorphic. The male's head and neck are a rusty purplish chestnut becoming dark greenish gold on breast and dark reddish purple on mantle and lesser wing-coverts. The female has a green head, neck and breast.

Nesting in Sumatra occurs in February through April; in Borneo it occurs in February; in Peninsular Malaysia it occurs in January and February. The female lays 1-2 eggs in a typical pigeon nest (twigs and grasses) in large shrub or tree.

Cool Facts: It is also known as the Cinnamon-headed Pigeon.

This species has four subspecies:

- *T. f. fulvicollis,* first reported by Wagler in 1827. The nominate species is found in the lowlands of Malay Peninsula from southern Myanmar, southern Tenasserim; including Riau and Lingga Archipelagos, to Sumatra, Bangka and Belitung.
- *T. f. melopogenys,* first reported by Oberholser, 1912. This subspecies is found in Nias I and Siberut I (off western Sumatra).
- *T. f. oberholseri,* first reported by Chasen, 1935. This subspecies is found in Natuna Island (off northwestern Borneo).
- *T. f. baramensis,* first reported by A. B. Meyer, 1891. This subspecies is found in Borneo and islands off North Bornean coast.

Common Name: Red-breasted Parakeet Scientific Name: *Psittacula alexandri* 



Size: 13-15 inches (33-38 cm); Wingspan: inches ( cm)

**Habitat**: Asia; occurs in South and South-East Asia, from northern and eastern India (including the Andaman Islands), Nepal, Bhutan and Bangladesh, ranging through Myanmar, Thailand, Laos, Cambodia, Vietnam and southern China (Guangxi, Guangdong and Hainan), with populations in Indonesia, on Java, Bali Karimunjawa, Kangean, Simeulue, Nias and Banyak, and in Kalimantan (where probably introduced from Java). This species is generally sedentary but has local irregular movements often coinciding with food supply.

This species uses a variety of forest and wooded habitats, including

human-altered areas, usually below 2,000 m. Habitats utilized by the species include dry forest, moist deciduous secondary forest, mangroves, cultivated areas with trees and human settlements.

**Status:** Near Threatened. **Global population:** Unknown amount of adult individuals with a declining population trend. Declines and local extinctions in recent decades have been attributed largely to capture for the live bird trade. Hunting and trapping are regarded as major threats to the species in Nepal, where it is also threatened by forest loss. Its nasal voice makes the species a popular cage-bird in Nepal, and its vocal habits when breeding and tendency to form large flocks when not breeding make it susceptible to trappers. These factors drive illicit hunting and trapping in protected areas, and it is persecuted by farmers because of its crop-raiding habits. Likewise in Bangladesh, the species is targeted for the cage-bird trade and is likely to be impacted by the removal of large trees. The species's almost total disappearance from northern Laos is thought to be driven mainly by habitat loss through conversion to agriculture. The loss and fragmentation of forest are likely to accelerate in Cambodia in the near future, given that many large agro-industrial concessions have been granted recently.

**Diet:** Wild and cultivated fruits, berries, flowers, nectar, nuts and seeds, leaves and cereals such as rice and maize.

**Nesting:** Sexes are similar. Nominate adults have green upper-parts; a green-yellow median wing coverts forming large patch on wing; gray heads, with varying tinges of blue, and around eyes washed with green; a black narrow line from forehead to eyes and black wide band across lower cheeks. They have a salmon/pink throat which extends to upper abdomen (which is duller in female); a green lower abdomen to under tail coverts with blue suffusion; a blue central tail feathers tipped with yellow-green. Their bills are coral red and their eyes are pale yellow.

Juveniles have green crowns and underparts; dark brown lower cheeks; brown/gray wash on green sides of head and green median wing coverts with yellow/green margins. The tail is shorter than adults. The bill is pale red and the eyes are gray.

They nest in tree cavities and lay a clutch of 2-4 eggs. Breeding generally takes place from December to April, although almost year-round on Java.

**Cool Facts:** The scientific specific name commemorates Alexander the Great whose armies introduced this parakeet to Greece. An alternative name is the moustached parakeet depending on subspecies.

This species has many subspecies:

• *P. a. abbotti,* first reported by Oberholser in 1919. This subspecies is found in the Andaman Islands. Both adults are similar to *P. a. fasciata,* but in general

color paler and larger in size.

- *P. a. alexandri,* first reported by Linnaeus in 1758. The nominate species is found in Java, Bali and extreme South Borneo. It has been introduced to Singapore and Central Japan; in Singapore, it has been breeding regularly since mid-1980s. Borneo population is commonly considered introduced, but is debated.
- *P. a. cala,* first reported by Oberholser in 1912. This subspecies is found in Simeulue I, off northwestern Sumatra. Both adults are similar to *P. a. fasciata,* but larger in size; paler green upper parts; less lilac/blue wash on throat to upper abdomen, particularly in the female.
- *P. a. dammermani,* first reported by Chasen & Kloss in 1932. This subspecies is found in Karimunjawa Island, off central-northern Java. Both adults are similar to *P. a. alexandri,* but larger in size; the crown more blue and the bill heavier.
- *P. a. fasciata,* first reported by Statius Muller in 1776. This subspecies is found in Northern India (from West Uttarakhand) Eastward through Nepal, Bhutan, East Bangladesh, Myanmar (Southward to Tenasserim), Thailand and Indochina to Southern China and Hainan. The male differs from *P. a. alexandri* by the head being more blue/gray; dark pink throat to upper abdomen suffused with lilac/blue. The upper mandible is red and the lower mandible is brown/black. The female's breast less washed with lilac and reaching up the sides of neck in front of green and the hind neck is gray. The head is less blue and the bill is black. Juveniles have a orange/red bill.
- *P. a. kangeanensis,* first reported by Hoogerwerf in 1962. This subspecies is found in Kangean Island, off notheastern Java. Both adults are similar to *P. a. alexandri*, but have a minimal blue wash on gray head and a larger bill; the yellow wing patch in male more extensive as well.
- *P. a. major,* first reported by Richmond in 1902. This subspecies is found in Lasia I and Babi I (off southeastern Simeulue). Both adults are similar to *P. a. cala*, but larger in size. The male has a less blue wash on lower abdomen to under tail coverts.
- *P. a. perionca,* first reported by Oberholser in 1912. This subspecies is found in Nias I, off Western Sumatra. Both adults are similar to *P. a.* major, but are slightly smaller in size. The male has a brighter green lower abdomen to under tail coverts.

## **Common Name:** Moluccan King Parrot **Scientific Name:** *Alisterus amboinensis*

Size: 13.6-15.7 inches (35-40 cm); Wingspan: inches ( cm)

**Habitat**: Asia; it is endemic to Peleng Island, Maluku and West Papua in Indonesia.

This species inhabits rain forests, but sometimes enters nearby plantations and gardens. Exceptionally, it occurs at altitude up to 2100 m, but more commonly below 1200 m (New Guinea) or 1600 m (Maluku).

#### Status: Least Concern. Global population:

Unknown amount of adult individuals with a declining population trend. The population is suspected to be in decline owing to ongoing habitat destruction and the pet bird trade.

**Diet:** Wild and cultivated fruit, berries, seeds and buds.

Encountered alone or in pairs, occasionally in small groups, it mainly frequents dense cover in the lower and mid-levels of forests. It is inconspicuous and rather quiet, except in flight.

Nesting: Sexes are



similar. Adults have red heads and underparts. From the mantle to the upper tail

coverts are violet/blue. The wings are soft green and the tail is black washed with violet/blue outside feathers with dull pink edging. The upper mandible is orange/red tipped with black and the lower mandible is black. Eyes are orange.

Juveniles have green mantles and side tail feathers tipped with soft red. The bill brown/black with the tip paler. The eyes are dark brown. Birds reach maturity in one year.

Nesting takes place in a tree-hollow. The breeding season begins in February and March, although breeding has not been observed in the wild, in captivity the clutch consists of two eggs which are incubated for 19 days. After hatching the chicks are ready to fledge at nine weeks old.

**Cool Facts:** Calls are high-pitched and slightly ringing, repeated by male at rate of two notes every three seconds for up to 20 seconds. Also screeching from both male and female.

There are six subspecies:

- A. a. amboinensis, first reported by Linnaeus in 1766, is the nominate subspecies and found on Ambon and Seram.
- *A. a. buruensis,* first reported by Salvadori in 1876. It is found on Buru in central Maluku. It is similar to *A. a. sulaensis* but with more tail feathers edged with pink. The bill is also gray/black in both sexes.
- *A. a. dorsalis,* first reported by Quoy & Gaimard in 1830. It is found in West Papua. It is similar to *A. a. amboinensis* but pink on tail feathers is absent. It is also slightly darker red on head and the under parts.
- *A. a. hypophonius,* first reported by S. Müller in 1843. It is endemic to Halmahera in northern Maluku. It is similar to *A. a. amboinensis* but wings and wing coverts are deep blue and the pink on tail feathers is absent.
- *A. a. sulaensis,* first reported by Reichenow in 1881. It is found on the Sula Islands. It is similar to *A. a. amboinensis* but there is a green stripe across theupper mantle and there is no pink edging on tail feathers.
- *A. a. versicolor,* first reported by Neumann in 1939. It is endemic to the island of Peleng of the Banggai Islands. It is different from *A. a. sulaensis* by having a uniformly blue mantle and smaller in size than *A. a. amboinensis.*

#### **Common Name:** Asian Emerald Cuckoo **Scientific Name:** *Chrysococcyx maculatus*

Size: inches (17 cm); Wingspan: inches ( cm)

**Habitat**: Asia; breeding range: the Himalayas from about Garhwal eastward through Nepal, Bhutan, Northeast India, Bangladesh and Southern China (Southeast Tibet, Sichuan, Yunnan, Hubei, Guizhou, Guangxi, Hainan), Southward to Myanmar, Northwest Thailand, North Laos and North & Central Vietnam. It winters South to Southern India, Sri Lanka, Andaman and Nicobar Islands.

Indochina and Malay Peninsula apparently small numbers reaching Sumatra.

It is found in subtropical or tropical moist lowland forests and subtropical or tropical moist montane forests.

Status: Least Concern. Global population:



Unknown amount of adult individuals. It is scarce in Nepal and probably elsewhere in NW of range; similarly scarce in Myanmar, and uncommon in Thailand. Overall situation poorly known, but species appears to be at best uncommon in any part of range, both in breeding and in wintering areas.

**Diet:** Insects, feeding on ants, caterpillars, bugs. Forages mainly in tree canopy, often taking prey on the wing.

**Nesting:** Sexes are dimorphic. Adult male glossy green above and from chin to upper breast, belly white with green and bronze bars, underside of wing with white band; eye-ring orange-red, iris red to red-brown, bill orange with black tip, feet green. Female bronze-green above, crown and nape light rufous, tail barred chestnut and black, green in centre; white below, tinged rufous on throat and flanks, barred with bronze; iris brown, bill yellow with black tip, feet brownish green. Juvenile variable, head rufous (some white-barred on crown) or barred

green and white, or head and mantle rufous, back and wing-coverts barred rufous and bronze-green, or rufous and brown, tail barred brown and rufous; throat and breast rufous with bronze bars, belly white barred with brown, white underwing band; bill black above, flesh below, feet grey.

Breeds April through July. It is brood-parasitic, laying eggs in the nests of the Crimson Sunbird (Aethopyga siparaja) and Little Spiderhunter.

**Cool Facts:** Calls are *"chweek"* in flight; a trill; also loud whistled twitters. It is one of the smallest parasitic cuckoos in China.

#### Common Name: Pied Crested Cuckoo Scientific Name: Clamator jacobinus



Size: 13.4 inches (34 cm); Wingspan: inches ( cm)

**Habitat**: Asia and Africa; an intra-African migrant in North and South, arriving on breeding grounds with rains and abundance of caterpillars. In far W Africa, breeds in Mauritania and migrates to Senegal and Gambia, where recent records are all in Nov–Dec; in Mali, present May–Oct; in Togo and Nigeria mainly seasonal, in N in Apr–Sept and in S in dry season; in savanna and forest edge in Gabon,

juveniles appear as rare migrants in Dec. In E Africa a diurnal migrant, observed to move NW over Serengeti Plains in Feb–Mar. In S Africa, appears in E Cape in late Oct; moves towards more equatorial woodlands for dry season. Black morph serratus appears in austral winter N to Kenya, Ethiopia, Sudan and Chad, occasionally wanders to W Africa. Seasonal with the rains in India, occurring NE India May–Sept and disappearing early in dry season; present in C Myanmar May to early Nov. Nominate jacobinus from India winters in E and C Africa. Race pica nearly unknown in winter in Asia (one record Nepal), migrates to Africa, where not distinguishable from African pica: most Asian migrants move across Arabian Sea and Indian Ocean; more than 20 records in Oman and S Arabia, mainly in migration season; also observed on Seychelles during migration period. Recorded as vagrant in several other countries including Thailand, Cambodia, the Philippines and Japan; however, a bird in S Finland in Sept was regarded as a likely escape.

Open woodland and scrub, dry thorn savanna, thorny jungle, plains. In India mainly in lowlands, plains and hills up to 2000 m, on migration to 4200 m in Himalayas; in Africa to 3000 m, but mainly below 1500 m.

**Status:** Least Concern. **Global population:** Unknown amount of adult individuals. Reported to be generally common, or at least not uncommon, throughout much of its extensive breeding range, e.g. common in parts of S India in Jul–Aug. No known threats to its numbers or habitats. May have an adverse impact on the breeding success of its host populations: e.g. 36% of Cape Bulbul (Pycnonotus capensis) nests were parasitized locally in S Africa.

**Diet:** Insects, mainly hairy caterpillars, also grasshoppers, mantids, termites; forest snails; eggs of host birds; berries. Feeds mainly in trees and bushes, also descends to ground and hops in search of food.

**Nesting:** Sexes are similar. Adult glossy black above with black crest, white patch on black wings and white tips to black tail; white below; iris brown, bill black, feet slate grey. Juvenile brown to sooty black above, whitish below with fulvous or grey on breast, tail spots buff (not white); iris pale yellow. Races differ in plumage and size: jacobinus smaller, pica larger, both unstreaked below; serratus larger, with two colour morphs, one variably greyish white to white below with streaked throat, the other, mainly in coastal S Africa, all glossy black with white wing patch and no white in tail.

Breeds in rains: in N India Jun–Aug, and in S Nilgiris Jan–Mar; in W Africa May–Jul; in Ethiopia Mar–Oct; in E Africa season coincides with the local rains, E of Rift Valley occurring Mar–May, from Rift westwards in Mar–Aug; in S Africa Nov–Mar. Brood-parasitic, with hosts mainly Turdoides babblers: in India Common Babbler (T. caudatus), Jungle Babbler (T. striatus) and Large Grey Babbler (T. malcolmi); in Mauritania, Kenya and Ethiopia Fulvous Chatterer (T. fulvus) and Rufous Chatterer (T. rubiginosus); in S Africa bulbuls (Pycnonotus, Andropadus importunus) and Fiscal Shrikes (Lanius collaris). Eggs blue in India, Sri Lanka and Africa N of 14° S, white in S Africa, rarely white in Mali and Kenya; 24 x 19 mm (India), 27 x 22 mm (S Africa); incubation 11–12 days. Nestlings either eject host's eggs or young or they monopolize food in nest, depending on host species; fledging 17–18 days.

#### Cool Facts:

Subspecies and Distribution:

- C. j. pica (Hemprich & Ehrenberg, 1833) sub-Saharan Africa S to Tanzania and Zambia, and NW India to Nepal and Myanmar, occasionally S Tibet, in foothills of Mt Everest.
- C. j. serratus (Sparrman, 1786) S Africa (S from S Zambia).
- C. j. jacobinus (Boddaert, 1783) S India and Sri Lanka.

## **Common Name:** Sunda Coucal **Scientific Name:** *Centropus nigrorufus*

Size: inches (46 cm); Wingspan: inches ( cm)

**Habitat**: Asia; it endemic to Indonesia, where it occurs on Java, and possibly Sumatra.

It is a sedentary resident of mangroves and associated swamps (particularly comprising *Acrostichium*, *Saccharum*, *Imperata* and *Nypa spp*.) in the coastal lowlands. It occurs in freshwater swamps and grassland scrub adjacent to brackish water swamps (possibly suboptimal habitats), although it appears to be excluded from mature stands of *Rhizophora* and *Bruguiera*, occupying fringing

habitat instead. It has also been recorded in teak forest and well inland.

Status: Vulnerable. Global population: 2,500-9,999 adult individuals with a decreasing population trend. The main threat appears to be the destruction and degradation of mangroves and



swamps as a result of widespread conversion to fishponds and agricultural land, and reclamation for urban expansion and industrialization. Suitable habitat on Java is now fragmented. It is also threatened by widespread trapping, giving rise to concern that local population extinctions might ensue.

**Diet:** Omnivorous; insects and their eggs (grasshoppers, beetles, hairy caterpillars, large moths, pupae, dragonflies, cicadas, etc.), frogs, snails, slugs, geckos, tree and water snakes, and small mammals such as rats. They have been seen feeding on green seeds from young rice plants.

They have been observed foraging on ground near puddles.

Nesting: Sexes are similar. Adults are glossy black above with stiff hackles,

purplish gloss on mantle, wings rufous with blackish tips to flight-feathers and upper wing-coverts. There are purplish-glossed black below. They have a long black tail. Their irises are red, their bills black, and feet are black. Females are slightly larger (e.g. in wing length, 210–227 mm versus 195–218 mm in male). Juveniles are similiar to adults, but sometimes shows some barring.

Breeding season occurs from January to March (occasionally to June). The nest is an untidy combination of ferns and grass leaves. They lay 1-5 white eggs.

**Cool Facts:** An analysis of DNA suggests that this species is closest to the Greater Coucal (*C. Sinensis*).

## **Common Name:** Whiskered Tree Swift **Scientific Name:** *Hemiprocne comata*

Size: inches (15-17 cm); Wingspan: inches ( cm)

**Habitat**: Asia; it is found in Brunei, Indonesia, Malaysia, Myanmar, the Philippines, Singapore, and

Thailand.

They prefer small cover breaks and the main canopy of evergreen forest inland, and locally also of tall, mature mangroves. In primary forest, often found close to rivers. From plains level up to 1000–1100m on major slopes, e.g. on Sumatra and in Philippines, but not above 800m in northern Malay Peninsula.

**Status:** Vulnerable. **Global population:** Unknown amount of adult individuals with a decreasing population trend. It is tied more exclusively to original forest, hence at greater risk of outright habitat loss than others of genus. It has been able to exploit edge created by selective logging.



Diet: Small flying arthropods.

It forages from perches low in the canopy profile, taking prey in much shorter

sorties (typically of less than one minute) close to vegetation surface, occasionally hovering momentarily; never above main canopy height. It is less gregarious than other tree swifts, being usually seen alone or in pairs.

**Nesting:** Sexes are similar although females lack the rufous patch between the eye stripes on the lower ear-coverts. It has a slight crest, distinctive facial stripes, extensive white tertial patches and bronze tone to upper parts. They are mostly dark bronze, with bold supercilium from forehead and lores to hind-nape and a more or less parallel stripe from chin back to side of neck, both sharply white against otherwise glossy black head and throat. Juveniles have a finely barred brown, tawny, gray and white. The whitish facial stripes are shorter than in adult. First-years are similar, having mix of adult (body) and retained juvenile (wing and tail) feathers. The subspecies differences are that *H.c. major* has more white on abdomen and tertials, broader, blunter, more juvenile-like tail-streamers, and proportionately shallower tail-fork. It also tends to be larger, however both subspecies increase in size clinally in their northward ranges, giving much overlap between races.

Over most of range lays Feb–Aug (latest fledglings in early Oct); the few Philippine records, dated only May. Nesting dispersed and breeding pairs territorial. Nest a half-saucer of hardened saliva incorporating feathers, but no published confirmation of vegetable matter included, constructed by both sexes; built 8–40 m up as a bracket or on upper surface of a thin, exposed branch; construction continues after laying. Lays one white egg; both pair-members incubate (though female perhaps takes greater share) and tend the chick; natal down color not described; in one instance, an egg hatched on or before day 21 and the chick flew soon after day 28, giving total development time of probably not less than 50 days; fledged juvenile may continue to be fed for up to three weeks after leaving nest.

Cool Facts: There are two subspecies:

- H. c. comata (Temminck, 1824) S Myanmar (S Tenasserim) and peninsular Thailand S to Sumatra (including W Sumatran islands) and Borneo and intervening islands.
- H. c. major (E. J. O. Hartert, 1895) Philippines, including Sulu Archipelago, but excluding Palawan

#### **Common Name:** Sumatran Trogon **Scientific Name:** *Apalharpactes mackloti*

#### Size: inches (30 cm); Wingspan: inches ( cm)

Habitat: Asia; it is endemic to the Indonesian island of Sumatra.

Its natural habitat is subtropical or tropical moist montane forest. It frequents the lower stories of rainforests, and is found chiefly on lower slopes, in altitude range of 750–2200m.

#### Status: Least Concern. Global population:

Unknown amount of adult individuals with a stable population trend. It is a restricted-range species that is present in Sumatra and Peninsular Malaysia. While it is uncommon within this range, it is the least rare of all trogons on Sumatra, and very common on Kerinci.

**Diet:** Green caterpillars, grasshoppers, stick-insects, beetles, bugs and fruits.

**Nesting:** Males have yellowish-green head and bluer green upper parts, yellow-barred wing feathers, a deep chestnut rump and a deep metallic



blue tail. Their throats and bellies are yellow and their is a pale grayish-green breastband. The bill is red, the orbital ring is blue and the feet orange. Female has barring on wing panel buffier and narrower. Breeding season occurs in March. 1-2 eggs are laid.

**Cool Facts:** It was formerly considered conspecific with the Javan Trogon (*A. reinwardtii*) under the common name, "Blue-tailed Trogon" before being declared a seperate species. It is very similar to the Javan Trogon but differs in a larger size, longer tail, larger bill, and deep chestnut rump.

#### **Common Name:** Red-headed Trogon **Scientific Name:** *Harpactes erythrocephalus*

Size: inches (31-35 cm); Wingspan: inches ( cm)

**Habitat**: Asia; it is endemic across much of the Indian subcontinent and Southeast Asia. It is sporadically distributed from North-Eastern India and Central Nepal to Southern China, through the Malay Peninsula all the way to areas of Sumatra. In most regions, it is sedentary although researchers have observed altitudinal movements in Southern Laos, as well as in the Sangthong district, Northern Laos.

It is exclusively a forest dweller. It is found in the middle and lower canopies of dense broadleaf forests, montane evergreen forests and mixed bamboo forests. It prefers the interior of damp dark evergreen cover and cool ravines.

## Status: Least Concern. Global population:

Unknown amount of adult individuals with a decreasing population trend. Ongoing habitat destruction appears to be the major factor in this species decline.

**Diet:** Green orthoptera, stick-insects, cicadas, millipedes, flies, beetles, centipedes, woodlice; also leaves (notably bamboo) and berries.

It hawks moths in early morning and evening, and takes cicadas off tree trunks.

**Nesting:** Sexes are dimorphic. The nominate race male has a blue bill with a blackish tip, a purplish-blue



orbital ring and the head and nape to mid-breast are dull crimson with white breastline. The mid-breast to vent is pinkish-red. The upper parts and upper tail are rufescent-brown. The female has the crimson areas replaced with brown. Juveniles are similiar to the female, but which buffish-white on lower breast, belly and flanks, and tertials. The wing-coverts may be strongly marked with black and buff.

The *helenae* race is the largest of the subspecies (wing 147–166mm) with strong red belly. The *yamakanensis* race is larger than the nominate subspecies (wing 155–159 mm), darker around head, with paler pink belly and more black in tail. Males have a cinnamon band across lower breast and females have a darker brown head and upper neck. The *rosa* race female is paler above and below than the *yamakanensis* race. The *hainanus* race is like the nominate subspecies but smaller, with much less red on head. The *inter-medius* race is smaller (143–155 mm), paler above but darker below than the *rosa* race, with paler cadmium-red on head and belly, generally darker than *annamensis*. The female is between those of nominate and *yamakanensis* races. The *annamensis* race is smaller (135–154 mm) and more ochraceous above than nominate race, with little red on head. The *klossi* race is brighter than *annamensis* race. The *chaseni* race is a shade darker above than *klossi* race, with duller red underparts and wing feathers have finer barring than *annamensis* race. The *flagrans* race is almost exactly like nominate, but considerably smaller (133–136 mm, vs. 140–156 mm in nominate).

Breeding seasons occurs in Apr in China; Apr-Aug, chiefly May-Jun, in India; Mar–May in Myanmar: Feb–Jul in Thailand: iuveniles in Mar and May in Peninsular Malaysia. Nest an unlined hollow on side of rotten tree trunk or old woodpecker hole, 0.7–5 m up (mean height of 49 nests, 2 m), in deep forest, but sometimes by a track or stream, excavated by both adults; entrances to two nest cavities  $8 \cdot 3 - 10$  cm  $\times 9 \cdot 6 - 15$  cm high, with distance from entrance to back wall of 14 cm in one; 14 different tree species belonging to 12 families recorded as nest-sites in Thai study. No evidence of nest-site reuse in subsequent season, apparently because it was no longer intact, but species has been recorded reusing site of old H. oreskios nest in same season, although never successfully. Replacement clutches not definitely documented, but suspected. Eggs 2-4, but mean 2.6 in Thailand, where only 2-3-egg clutches recorded, and four-egg clutches perhaps only at higher latitudes; creamy white and glossy, size 26-7-28 mm  $\times$  23·4–24·3 mm; incubation 17–19 (mean 18) days, by both sexes (male by day, female at night) but female bouts on average longer (16-1 hours versus 7-6 hours); nestling period 12.5–14 (mean 13.4) days, with young being provisioned and brooded by both sexes, but brooded exclusively by female at night and female takes greater responsibility for feeding nestlings; c. 1 visit per hour with food. Young remain with and dependent on adults for at least c. 7 weeks after fledging. Few data until recently on nesting success, which appears very low (estimated at just 0.08) based on Thai study; of 19 nests that failed, 18 were predated, by pig-tailed macaques (Macaca nemestrina; nine nests), snakes (Boiga sp.; four) and Crested Goshawks (Accipiter trivirgatus; two), with northern tree shrews (Tupaia belangeri), variable squirrels (Callosciurus finlaysonii) and Oriental Pied Hornbills (Anthracoceros albirostris) responsible for the failure of one nest each; at the other, the male disappeared causing the female to abandon the nest.

**Cool Facts:** *H. erythrocephalus* comes from the Ancient Greek terms '*eruthro*' meaning red and '*kephalos*' meaning head.

Subspecies and Distribution

- H. e. erythrocephalus (Gould, 1834) Himalayas from N India (Uttarakhand) and Nepal through NE India to SW Myanmar and W Thailand.
- H. e. helenae Mayr, 1941 N Myanmar and S China (SE Tibet and W Yunnan).
- H. e. yamakanensis Rickett, 1899 SE China (SE Sichuan and Guizhou E to Fujian).
- H. e. rosa (Stresemann, 1929) Guangxi (Yao Shan), in SE China.
- H. e. intermedius (Kinnear, 1925) SE Yunnan, N Vietnam (Tonkin, N Annam) and N Laos.
- H. e. hainanus Ogilvie-Grant, 1900 Hainan I.
- H. e. annamensis (Robinson & Kloss, 1919) NE Thailand, C & S Laos, S Vietnam (S Annam and Cochinchina).
- H. e. klossi (Robinson, 1915) Bhantat Range in W Cambodia and extreme E Thailand, also hills on Koh Chang I (SE Thailand).
- H. e. chaseni Riley, 1934 mountains of Malay Peninsula.
- H. e. flagrans (S. Müller, 1836) mountains of Sumatra.

#### **Common Name:** Crested Kingfisher **Scientific Name:** *Megaceryle lugubris*

**Size**: inches (41-43 cm); **Wingspan:** inches ( cm)

**Habitat**: Asia; it is a resident of the Himalayas and foothills of Northern India, Bangladesh, northern Indochina, Southeast Asia, Japan and Russia. There is attitudinal migration in Japan and the Himalayas, with movement to lower country in winter to avoid frozen rivers, but some birds remain in winter around hot springs in the Kitami Hills, in Hokkaido.



Its typical habitat are smaller, fast-flowing streams and rivers with rock or gravel base, in forested mountains and foothills. It is sometimes found at large rivers and river mouths, but avoids rivers with bare open banks.

**Status:** Least Concern. **Global population:** Unknown amount of adult individuals with a declining population trend. It has been estimated at c.100-10,000 breeding pairs in China and c.100-10,000 breeding pairs in Japan. The population decline

is due to ongoing habitat destruction and human disturbance. In Kashmir, it is sometime shot since it preys upon trout (damaging profitability of recreational businesses).

Diet: Fish between 15–18 cm long, and crayfish.

Perches on an overhanging branch, partly submerged log or rock, occasionally bobbing head, raising crest and flicking tail, then dives -obliquely into water for a fish. Favored stretches of river are fished repeatedly.

**Nesting:** Sexes are dimorphic. It is a distinctive and large kingfisher with long crest feathers. The adult male nominate race has a white loral spot, long feathers on forehead and crown which are blackish-gray and spotted with white. When the crest is erect, there are 2 patches of shorter white feathers. The malar stripe is white-speckled, the collar is white collar and upper parts barred black and white. The tail is black with 6–8 white bars. The under parts are white, the breast band is black-speckled with rufous-orange feathers. The flanks are barred with gray, the bill is black, the basal is half pale blue with the tip yellowish. The iris is dark brown, the legs and feet are dark olive-gray. The adult female is similar, but there is no rufous on breast and it has bright pink to cinnamon under wing coverts. The juvenile is like the female, but the sides of neck, breast, flanks and under tail-coverts are washed with pale rufous. The *guttulata* race is smaller than nominate (except in western Himalayas), with darker upper parts and breast. The white spots on the crest, back and wings are fewer than the nominate species but larger. The *pallida* race has pale gray upper parts.

Lays in Mar–Jun in Nepal, in Apr in China and in Apr–Jul in Japan. Territory of a single bird may be 4 km<sup>2</sup>. Nest-site a vertical bank, often sandy and at least 2 m high, by a stream, in a ravine or in forest, and can be 1.5 km from water; in Kyoto Prefecture (Japan), nests were usually in banks more than 2 m high, up to 1500 m from water and at least 1400 m apart; both sexes dig tunnel 2–3 m long and 10–15 cm wide, ending in a chamber 30–50 cm wide; in Kashmir, a pair dug 1 m of a tunnel in sandy soil in 20 hours; nest may be reused. Clutch 4–7 eggs, usually 4–5; apparently only female incubates, period not documented; both sexes feed the young, which fledge after c. 40 days.

Cool Facts: There are four subspecies:

- M. I. continentalis (E. J. O. Hartert, 1900) foothills from NE Afghanistan E through Kashmir to W Bhutan.
- M. I. guttulata (Stejneger, 1892) C Bhutan E in foothills to NE India and C, S & NE China and (now rare) N Korea, and S to S Myanmar, NW Thailand and C Vietnam.
- M. I. pallida (Momiyama, 1927) N Japan (Hokkaido), possibly also S Kuril Is.
- M. I. lugubris (Temminck, 1834) C & S Japan (Honshu, Shikoku, Kyushu).

## Common Name: Red-bearded Bee-eater Scientific Name: Nyctyornis amictus

Size: inches (27-31 cm); Wingspan: inches ( cm)

**Habitat**: Asia; south Myanmar (south from Dawna Range) and southwest Thailand (Petchaburi district) southward through Malay Peninsula to Johore, including Penang Island; also Sumatra and Bangka Island, and throughout

lowland Borneo.

Its natural habitat is Middle storey and lower part of canopy of lowland evergreen mixed dipterocarp forest, at up to 1500 m; also disturbed forest, forested banks of streams, lagoons and swamps, and in Myanmar well-lit woods: sometimes in gardens and about houses.

#### Status: Least Concern. Global population:

Unknown amount of adult individuals with a decreasing population trend. The population is suspected to be in decline as lowland rainforests have been replaced with



palm oil and rubber plantations throughout much of its range

**Diet:** Airborne insects: wasps, hornets, bees including carpenter-bees (*Xylocopa*), cicadas, beetles, crickets and ants. It has been recorded bringing a gliding lizard (*Draco sumatranus*) to the nest.

It hunts from elevated leafy perch overlooking open airspace, by flying out after passing insect. It sits almost motionless for long periods, then moves to new vantage point.

**Nesting:** Sexes are dimorphic. Male green above and paler green below; crown lilac of an extraordinary hue, intense and with pearly sheen; bases of lilac feathers buff or red, and from underside tips of feathers appear red, not lilac; narrow border of small, thin, stiff, forward-curving, pale azure feathers around base of bill; throat feathers long and broad, bases grey and dark olive-green, only tips, with long radiating barbs, are red; rectrices rather stiff, with shafts wide proximally and ivory or pale yellow; upperside of tail green, underside yellow with black tip; bill robust, arched, strongly decurved, blackish, with proximal quarter of lower mandible lead-grey; mouth yellowish; iris bright orange. Female like male, but lilac crown patch smaller; forehead and hindcrown vermilion and green respectively, not lilac. Immature uniform green but for warm buff undersides of wings, yellowish underside of tail, and a few pale blue feathers around base of bill.

Breeding season occurs in March. 1-2 eggs are laid.

**Cool Facts:** It's call is a fast, descending series of 5–10 hoarse notes sounding like "*KA-Ka-ka-ka-ka-ko-kow*" (with emphasis on initial notes). This call is sometimes given just once, and at other times repeated at intervals for long periods. Also there are low-pitched, frog-like calls "*grwaa*" or "*ko-ko-grwaa*", and a gruff, repeated "*grow...grow...grow...*"