

*Ptilinopus regina*

## Rose-crowned Fruit Dove



**LENGTH**  
22–24cm (9–9½in)

**WEIGHT**  
100g (3½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Variety of forest types; mangroves

**ADULT ROSE-CROWNED FRUIT DOVE**



The Rose-crowned Fruit Dove is one of a number of vividly coloured fruit doves that are found in Indonesia and Australasia. Its most distinctive features are its streaky grey breast and orange belly. The red crown, with a yellow band behind it, is only shown by three of the five subspecies. The male and female are similar, but young birds are greener with no red on the crown.

The Rose-crowned Fruit Dove eats a wide variety of fruit. It calls with a loud, explosive “hookcoo” or “woo-hoo”, which becomes a rapid “coocoocoocoocoo”.



**ADULT MALE**

*Ptilinopus superbus*

## Superb Fruit Dove



**LENGTH**  
21–24cm (8½–9½in)

**WEIGHT**  
125g (4oz)

**MIGRATION**  
Non-migrant

**HABITAT** Tropical broad-leaved evergreen forest, mangroves, and plantations

Despite the bright colours of its plumage, this dove can be surprisingly well camouflaged in the dense foliage of the rainforest canopy. The brilliantly coloured male has a purple cap, green ear-feathers, orange-red collar, and blue and green bands on the underparts. The female is mostly green with a small blue-black patch at the back of the crown. Large numbers of these doves sometimes gather in the canopy of fruiting trees to feed. The nest is a small platform of twigs. The call of this species is a steady “coo-coo-coo-coo”.



**ADULT SUPERB FRUIT DOVE**

*Alectroenas madagascariensis*

## Madagascar Blue Pigeon



**LENGTH**  
25–28cm (10–11in)

**WEIGHT**  
175g (6oz)

**MIGRATION**  
Non-migrant

**HABITAT** Undisturbed primary and degraded tropical broad-leaved evergreen forest

This species is found only in the diminishing tropical forests of eastern Madagascar. The Madagascar Blue Pigeon has beautiful silvery blue-grey plumage. It has a patch of red skin around the eye and a blood-red tail and undertail feathers. Little is known about the habits of the Madagascar Blue Pigeon, but it lives in pairs or small flocks of up to 12 or more. It searches for fruiting trees, where it prefers to feed in the treetops. This bird breeds from July to March.



**ADULT IN A FRUIT TREE**

*Ducula aenea*

## Green Imperial Pigeon



**LENGTH**  
40–47cm (16–18½in)

**WEIGHT**  
545g (20oz)

**MIGRATION**  
Non-migrant

**HABITAT** Various types of forest, forest edges, and mangroves



**ADULT BIRD**

A large bird, the Green Imperial Pigeon has a pale grey head, neck, and underparts, while the upperparts, wings, and tail are mostly green. Its flight is rapid and direct and it utters a deep, booming call. This pigeon lives in the canopy of tropical forests, where it forages for fruit.

*Lopholaimus antarcticus*

## Topknot Pigeon



**LENGTH**  
40–45cm (15½–17½in)

**WEIGHT**  
450–525g (16–19oz)

**MIGRATION**  
Non-migrant

**HABITAT** Rainforest, sometimes in more open areas during nomadic movements

This large Australian Pigeon has an unusual crest of elongated feathers on its forecrown. This crest bulges out and then sweeps back over the crown, blending into a second crest of rufous and black feathers that hangs over the nape. Otherwise, it is mainly grey, but has a narrow silver-grey band on its slaty-black tail.

A nomadic species, the Topknot Pigeon is generally found in flocks that can number up to hundreds, making seasonal movements in search of food. It tends to feed on fruit in the canopy, but often rests on exposed branches. This species can get water by drinking raindrops trapped in foliage. Breeding occurs from July to January, when a nest of long, loose twigs is built high up in a rainforest tree. One large, slightly glossy egg is laid.



**ADULT TOPKNOT PIGEON**

*Hemiphaga novaeseelandiae*

## New Zealand Pigeon



**LENGTH**  
46–50cm (18–19½in)

**WEIGHT**  
650–800g (23–29oz)

**MIGRATION**  
Non-migrant

**HABITAT** Lowland native forest and plantations; also rural and city gardens and parks

The New Zealand Pigeon is the second largest member of the Columbidae family. Its plumage is mostly shiny greenish purple, with a contrasting white belly and vent. The bill is red to orange, and the eyes and feet are red.

The call of this pigeon is a soft “coo”. It mainly feeds on fruit from trees. It plays an important ecological role in the regeneration of native forests, as it is the only species of bird capable of eating the largest fruit and dispersing the seeds intact. It also browses on leaves and buds, particularly when breeding. The species breeds predominantly in summer and nests in trees, laying a single egg in a twig nest. The egg is incubated for 28 days, and the young take five weeks to leave the nest.

# PARROTS

**ORDER** Psittaciformes  
**FAMILY** 1  
**SPECIES** 352

NOISY, GREGARIOUS, and often brilliantly coloured, parrots are some of the most eyecatching tropical birds of all. They are native to every continent except Europe, in a variety of different habitats, but the greatest numbers live in forests, particularly in southeast Asia and Australasia. Prized for their beauty, intelligence, and ability to mimic human speech, they continue to be threatened by collectors and deforestation.

## ANATOMY

Parrots vary in length from about 8cm (3in), in the case of pygmy parrots, to over 1m (3½ft) in the case of large macaws. Unlike some birds, they share a number of visible physical features that make them easy to recognize. Among these characteristics are plump bodies, short necks, and strongly decurved bills with a fleshy cere (region of bare skin) at the base. Their feet have four fleshy toes, with two pointing forwards and two pointing behind. Some parrots have long, sharply pointed wings, while in others they are broad and rounded. In parakeets, lorikeets, and macaws, the tail is long and graduated, but in some other species it is short and square.



## NESTING AND PARENTING

As a group, parrots share remarkably similar nesting habits. Most species lay their eggs – which can number up to 10 – in tree-holes, using little or no nesting material. One of the few exceptions to this is the Monk Parakeet, from Argentina and southern Brazil. In this species, several dozen birds work together to build a giant nest from twigs, with each pair occupying a separate “apartment”. Initially, young parrots are naked when they hatch, but they soon grow a covering of down. Their heads and beaks are well developed, and their parents feed them by regurgitation. For many parrots, the supply of suitable nest-holes has a pronounced effect on breeding success. Many parrots take over old woodpecker holes, but in Australasia, where there are no woodpeckers, parrots sometimes use old termite nests instead.



### CONSPICUOUS CRESTS

Unlike typical parrots, this Major Mitchell's Cockatoo has a crest that it can raise or lower. Cockatoos are often placed in a separate family, as they share a number of distinctive features.

## HABITATS

The majority of parrots are birds of forests and open woodland, with the largest number found in rainforest and cloudforest in the tropics, but in the southern hemisphere they are widespread in temperate regions as well. Some parrots have successfully adapted to open grassland, such as the savanna-like cerrado of Brazil or the Australian “outback”, where a scattering of trees allows them to nest. Australia’s parrots include a number of species that feed on the ground, while New Zealand is the home of the endangered Kakapo – the world’s heaviest parrot, and the only species that has lost the ability to fly. Parakeets have successfully established themselves as urban birds in some parts of the world, including in Europe and North America.

### MOUNTAIN PARROT

The Kea, from New Zealand, is one of the few parrots that tolerates temperatures close to freezing. It lives in the mountains of the country’s South Island, sometimes above the snowline.



### SETTING UP HOME

Having found a suitable nest-hole, a male Budgerigar feeds the female – a common part of parrot courtship behaviour. Budgerigars live in open grassland and scrubland, where tree-holes can be hard to find. They often nest in fallen branches, or in old fenceposts.



## PLUMAGE

Parrot plumage is often boldly coloured – a feature particularly noticeable in macaws, lorikeets, and rosellas, species that have long been prized as cage-birds. Many of these colours are created by the microscopic structure of the feathers, rather than by chemical pigments. However, not all parrots are this flamboyant. A number of species of Australian cockatoo are almost entirely white and others are a dull brownish black. Whatever their colour, all parrots have large quantities of powder down, which gives their feathers a dusty feel. In the majority of parrots, males and females are similar or identical. Where the sexes do differ, the males are usually brighter than the females.

## FEEDING AND SOCIAL LIFE

Most parrots feed on plants. Large macaws and cockatoos can crack open nuts the size of golf balls, while at the other end of the scale, small parrots such as Budgerigars eat grass-seeds, using their tongues to roll each seed around in their beaks, so that they can discard the husk. Lorikeets specialize in feeding on pollen and nectar, which they collect with tongues that have brush-like tips. Pygmy parrots are unusual in eating insects, which they prise from crevices in bark, but New Zealand's parrots excel in unusual eating habits. The flightless Kakapo feeds on the juices from grasses, while the Kea is a natural opportunist, feeding on carrion and leftover food. The Antipodes Parakeet scavenges dead remains in penguin colonies, and even kills storm petrels in their burrows.

Parrots are highly social birds, and are rarely seen on their own. Many species live in pairs, or in noisy flocks, setting off shortly after dawn in search of food. Large parrots, such as macaws, typically fly in groups of 2–20 birds, but some species – such as Galahs – gather in much larger numbers, and can be serious agricultural pests.



### GALAHS FEEDING

Small, highly sociable cockatoos, Galahs are a common sight in open country throughout Australia, including the edges of towns. Unlike most parrots, they have benefited from the spread of farming.

### HUMAN IMPACT

#### ENDANGERED SPECIES

Parrots include a large number of threatened birds. Altogether, over 90 species are listed as being vulnerable or endangered, and of these, 17 are in imminent danger of becoming extinct in the wild. The two chief threats facing parrots are habitat destruction – particularly in tropical forests and on remote islands – and trapping for the cage-bird trade.



### DWINDLING NUMBERS

Found only in a small part of eastern Brazil, Lear's Macaw is critically endangered, with fewer than 500 birds left in the wild.

### PAIRED FOR LIFE

Parrots are long-lived birds, and they typically pair up for life. In the wild, Scarlet Macaws can live to be 50, but their life expectancy in captivity is even longer, sometimes reaching 80 years.



**ADULT KEA***Nestor notabilis***Kea****LENGTH**  
48cm (19in)**WEIGHT**  
800–950g (29–34oz)**MIGRATION**  
Non-migrant**HABITAT** Upland scrub and grassland in summer; wooded valleys in winter**RED LIST CATEGORY** Vulnerable

Found only on New Zealand's South Island, the Kea is a large, stocky mountain bird. It is olive-green in colour, with dark-edged feathers and bright red underwings. It has a sharp, elongated, hooked bill, with a long upper mandible, and well-developed feet for foraging on the ground.

The Kea is an inquisitive species that can often be found near ski lodges or car parks, waiting to pick up food scraps. In these situations, the parrot can soon be a nuisance as it can easily strip rubber wiper blades and window trims from cars. Only about 5,000 individuals now remain. The species was protected in 1970 after more than 150,000 birds were legally shot when some birds were found to be feeding on sick sheep.

*Probosciger aterrimus***Palm Cockatoo****LENGTH**  
55–60cm (21½–23½in)**WEIGHT**  
850g (30oz)**MIGRATION**  
Non-migrant**HABITAT** Tropical forest

The Palm Cockatoo is found in Papua New Guinea and Australia's Cape York peninsula. It is a large, all-black species, except for its bright red cheek patches: these are actually areas of bare skin that become darker in colour when the bird is alarmed or excited, giving the appearance of blushing. The male and female are similar in appearance, and have an impressive head crest of long, back-curved feathers. However, the most noticeable feature is the massive hooked bill, which, aided by very strong jaw muscles, is capable of exerting tremendous pressure to crush or crack tough nuts and seeds.

*Strigops habroptila***Kakapo****LENGTH**  
64cm (25in)**WEIGHT**  
1.5–3kg (3½–6½lb)**MIGRATION**  
Non-migrant**HABITAT** Currently confined to forests on predator-free offshore islands**RED LIST CATEGORY** Critically endangered

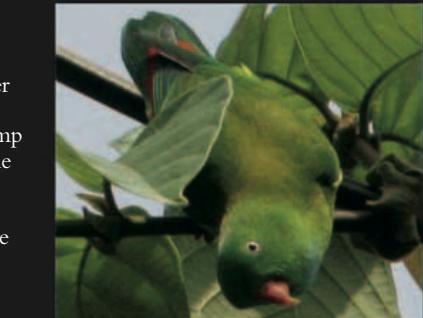
New Zealand's Kakapo is one of the most remarkable species of bird. As well as being nocturnal and flightless, it is very long-lived and is the world's

heaviest parrot. The Kakapo has a rounded face that has led to its alternative name – the Owl-Parrot. It has barred green plumage and short wings. It breeds only once in every three to five years, when its favoured feeding plants are fruiting. The males gather at mating grounds (leks), where they excavate a series of bowl-shaped holes in the ground and make loud, booming calls to attract females.

Before human colonization, the Kakapo was found throughout New Zealand. However, by 1976 only 18 male birds remained. Conservationists then decided to take all the remaining birds into captivity under a breeding programme (see panel, below).

**HUMAN IMPACT****KAKAPO RECOVERY PLAN**

All remaining Kakapos have been transferred to a predator-free offshore island, where they are supervised by teams of dedicated conservationists. This has proved to be very successful and at the end of 2005, the birds numbered around 85 individuals – their highest level in more than 25 years.

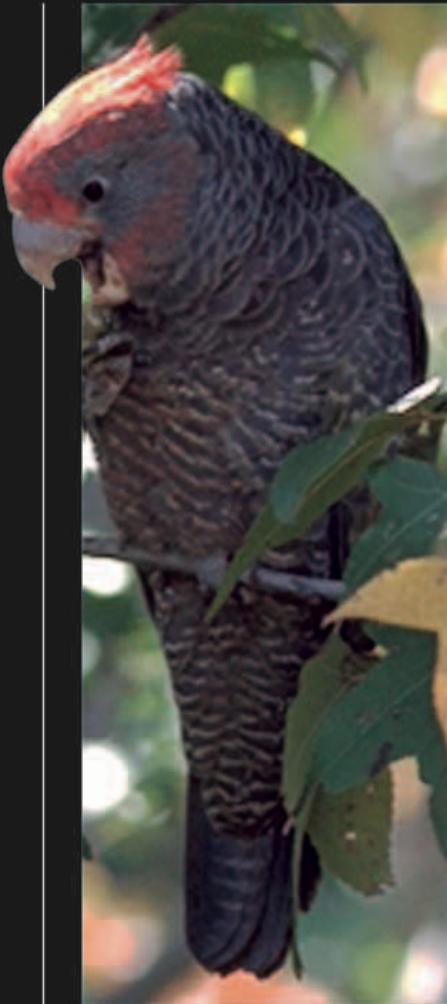
**ADULT KAKAPO****MALE VERNAL HANGING PARROT***Loriculus vernalis***Vernal Hanging Parrot****LENGTH**  
13cm (5in)**WEIGHT**  
35g (1½oz)**MIGRATION**  
Partial migrant**HABITAT** Forest, woodland, orchards, bamboo thickets, and tall scrub

This small, squat species is found in much of coastal India and parts of China and Indochina. Its plumage is largely bright green, with slightly paler underparts. It has an orange-red bill, a pale blue patch on its throat, a red rump and tail patch, and orange-red legs. The eye stands out in the bird's plain face due to its noticeable pale iris. The female is paler and has little or no blue on its throat. The juvenile has a duller rump, and lacks the throat patch. This parrot nests in holes in trees and lays 2–4 white eggs.

**ADULT PALM COCKATOO***Calyptorhynchus banksii***Red-tailed Black Cockatoo****LENGTH**  
50–65cm (19½–26in)**WEIGHT**  
650–775g (23–28oz)**MIGRATION**  
Non-migrant**HABITAT** Forests, woodland, farmland, and semi-arid inland areas

A large, long-winged species, the Red-tailed Black Cockatoo appears almost like a hawk in flight. The male is all black, except for two bright red undertail patches. The female is browner, with yellow spotting on the head and shoulder and yellow barring on the breast. Its orange undertail feathers are barred, while the male has bold scarlet panels on the undertail. Both sexes have a rounded crest and a stubby bill. They nest in the large hollows of gum trees. The species is found only in Australia, where it has a wide but fragmented range.

**MALE RED-TAILED BLACK COCKATOO**



JUVENILE MALE

*Callocephalon fimbriatum*

## Gang-gang Cockatoo



**HABITAT** Tall dense woodland, as well as parks and gardens in some areas

Noticeably different in appearance to the female, the male Gang-gang Cockatoo has a bright scarlet head, with a distinctively upturned, fluffy crest. The rest of the male's plumage is predominantly grey, appearing scaly (except on the all-dark tail) as the feathers are pale-edged. The female is less striking in appearance, with a grey head and crest. In contrast to the male, the female is brighter below, with buff-grey and red barring on the breast, and barring on the underside of the tail. The juvenile is similar to the female, although young males display a variable amount of pinkish red on the crest and crown. The call of the Gang-gang Cockatoo is a drawn-out, creaking rasp that sounds like a gate swinging on a rusty hinge.

This cockatoo is restricted to the southeastern corner of Australia. Although not an uncommon species, it can be difficult to see as it is usually silent, even when it is feeding. The Gang-gang Cockatoo is perhaps easiest to see in the botanical gardens of Canberra (see p. 361).

**LENGTH**

32–37cm (12½–14½in)

**WEIGHT**

275g (10oz)

**MIGRATION**

Partial migrant

**PAIR OF ADULT LITTLE CORELLAS***Cacatua sanguinea*

## Little Corella

**LENGTH**

36–39cm (14–15½in)

**WEIGHT**

450–575g (16–21oz)

**MIGRATION**

Non-migrant

**HABITAT** Grassland, farmland, and open woodland

When seen at rest, the Little Corella appears almost completely white. A number of subspecies occur, but all share a number of key features: a short bill, a small, pointed crest, an area of bare blue skin that circles the eye, and no pink or red on the throat. In flight, the Little Corella looks different from different angles: when

seen from above, its wings are all-white; but when seen from below, a lemon-yellow underwing and tail are visible.

A very sociable species, these birds gather in large flocks in Australia's agricultural heartland and congregations of over 30,000 birds have been reported. As a result, the species is often regarded by farmers as a pest. The Little Corella is an abundant species throughout much of the interior of Australia, as well as being common in feral flocks in many urban areas of the east coast. The species is also found in southern Papua New Guinea.

hundreds of birds that roost along tree-lined watercourses, emerging en masse when disturbed, in an impressive cloud of white feathers and a cacophony of screeching sounds. However, in tropical Australia and New Guinea, the species is seldom seen in flocks of more than 20 birds. The Sulphur-crested Cockatoo's normal diet consists of berries, seeds, nuts, and roots.

**ADULT SULPHUR-CRESTED COCKATOOS***Cacatua galerita*

## Sulphur-crested Cockatoo

**LENGTH**

45–55cm (17½–21½in)

**WEIGHT**

800–975g (29–35oz)

**MIGRATION**

Non-migrant

**HABITAT** Forest, woodland, and farmland

The Sulphur-crested Cockatoo is a common sight in much of eastern and northern Australia; it also occurs throughout Papua New Guinea. It is a large white species with a striking lemon-yellow crest, a pale yellow tint behind the eye, and a strong dark bill. The crest is usually held flat, but can be raised as a tall, forward-curving adornment. The species flies with a stiff-winged series of flaps that are followed by long, swooping glides. When seen from below, a yellow wash to the underside of its wings and tail is visible. The calls of the species are a collection of raucous, noisy screeches that vary from ear-piercing squawks to guttural grunts.

In parts of southern Australia, the species forms huge flocks of



*Eolophus roseicapilla*

## Galah



## LENGTH

35cm (14in)

## WEIGHT

350g (13oz)

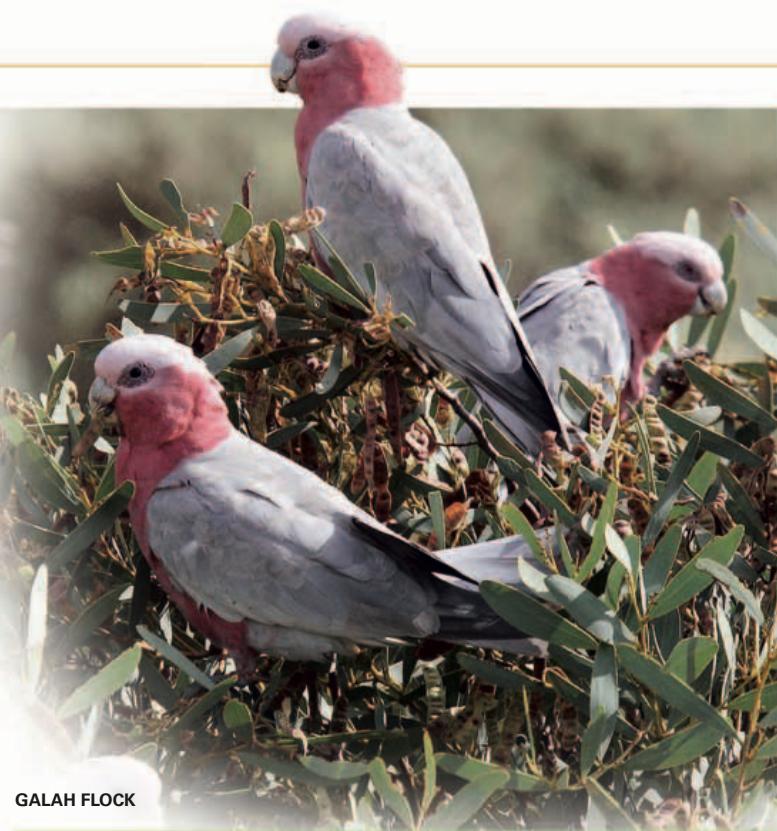
## MIGRATION

Non-migrant

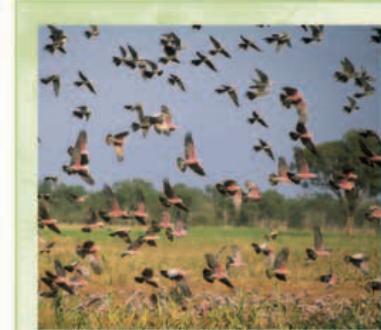
**HABITAT** Woodland, farmland, scrub, parks, and gardens

Found throughout most of Australia, the Galah has plumage in a splendid combination of grey and pink, its pinkish white cap and deep rose-pink underparts contrasting with its pale grey upperparts. The male and female are similar in appearance, differing only in eye colour – brown in the male and red in the female. In flight, the Galah is long-winged, appearing hawk-like from certain angles. The top part of the tail and rump appear a paler grey when seen from above. This bird flies in different ways – sometimes with deep wingbeats that carry it in a direct path; at other times, it flies erratically and randomly across the sky. The Galah has a distinctive metallic, high-pitched screeching call, and gives out harsher, scolding screeches when alarmed.

Galah is an aboriginal name for the species but has now entered common Australian usage to imply a “fool” or “idiot”. The term is probably derived from the species’s playful behaviour – it is not uncommon, for instance, for a Galah to hang upside-down from a branch or wire by one leg or for flocks of Galahs to be seen fighting and screeching at one another.



GALAH FLOCK



## GREGARIOUS GALAHS

A very sociable species, Galahs are found in large flocks of up to a thousand birds. The flocks can be a nuisance when they descend to feed on agricultural crops. On a hot day, the birds gather for shelter among trees, which they often strip of bark and leaves. Large flocks form communal roosts, engaging in noisy acrobatics before settling down for the evening.

*Nymphicus hollandicus*

## Cockatiel



## LENGTH

33cm (13in)

## WEIGHT

80–100g (2 $\frac{1}{8}$ –3 $\frac{5}{8}$ oz)

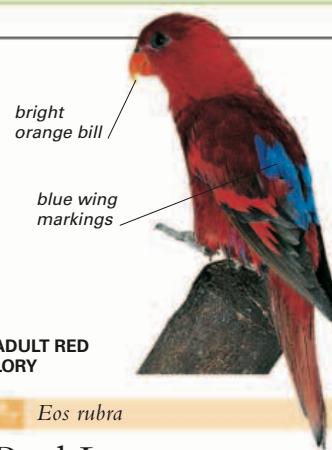
## MIGRATION

Non-migrant

**HABITAT** Dry open country close to water, including open woodland, grassland, and farmland

MALE COCKATIEL

A small, graceful cockatoo, the Cockatiel has a pointed bright yellow crest, a yellow face and throat, a large orange ear spot behind the eye, and a long tail. The rest of the plumage is pale grey, except for a large white wing-bar. The male and female are similar in appearance, although the male has more striking marks on the head. The Cockatiel has a swift direct flight. It usually forages for fruit and seeds in pairs or small groups.



ADULT RED LORY

*Eos rubra*

## Red Lory



## LENGTH

31cm (12in)

## WEIGHT

150g (5oz)

## MIGRATION

Non-migrant

**HABITAT** Lowland forest, mangroves, and plantations

Found only in the Molucca islands of Indonesia, the Red Lory is a small, bright scarlet parrot with an orange bill, a blue patch on the wings, dark flight feathers, and dull grey legs. The species is usually found in flocks of up to 30 birds, gathering at flowering trees to feed on nectar with their brush-tipped tongues. Small parties frequently move between islands in parts of its range.

*Trichoglossus haematodus*

## Rainbow Lorikeet



## LENGTH

25–30cm (10–12in)

## WEIGHT

85–125g (3–4oz)

## MIGRATION

Partial migrant

**HABITAT** Woodland, rainforest, open country with trees, mangroves, parks, and gardens

One of the most spectacularly plumaged of all parrots, the Rainbow Lorikeet is a brightly coloured bird in a stunning mixture of a flecked blue head, bright red eye and bill, bright yellow or orange collar, green upperparts, orange breast, and blue belly. The male and female are indistinguishable in appearance. Found across a wide range, this species includes a large number of different subspecies – at least 20 – some of which are much plainer and greener than the eastern Australian bird pictured here.

As the Rainbow Lorikeet darts through the trees, it shows a distinctive flight silhouette with its long tail and thin wings, which are angled back. Noisy in flight with loud screeches and chattering calls, it is quieter and more subdued when feeding or at rest. The Rainbow Lorikeet feeds mainly on flowers, searching out trees in blossom to feast on pollen and nectar. Massive flocks of birds also gather (and are a popular tourist attraction) in parts of Australia where sweet food is offered to them.

ADULT RAINBOW LORIKEET  
(EASTERN AUSTRALIAN SUBSPECIES)



*Psitteuteles versicolor*

### Varied Lorikeet

	<b>LENGTH</b> 19cm (7½in)
<b>WEIGHT</b> 50–60g (1¾–2⅓oz)	
<b>MIGRATION</b> Partial migrant	

**HABITAT** Tropical woodland, particularly along watercourses

Found only in tropical northern Australia, the Varied Lorikeet is tiny and predominantly bright green, with generous yellow flecks on its plumage. The male has a bright scarlet cap, a white eye-ring, a yellow spot behind

### MALE VARIED LORIKEET

the eye, a mauve-pink patch on the upper breast, and paler plumage below. The female has less red on the crown, and the juvenile is duller overall.

The Varied Lorikeet feeds on flowers and fruit. Consequently, it is nomadic, moving about to find suitable trees in flower. A gregarious species, it is usually seen in family parties or small groups, although large flocks often gather to feast on nectar. The Varied Lorikeet is noisy when feeding, with its chattering, sharp screeches, and softer scolding calls. It can be quite aggressive, driving off other nectar-feeding species, such as honeyeaters.

*Glossopsitta concinna*

### Musk Lorikeet

	<b>LENGTH</b> 22cm (8½in)
<b>WEIGHT</b> 50–65g (1¾–2¾oz)	
<b>MIGRATION</b> Non-migrant	

**HABITAT** Coastal woodland



**FEMALE MUSK LORIKEET**

The Musk Lorikeet is found only in a small coastal belt of southeastern Australia (including parts of Tasmania). It is a small, bright green parrot, with a crimson red forehead and "mask" behind the eye, and a yellow flash down the side of the breast. The male has a bright blue crown, which is turquoise and less well-defined in the female. The Musk Lorikeet is often found feeding in mixed flocks with other small species of lorikeet.

*Charmosyna papou*

### Papuan Lorikeet

	<b>LENGTH</b> 36–42cm (14–16½in)
<b>WEIGHT</b> 75–100g (2½–3½oz)	
<b>MIGRATION</b> Non-migrant	

**HABITAT** Upland forest

The Papuan Lorikeet has a bright red forehead, neck, breast, and back; green wings; dark blue flanks and crown; and a long tail with extravagant yellow streamers. The male and female are alike, except for the bright yellow back of the female. The juvenile is duller. A darker form of the species also occurs (apparently at higher altitudes) in which the red areas of plumage are replaced with black.



**ADULT PAPUAN LORIKEET**

*Northiella haematogaster*

## Bluebonnet



LENGTH	26–30cm (10–12in)
WEIGHT	95g (3½oz)
MIGRATION	Non-migrant

**HABITAT** Woodland and open areas, including farmland; scrub and riverine forest

A spectacular bird while in flight, the Bluebonnet has a blue face and a bright orange and yellow belly, which is splendidly displayed when the bird is in the air. Its primary wing feathers are blue. The juvenile is also brightly coloured, but lacks some of the contrasting tones seen in the adult. This species feeds in pairs or small groups. It breeds in July–December; the female incubates the 4–7 eggs and is fed by the male for 20 days. Four subspecies of the Bluebonnet have been identified.



ADULT BLUEBONNET

*Psephotus varius*

## Mulga Parrot



LENGTH	26–31cm (10–12in)
WEIGHT	60g (2¼oz)
MIGRATION	Non-migrant

**HABITAT** Dry woodland, open areas, and cultivated land

The Mulga Parrot is also known as the Varied Parrot, reflecting its spectacular contrasts of colour. Its plumage is mainly green, but it has a yellow forehead and upper face, with a red nape and rump. The breeding season lasts from July to December, although it also breeds during the rains. The young remain with the parents to form family groups after fledging.



PAIR OF MULGA PARROTS



MALE RED-FRONTED PARAKEET

*Cyanoramphus novaeseelandiae*

## Red-fronted Parakeet



LENGTH	23–28cm (9–11in)
WEIGHT	70–125g (2½–4oz)
MIGRATION	Non-migrant

**HABITAT** Native forest or scrub on islands

**RED LIST CATEGORY** Vulnerable

The Red-fronted Parakeet is mainly green in colour. However, it has a red eye-stripe, crown, and forehead. It feeds on fruit and seeds, and usually nests in a cavity, such as a rock crevice. Large clutches of up to 10 eggs have been reported, but the average is five eggs, laid in October–December. The female incubates the eggs but the male helps to feed the young.

*Psephotus haematonotus*

## Red-rumped Parrot



LENGTH	25–28cm (10–11in)
WEIGHT	60g (2¼oz)
MIGRATION	Non-migrant

**HABITAT** Wet areas up to 1,000m (3,300ft) and suburban habitats



MALE RED-RUMPED PARROT

The Red-rumped Parrot is not really an apt name for this bird, because its most spectacular feature is the bright mix of green, blue, and yellow in its plumage. The red rump is clearly visible only when the bird is in flight, and is not present in the female and the juvenile. The bird breeds in small colonies, although it is territorial around the nest and defends individual branches. Breeding usually takes place between July and January.

*Platycercus elegans*

## Crimson Rosella



LENGTH	32–37cm (12½–14½in)
WEIGHT	125–150g (4–5oz)
MIGRATION	Non-migrant

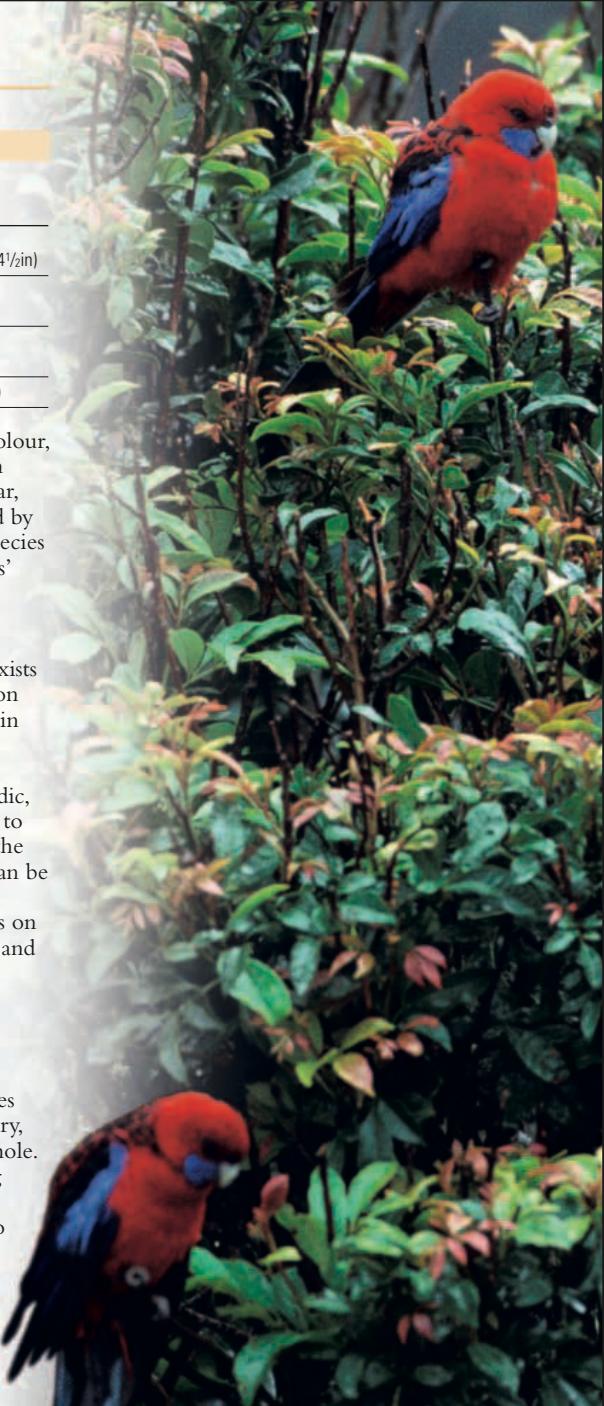
**HABITAT** Forested hills, up to 1,900m (6,200ft)

Deep crimson and dark blue in colour, the Crimson Rosella is striking in appearance. Both sexes look similar, but the rich red colour is replaced by green in the juvenile. Three subspecies have been described in the species' natural range, which is largely restricted to the eastern and southeastern coast of Australia, although an isolated population exists in northeast Australia. The Crimson Rosella is often found in pairs or in small groups. Although the adults prefer to stay in the same area for years, the younger ones are nomadic, usually wandering in flocks of up to 30. Outside the breeding season, the species tends to disperse rather than be truly migratory. The diet of the Crimson Rosella is varied; it feeds on flowers and seeds of grasses, trees, and shrubs and even strips tree bark looking for insect larvae.

The male Crimson Rosella's courtship display consists of wing fanning, tail-wagging, and head-bobbing. The breeding season takes place between August and February, when 3–8 eggs are laid in a tree-hole. The male feeds the female during incubation and for a short period after the eggs hatch. The male also actively feeds the young for the period up to fledging.

## FEEDING IN FLOCKS

Groups of Crimson Rosellas gather to feed on tree blossoms and the seeds of eucalyptus trees.

*Neophema petrophila*

## Rock Parrot



LENGTH	21–24cm (8½–9½in)
WEIGHT	55g (2oz)
MIGRATION	Non-migrant

**HABITAT** Coastal scrub and grassland

MALE ROCK PARROT





### *Melopsittacus undulatus*

#### Budgerigar



<b>LENGTH</b>	18–20cm (7–8in)
<b>WEIGHT</b>	30g (1½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wide range of habitats, including arid areas, but usually close to water

#### ADULT BUDGERIGAR (WILD SPECIES)



Despite being confined to Australia as a naturally breeding bird, the Budgerigar is probably the most familiar parrot in the world – it is also one of the smallest. The plumage of the wild Budgerigar is a combination of a black-barred head and back and a yellow face contrasting with a bright green front and a blue tail. The Budgerigar is a swift-flying bird. It mostly feeds on grass seeds from the ground. Budgerigars are thought

to be able to survive for long periods without water, although many die during prolonged drought. There is no distinct breeding season; it depends much on the availability of food. The bird breeds in small colonies, nesting in tree hollows or cavities, and 4–8 eggs are laid. The male supplies food for the female during this time.

### *Purpureicephalus spurius*

#### Red-capped Parrot

<b>LENGTH</b>	35–38cm (14–15in)
<b>WEIGHT</b>	125g (4oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Eucalyptus forest



#### BRILLIANT COLOURS

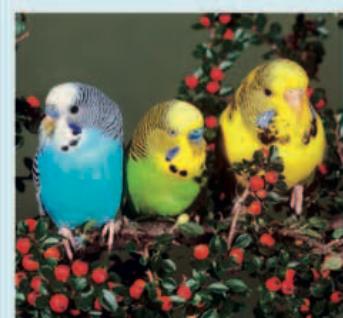
With its crimson head, back, and belly and bright blue wings with bold black markings, the Crimson Rosella is a stunning bird.



#### ADULT RED-CAPPED PARROT

#### COLOUR FORMS

Domesticated Budgerigars are commonly bred in various shades and hues that are rarely found in the wild species. These colour variants are derived by breeding the birds selectively rather than by controlling their diets. The variety ranges from blue, green, yellow, and white to pied and multicoloured plumage.



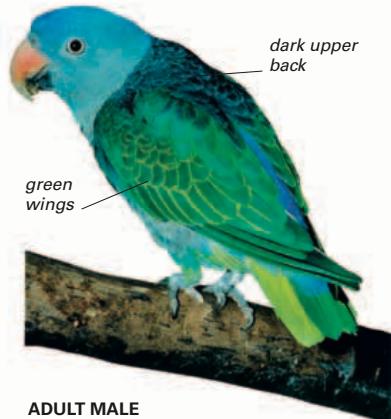
*Psittinus cyanurus*

## Blue-rumped Parrot

<b>LENGTH</b>	18cm (7in)
<b>WEIGHT</b>	100g (3½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Lowland rainforest, forest edges, plantations, and occasionally mangroves

A stout bird with a short tail, the Blue-rumped Parrot is among the most widely distributed species in its genus. The male has a bright red bill, with a blue head, dark upper back, and a blue rump, with the rest of the plumage in bright green. The female has a brown bill and head, with a green upper back, and a smaller, less noticeable blue rump. The male in the subspecies found on the islands off Sumatra, has less blue on its head,



ADULT MALE

with paler green plumage on its back, and an all-green rump. This bird is considered to be near-threatened, due to the alarming rate at which its primary rainforest habitat is being logged. Cage-bird traders are also known to hunt and capture large numbers of the species.

*Aprosmictus erythropterus*

## Red-winged Parrot

<b>LENGTH</b>	30cm (12in)
<b>WEIGHT</b>	150g (5oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open woodland, forest, and scrub

Mainly an Australian species, though also found in southern Papua New Guinea, the Red-winged Parrot is a large bird. The male's bill and eyes are red, which contrast with the bright

## MALE FEEDING

*Prioniturus discurus*

## Blue-crowned Racquet-tail

<b>LENGTH</b>	27cm (10½in)
<b>WEIGHT</b>	175g (6oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rainforest

The Blue-crowned Racquet-tail is a small parrot with a variable amount of bright blue on its head and green plumage. However, the Blue-crowned Racquet-tail's most noticeable feature



ADULT BLUE-CROWNED RACQUET-TAIL

is its remarkable tail. Its two central tail feathers are long, with bare shafts that have dark racquet-shaped tips. The male has longer tail feathers than the female. These parrots form small flocks, feeding together on banana and other fruiting trees.

*Alisterus scapularis*

## Australian King Parrot

<b>LENGTH</b>	42–44cm (16½–17½in)
<b>WEIGHT</b>	200–275g (7–10oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rainforest, woodland, and scrub



MALE ADULT

With its sharp, hooked bill and bright plumage, the male Australian King Parrot must rank as one of the most attractive parrots in Australia. Its scarlet head, with bright green upperparts, green underparts, purple rump, along with a dark tail, and two pale green tramlines down its back, create a stunning contrast. The female is duller, with a green head, and the scarlet plumage restricted to the belly.



*Tanygnathus lucionensis*

## Blue-naped Parrot



## LENGTH

30cm (12in)

## WEIGHT

150–225g (5–8oz)

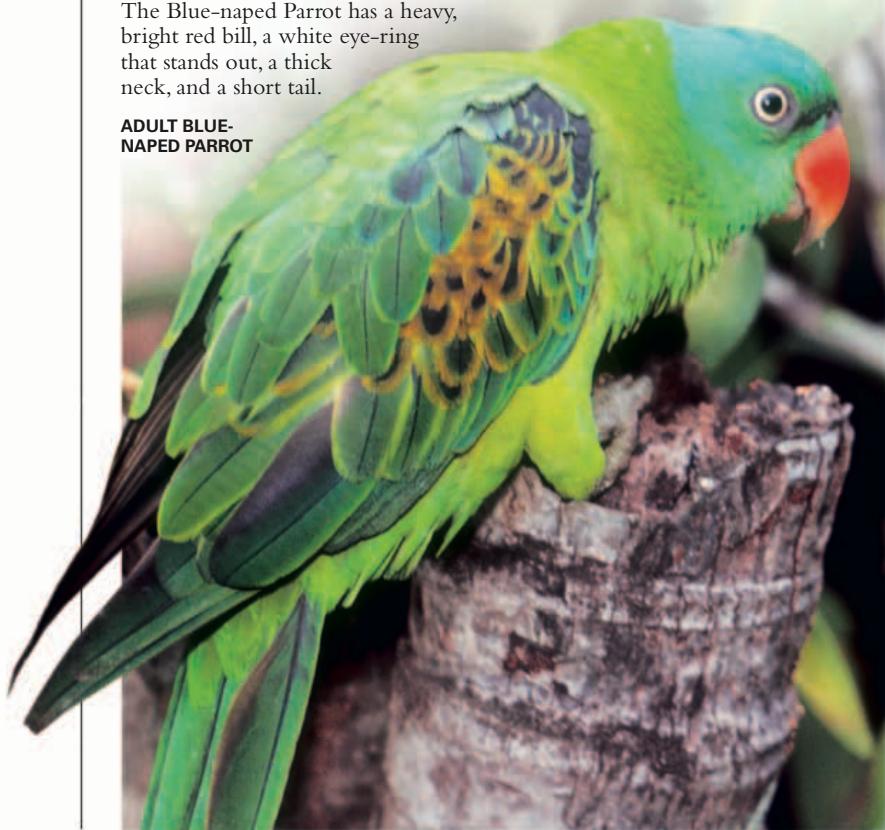
## MIGRATION

Non-migrant

**HABITAT** Lowland forest, plantations, scattered trees in agricultural areas, and mangroves

The Blue-naped Parrot has a heavy, bright red bill, a white eye-ring that stands out, a thick neck, and a short tail.

## ADULT BLUE-NAPED PARROT



Its plumage is green, with a bright blue patch that usually extends from the front of the eyes, to the back of the neck, giving rise to the bird's common name. A mottled patch of rufous and blue feathers is also noticeable at the top of its wings. The male and the female of this species are similar in appearance. The Blue-naped Parrot feeds on all kinds of fruit and seeds, even young coconuts, cracking them open with its powerful bill.

*Polytelis anthopeplus*

## Regent Parrot



## LENGTH

40cm (15 1/2in)

## WEIGHT

100g (3 3/8oz)

## MIGRATION

Partial migrant

**HABITAT** Eucalyptus woodland, mallee scrub, and coastal forest

A large, long-winged, long-tailed bird, the Regent Parrot looks particularly impressive in flight because of the contrast between its bright yellow plumage, the dark wings, and the tail. The male is a spectacular-looking bird, with its yellow head and shoulders, dark olive-green upperparts, bright yellow underparts, and a salmon pink bar

## MALE REGENT PARROT AT NEST HOLE

across the black-tipped wings. While both sexes look similar, the female Regent Parrot is slightly less gaudy in appearance than the male.

The Regent Parrot is a social species that nests in small colonies, usually in large hollows in gum trees. The female lays 3–8 eggs and rarely leaves the nest while it is incubating the eggs, waiting for the male to feed it. Outside the breeding season, these parrots form large flocks, particularly when the species comes in to roost. The Regent Parrot is found only in Australia, where it has a fragmented distribution. The bird occurs in the mallee scrub of South Australia, New South Wales, and Victoria, with a separate population on the other side of the continent in the coastal forest of southwest Australia.

*Polytelis swainsonii*

## Superb Parrot



## LENGTH

40cm (15 1/2in)

## WEIGHT

125–150g (4–5oz)

## MIGRATION

Partial migrant

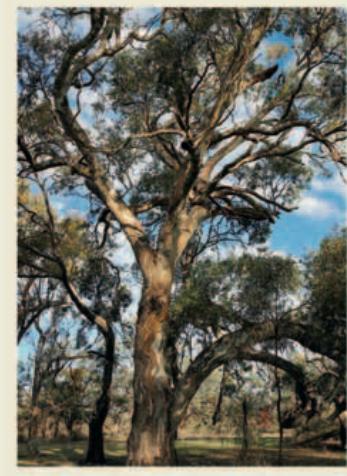
**HABITAT** Box woodland; breeds in River Red Gum forest

**RED LIST CATEGORY** Vulnerable

## GREAT SITES

## GULPA STATE FOREST

One of the best places for a glimpse of the Superb Parrot is the Gulpa State Forest in southwest New South Wales. The species is present in this region most of the year, although it can be quite scarce during summer.



Confined to southeast Australia, the Superb Parrot is a rapidly declining species, currently numbering only around 6,500 birds. It is a bright green parrot with a long tail. The male has a yellow forehead, with a face that is bordered below by a broad scarlet crescent that extends across its throat. The female has a plain green face with a blue tint, and is dull overall. However, it has red feathering on its thighs, a feature lacking in the otherwise brighter male. The Superb Parrot has a swift, direct flight. When seen from below, the female shows a rose-pink tint on the underside of its tail, while the male shows black.

## FLOCK OF SUPERB PARROTS

*Psittacula cyanocephala*

## Plum-headed Parakeet



<b>LENGTH</b>	33–37cm (13–14½in)
<b>WEIGHT</b>	55–85g (2–3oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Moist deciduous woodland

The Plum-headed Parakeet is a brightly coloured species that is found throughout the Indian subcontinent and Sri Lanka.

The male has a striking head coloration: crimson above the bill and graduating through purple, before becoming blue at the top of the

neck. This “hood” is further separated from the body by a well-defined but thin black border. In addition to its well-marked head, the male Plum-headed Parakeet also has two small maroon patches at the top of the wing that are not present in the female. It has a long blue tail, and a hint of blue on the rump. The female Plum-headed Parakeet is less striking, with a purple-grey head that has no black edging; instead it has an indistinct yellow neck-ring. The juvenile has a green head, with a small amount of orange on the crown.

This species is sometimes considered to be a pest as large flocks of several hundred birds can gather and cause damage to agricultural crops. Usually, however, its main food consists of wild fruit, seeds, buds, and nectar.

## MALE PLUM-HEADED PARAKEET

*Psittacula krameri*

## Rose-ringed Parakeet



<b>LENGTH</b>	37–43cm (14½–17in)
<b>WEIGHT</b>	100–150g (3½–5oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Mainly deciduous woodland and forest; also farmland

## MALE ROSE-RINGED PARAKEET

*Agapornis roseicollis*

## Rosy-faced Lovebird



<b>LENGTH</b>	15–18cm (6–7in)
<b>WEIGHT</b>	45–65g (1–2³/₈oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Arid woodland, tree-lined rivers, and scrubby hillsides

## FLOCK OF ADULT ROSY-FACED LOVEBIRDS

The Rosy-faced Lovebird is a small parrot, with a noticeable white eyering, a pale-coloured bill, a pink face and throat, and a bright blue rump. It is mainly green in colour. Both sexes are similar in appearance, but the juvenile is browner.

The Rosy-faced Lovebird is found in arid, rocky terrain in southern Africa and is specifically located in a narrow band stretching from Angola and Namibia to South Africa. Although it is found in dry habitats, the species requires access to water and often visits watering holes for baths. It is also sociable and feeds in small groups. Commonly kept as cage-birds, large numbers have been taken from the wild, contributing significantly to the decline of the species.

Also known as the Ring-necked Parakeet, the Rose-ringed Parakeet is a common species that naturally occurs in large parts of Africa and Asia. Many feral populations have also become established in other locations around the world, such as Europe and North America. It is a slim-bodied, mainly green parrot, with a long tail. The male has a bright red bill, red eye, a pink collar around its neck, and a black chin. The female Rose-ringed Parakeet is plainer and lacks the distinctive head pattern of the male.

*Agapornis canus*

## Grey-headed Lovebird



<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	25–30g (7/₈–1 1/₁₆oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest edges, scrub, and semi-wooded areas near the coast

This tiny, short-tailed parrot is the only species of lovebird to occur in Madagascar and is the smallest of the lovebirds. The male Grey-headed Lovebird has dark green upperparts, a pale lime-green belly, and a contrasting pale grey head and breast. The female and juvenile are much less distinctive: entirely dark green above and pale green below, without any grey on the head and breast. The adult has a greyish white bill, but in the juvenile, the bill is more yellow in tone and has a black base.

This lovebird feeds mainly on seeds and can often be found foraging on the ground. It also consumes some fruit and the species has been known to cause damage to rice crops.

## PAIR OF GREY-HEADED LOVEBIRDS





ADULT GREATER VASA PARROT

	<i>Coracopsis vasa</i>
<b>LENGTH</b>	50cm (19½in)
<b>WEIGHT</b>	525g (19oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest, coconut plantations, savanna, scrub, and open areas adjacent to woodland

This distinctive and unusual-looking parrot is found only in Madagascar and the neighbouring Comoros Islands. It is a large, dark brown bird that is almost black on the breast and back, with slightly paler feathering on its wings and long tail. Both sexes are alike, while the juvenile is generally browner. During the breeding season, some individuals lose most of their facial feathers, their bald heads revealing bare yellow-orange skin below.

	<i>Poicephalus rueppellii</i>
<b>LENGTH</b>	22–28cm (8½–10in)
<b>WEIGHT</b>	100–150g (3½–5oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Dry woodland

A distinctive parrot with an unusual colouring combination, Rüppell's Parrot is a bird of southwest Africa, found only in Angola and Namibia. The female is pale grey on the head and breast; dark grey on the wings and back, with a bright yellow vertical wing-bar; and bright blue on the belly and undertail. The male lacks the blue plumage below – instead, its underparts are a uniform grey.

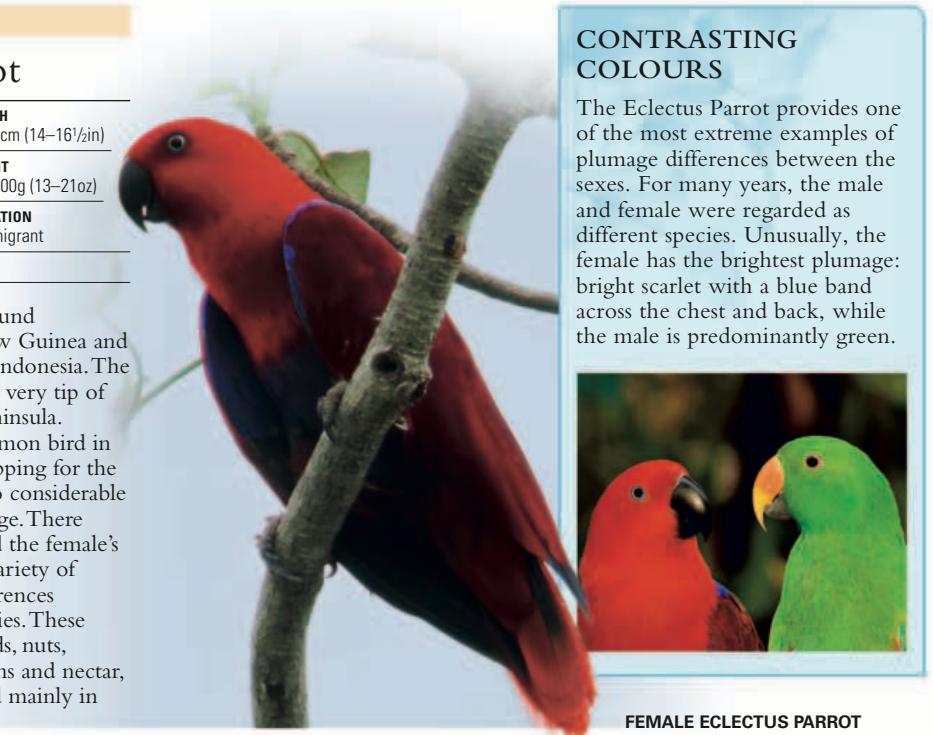
	<i>Eclectus roratus</i>
<b>Eclectus Parrot</b>	
<b>LENGTH</b>	35–42cm (14–16½in)
<b>WEIGHT</b>	350–600g (13–21oz)
<b>MIGRATION</b>	Non-migrant
<b>HABITAT</b>	Woodland canopy

The Eclectus Parrot is found throughout much of New Guinea and neighbouring islands of Indonesia. The species also occurs in the very tip of Australia's Cape York Peninsula. Although it is still a common bird in many areas, excessive trapping for the cage-bird trade has led to considerable decline in parts of its range. There are several subspecies and the female's colour patterns show a variety of noticeable plumage differences according to the subspecies. These parrots feed on fruit, seeds, nuts, berries, leaf buds, blossoms and nectar, all of which are procured mainly in the treetops.

	<i>Psittacus erithacus</i>
<b>Grey Parrot</b>	
<b>LENGTH</b>	28–39cm (11–15½in)
<b>WEIGHT</b>	400–500g (14–18oz)
<b>MIGRATION</b>	Non-migrant
<b>HABITAT</b>	Damp lowland forest

The Grey Parrot (also known as the African Grey Parrot) is a common bird in captivity. Although much of this popularity can be attributed to its distinctive appearance, it is probably largely due to the species' propensity for mimicry. Parrots are now generally regarded as one of the most intelligent bird families – and the Grey Parrot's powers of speech certainly seem to offer supporting evidence. Individual captive Grey Parrots with a vocabulary of more than 500 words have been recorded, with some individuals reputedly able to invent their own words and phrases in order to communicate – using language in the same way that a human would.

The Grey Parrot is a medium- to large-sized species of parrot with barred grey plumage. It has white facial feathering, black wing-tips and a scarlet tail. Birds of the subspecies *P. e. timneh*, from parts of Sierra Leone and Ivory Coast, are smaller and darker, with a grey-red tail. The Grey Parrot feeds primarily on nuts and fruit, supplemented by leafy matter. Each clutch consists of 3–5 eggs, which are laid in a tree-cavity high above the ground. The female incubates the eggs for 30 days and is fed by the male during this time. Both parents feed the young.



## CONTRASTING COLOURS

The Eclectus Parrot provides one of the most extreme examples of plumage differences between the sexes. For many years, the male and female were regarded as different species. Unusually, the female has the brightest plumage: bright scarlet with a blue band across the chest and back, while the male is predominantly green.



FEMALE ECLECTUS PARROT



ADULT GREY PARROT



CAPTIVE SPIX'S MACAW

*Cyanopsitta spixii*

## Spix's Macaw



**LENGTH** 55–57cm  
(21½–22½in)

**WEIGHT** 300–400g (11–14oz)

**MIGRATION**  
Non-migrant

**HABITAT** Gallery woodland within the caatinga (dry shrubland and thorn forest) zone

**RED LIST CATEGORY** Critically endangered

Named after a 19th-century German naturalist-explorer who spent three years in Brazil, Spix's Macaw is the smallest of the blue macaws. It has a black bill, silvery grey head, with dark grey skin surrounding the eyes, a darker back and wings, and a long, pointed tail. It feeds on seeds, nuts, and fruit and is a creature of habit, perching all day on a favoured treetop. Spix's Macaw was perhaps partially nomadic, although it has always been restricted to a small and remote corner of northeast Brazil, where the last known wild bird disappeared a few years ago; approximately 50 are now in captivity.

*Ara macao*

## Scarlet Macaw



**LENGTH**  
84–89cm (33–35in)

**WEIGHT** 0.9–1.5kg (2–3½lb)

**MIGRATION**  
Non-migrant

**HABITAT** Humid evergreen forest and gallery woodland; occasionally pine forest and mangroves

It is difficult to distinguish the Scarlet and Red-and-green Macaws (right), from each other, especially as the two species often occur together in the same forests. Mostly bright red in colour, the Scarlet Macaw has an unmarked bare white face and bright yellow feathers on its blue wings. Its wide-ranging diet has been well studied and the bird is known to consume the seeds of a great many tree species, as well as the fruit, flowers, leaves, and even the sap and bark. In some areas, it even eats pine-seeds. It is totally reliant on tree cavities for nesting. The numbers of this magnificent bird have declined in many areas, especially in Central America, where in many countries the species is now on the verge of extinction.

ADULT SCARLET MACAW

*Ara ararauna*

## Blue-and-yellow Macaw



**LENGTH**  
86cm (34in)

**WEIGHT** 1–1.5kg (2¼–3¼lb)

**MIGRATION**  
Non-migrant

**HABITAT** Seasonally flooded and gallery forest, palm groves in savanna; rarely in deciduous forest

Unlike many macaws, which have declined in numbers, the Blue-and-yellow Macaw is still common over much of its large range, despite depletion due to trappers and habitat loss. Named for its plumage colours, it has a green forehead, a black chin, blue feathers on its upperparts, and yellow underparts. The species is dependent on palms for its nest sites, although it feeds on a variety of fruit, flowers, and nectar of other trees; it moves seasonally in search of food. The breeding cycle lasts four to five months and 1–3 eggs are laid.



BLUE-AND-YELLOW MACAW



PAIR OF RED-AND-GREEN MACAWS

## Red-and-green Macaw



**LENGTH**  
90–95cm (35–37in)

**WEIGHT** 1–1.7kg (2¼–3½lb)

**MIGRATION**  
Non-migrant

**HABITAT** Humid tropical and gallery forests in lowland and foothills

## CLAY LICKS

This macaw is one of several parrots known to visit clay cliffs in forests, usually along watercourses, in order to scrape off and swallow particles of clay. The reason for this unusual behaviour is not definitely known, but it has been suggested that the clay helps make some unripe fruit more palatable or, even more remarkably, counters the stimulant effects of some elements of its diet.



*Primolius maracana*

## Blue-winged Macaw

**LENGTH**

36–43cm (14–17in)

**WEIGHT**

250–275g (9–10oz)

**MIGRATION**

Non-migrant

**HABITAT** Edges of lowland forest; also in palm groves and gallery woodland

PAIR OF BLUE-WINGED MACAWS

*Diopsittaca nobilis*

## Red-shouldered Macaw

**LENGTH**

30cm (12in)

**WEIGHT**

125–175g (4–6oz)

**MIGRATION**

Non-migrant

**HABITAT** Savanna and marshy areas, with gallery woodland and groves of palms

ADULT RED-SHOULDERED MACAW

The Red-shouldered Macaw is one of several smaller macaws with mostly green plumage and a bare area of white skin around the eye. This species has a pale blue crown and an orange-red shoulder patch. Its nest is sited either in a palm tree or an arboreal termite nest. Four eggs are laid and are incubated for about a month.

*Aratinga aurea*

## Peach-fronted Parakeet

**LENGTH**

23–28cm (9–11in)

**WEIGHT**

75–95g (2½–3¾oz)

**MIGRATION**

Non-migrant

**HABITAT** Open savanna, with palms, gallery forest, dry woods, and tall scrub

The genus *Aratinga* is one of the two largest genera of South American parakeets and the Peach-fronted Parakeet is one of its most widespread and common representatives. Mainly green in colour, the forehead to mid-crown is peachy orange and separated from the pale yellow-orange ring around the eye by a strip of dull green feathers. The underparts are mainly greenish yellow, becoming more buff on the throat and upper breast. The Peach-fronted Parakeet is a very sociable bird, frequently occurring in

**FEEDING TOGETHER**

Like many parrots, Peach-fronted Parakeets feed communally, with one bird serving as a lookout for danger.

*Aratinga acuticaudata*

## Blue-crowned Parakeet

**LENGTH**

33–38cm (13–15in)

**WEIGHT**

175g (6oz)

**MIGRATION**

Non-migrant

**HABITAT** Dry woodland and cactus scrub, and open savanna with palm groves

Principally green, the Blue-crowned Parakeet has a dull blue head, a white ring around the eye, and some red on its tail. It feeds on cacti fruit, berries, and seeds, but also on mangoes and some crops, moving widely in search of food. This parakeet has suffered at the hands of the cage-bird trade, especially in the south of its range, with large numbers being exported from Argentina.

**GROUP OF BLUE-CROWNED PARAKEETS**

flocks, except when breeding. The nesting season occupies much of the second half of the year. The bird excavates a hole in a disused termite's nest, either on the ground or, less commonly, in a tree and 2–4 eggs are laid, with incubation lasting just over three weeks. The young take almost seven weeks to reach fledging. Nestlings are often taken as pets, as the nests are easily accessed.

The Peach-fronted Parakeet is often seen foraging on the ground, as well as in trees and low bushes, taking seeds, flowers, and leaves, but also, to a much lesser extent, termites, moths, beetles, and various insect larvae. It also visits crops such as rice, soya, and maize, which are about to be harvested, bringing the bird into conflict with local farmers, especially in Argentina, where the species is still listed as a pest.

Whereas many species, including a number of parrots, are declining as a result of deforestation, this adaptable species is actually increasing in Brazil as a result of such clearance.

**A STRONG GRIP**

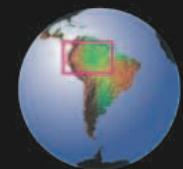
The Peach-fronted Parakeet has very dexterous feet, which it uses to hold its food.





## GREAT SITES

# MANÚ NATIONAL PARK



Location In Manú and Paucartambo provinces, southeastern Peru.



Manú is the world's largest tropical rainforest reserve and supports a greater diversity of birds than any other national park. More than 850 species of bird have been recorded here, including many that are globally threatened. This total is equivalent to around 10 per cent of all bird species in the world. On the eastern slopes of the Andes in Peru, Manú National Park and the adjacent Biosphere Reserve and Cultural Zone form a vast protected area of 18,800 square km (7,250 square miles). It comprises virtually the entire watershed of the Río Manú and most tributaries of the Río Madre de Dios, two of the major rivers in the western Amazon basin.

## RANGE OF HABITATS

Manú's extraordinary species richness is due to its altitudinal variation and range of habitats, from tundra-like puna grassland and stunted elfin forest at high altitudes, humid temperate forest and cloudforest at mid-altitudes, humid upper tropical forest in the foothills, and primary rainforest and swamp forest in the lowlands.

Some of Manú's birds, such as the Black-faced Cotinga and Rufous-fronted Antthrush, are found nowhere else, while this is among the best areas in the Amazon basin to see many other species, from tanagers to toucans, woodcreepers, hummingbirds, quetzals, cotingas, and parrots. In addition to its resident birdlife, Manú hosts huge numbers of warblers and other migrant birds from North America throughout the northern winter, and in late July and August during the dry season its exposed river banks provide a valuable feeding and resting place for migrating North American shorebirds.

A highlight of the lowland rainforest at Manú is the flocks of macaws that visit favoured cliffs and river banks, reaching a peak in August and September. Another of Manú's most spectacular birds is the Andean Cock-of-the-Rock, which inhabits the frequently mist-shrouded cloudforest.

Classified as a World Heritage Site in 1987, Manú is famous among birdwatchers for offering one of the most intense and varied experiences anywhere in the Amazon.

## FLOCKING AT CLAY LICKS

In early morning raucous flocks of Scarlet and Red-and-green Macaws assemble at clay licks, often exposed cliffs or river banks, in the lowlands of Manú National Park.

## WHAT TO SPOT



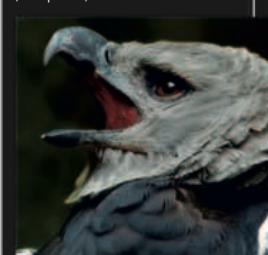
**HOATZIN**  
*Opisthocomus hoazin*  
(see p.272)



**ORINOCO GOOSE**  
*Neochen jubata*  
(see p.128)



**ANDEAN COCK-OF-THE-ROCK**  
*Rupicola peruvianus*  
(see p.339)



**HARPY EAGLE**  
*Harpia harpyja*  
(see p.200)

*Anodorhynchus hyacinthinus*

## Hyacinth Macaw



## LENGTH

100cm (39in)

## WEIGHT

1.5kg (3½lb)

## MIGRATION

Non-migrant

**HABITAT** Tropical lowland forest, gallery forest, and palm groves

**RED LIST CATEGORY** Endangered

The largest parrot in South America, the Hyacinth Macaw displays its enormous size to great effect when it is in flight. It has a massive "bone-crushing" bill, deep cobalt-blue plumage, violet wings, and grey on the underparts of the tail and wings. A yellow patch around the eye and at the base of the bill provides a spectacular contrast. The sexes show no difference in plumage, but the juvenile has paler yellow skin on the face and a shorter tail.

This species mostly feeds on palm fruit, although occasionally it also eats other fruit, as well as snails. Most foraging is done on the ground, where it walks jauntily on its short legs with the tail held low. It nests either in tree-holes or on cliffs. Only 2 or 3 eggs are laid, and incubation lasts just under a month. The young remain in the nest for three months before fledging.

The status of this species is a source of conservation concern, as populations have declined steadily due to illegal trade in cage birds.

## ADULT HYACINTH MACAW

## SMALL FLOCKS

A very gregarious bird, the Hyacinth Macaw can frequently be seen travelling in small flocks of one to eight pairs, which call loudly to one another. In the wild, Hyacinth Macaws often flock to areas of exposed clay known as macaw licks. When disturbed, these bright birds screech loudly and circle overhead with their long tails streaming. In the breeding season, however, pairs will break away from the group. The species is monogamous, and pairs remain bonded for life.



*Cyanoliseus patagonus*

## Burrowing Parakeet



LENGTH	39–52cm (15½–20½in)
WEIGHT	250–300g (9–11oz)
MIGRATION	Non-migrant

**HABITAT** Dry wooded savanna, thorn scrub, and other arid lowland, especially along watercourses

Most parakeets tend to be relatively small, but the Burrowing Parakeet is an exception. It has an olive-brown head and breast and has yellow over the rest of the underparts, with a red “stain” on the central belly. Its back and wings are yellow and its flight feathers are blue. It feeds on seeds, foraging on the ground, and is persecuted in some areas because it is seen as a crop pest.



LARGE FLOCK OF BURROWING PARAKEETS

### CLIFF-NESTING

Burrowing Parakeets are so named for their habit of nesting in sandstone, limestone, or earth cliffs, sometimes well above the ground, and frequently in close proximity to water, including the sea. The burrows are often interconnected, forming a sort of mini-labyrinth.

*Myiopsitta monachus*

## Monk Parakeet



LENGTH	29cm (11½in)
WEIGHT	90–150g (3½–5oz)
MIGRATION	Non-migrant

**HABITAT** Gallery forest, savanna woodland, scrub, parkland, and orchards; often near or in urban areas

The Monk Parakeet is mostly green, with a pale grey face and crown, yellowish pink bill, and brown breast feathers that are fringed with grey. It has a varied diet, with thistles often an important component during the breeding season. In some areas, it is considered a serious pest of agricultural crops.



### ADULT MONK PARAKEET

### COMMUNAL NESTS

The Monk Parakeet's nesting system is atypical of parrots. The species makes communal nests of spiny sticks, which are cut from bushes and are often placed on top of trees, especially the eucalyptus. The nests contain multiple chambers that are occupied all year round, being used by different pairs in rotation, and sometimes also by non-breeding individuals. Rarely is a nest used by a lone pair.

*Pyrrhura frontalis*

## Reddish-bellied Parakeet



LENGTH	24–28cm (9½–11in)
WEIGHT	70–95g (2½–3¾oz)
MIGRATION	Non-migrant

**HABITAT** Montane evergreen forest; also parkland and gallery woodland



### ADULT REDDISH-BELLIED PARAKEET

As its name indicates, the Reddish-bellied Parakeet has a red belly. It has a white eye-ring, a yellowish green neck and breast, blue flight feathers, and a reddish brown undertail. It mostly feeds on the nuts of the monkey-puzzle tree in some parts of its range, although a variety of other fruit are also taken. The female lays five eggs in a tree-hole, and the incubation process takes almost one month. It is one of the most common parrots in southern Brazil.

*Brotogeris chiriri*

## Yellow-chevroned Parakeet



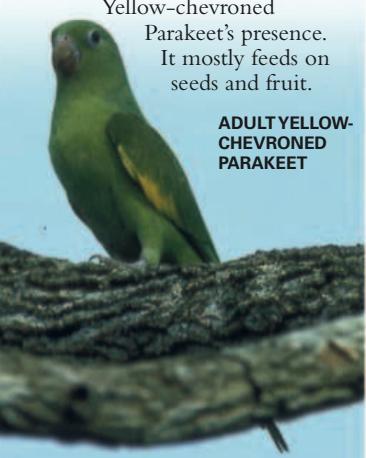
LENGTH	20–25cm (8–10in)
WEIGHT	60g (2½oz)
MIGRATION	Non-migrant

**HABITAT** Patches of forest, including riparian woodland and in open country; frequently enters towns

The two most noticeable features of the Yellow-chevroned Parakeet are its bright pink bill and the yellow stripe in each wing, which is more conspicuous in flight. It is green in colour overall, and a paler green on the underparts. The sexes are similar in plumage. The high-pitched screeching calls of an overhead flock are often the first indication of the Yellow-chevroned

Parakeet's presence. It mostly feeds on seeds and fruit.

### ADULT YELLOW-CHEVRONED PARAKEET

*Forpus xanthopterygius*

## Blue-winged Parrotlet



LENGTH	13cm (5in)
WEIGHT	30g (1½oz)
MIGRATION	Non-migrant

**HABITAT** Lightly wooded areas, including savanna, pastures, parkland, and town suburbs



### ADULT BLUE-WINGED PARROTLET

This small parrot is green all over, and slightly yellower below. The blue wing patches that give the bird its name are actually hard to see, except in flight, and are only present in males. There is also some blue on the rump. The Blue-winged Parrotlet feeds primarily on seeds and fruit, including grass seeds taken on the ground, and also shows a preference for catkins. It lays 4–7 eggs in a hole in a tree, or sometimes in an old termite nest. Only the female incubates the eggs.

*Touit purpuratus*

## Sapphire-rumped Parrotlet



**LENGTH**  
18cm (7in)

**WEIGHT**  
55–65g (2–2½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Montane evergreen forest, seasonally flooded and savanna forests, and forest edges

This squat, short-tailed, and small-billed parrot is most frequently seen in high flight between feeding and roosting areas in early morning and late afternoon. The Sapphire-rumped Parrotlet is mainly green, relieved by an olive-brown head, violet-blue edges to the wings and rump, and a brown line at the edge of the back, with red patches on the tail. The sexes differ only in the pattern of red and green on the tail.

*Pionus menstruus*

## Blue-headed Parrot



**LENGTH**  
24–28cm (9½–11in)

**WEIGHT**  
200–300g (7–11oz)

**MIGRATION**  
Non-migrant

**HABITAT** All types of woodland, including seasonally flooded and savanna forest and tall second growth

One of the most common parrots across its broad South American range, the Blue-headed Parrot is easily identified by its size and relatively squat appearance, especially when it is perching. It has a strikingly blue head and some red on the undertail feathers. The juvenile has a mainly green head. Ornithologists recognize

*Pionopsitta vulturina*

## Vulturine Parrot



**LENGTH**  
23cm (9in)

**WEIGHT**  
150–175g (5–6oz)

**MIGRATION**  
Non-migrant

**HABITAT** Amazonian forest, both seasonally flooded and permanently dry areas

Found only in east Amazonian Brazil, the Vulturine Parrot has a distinctive head, which is mostly bare, but is covered by black bristles that become yellow-orange near the bill base. It is unclear what purpose the bare head serves, but it is speculated that the juice from the fruit the bird feeds on would otherwise mat the bird's feathers. The Vulturine Parrot's plumage is largely green, with a yellow feathered collar and small patches of red, orange, and blue in the wings and tail.



ADULT TURQUOISE-FRONTED AMAZON

*Amazona aestiva*

## Turquoise-fronted Amazon



**LENGTH**  
37cm (14½in)

**WEIGHT**  
350–450g (13–16oz)

**MIGRATION**  
Non-migrant

**HABITAT** Savanna and gallery forest, palm groves and other wooded areas; requires tall trees

This typically noisy parrot is an excellent mimic of human and other sounds in captivity; large numbers have been taken from the wild for export, particularly in Argentina, in recent decades. The turquoise-blue forecrown, from which the species derives its name, is difficult to see at a distance.

The male and the female are similar in plumage. Two subspecies are recognized, which differ primarily in the colour of the shoulder patch: it is orange-red in one and yellow in the other. The species gathers in flocks at regular night-time roosts, but mated pairs always stay close together.

*Amazona leucocephala*

## Cuban Amazon



**LENGTH**  
32cm (12½in)

**WEIGHT**  
225–325g (8–12oz)

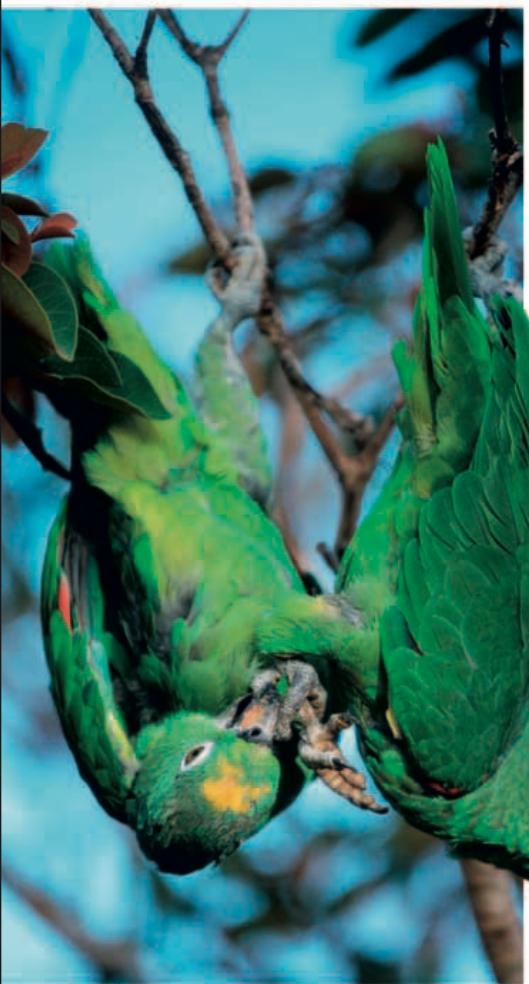
**MIGRATION**  
Non-migrant

**HABITAT** Woodland and forest, especially on limestone, also mangroves, plantations, and gardens

## ADULT CUBAN AMAZON



With the beautiful pink coloration on its face, throat, and upper breast and its green back, this parrot is a common and popular cage-bird, especially in Cuba. The only one of its family to be found in the Bahamas and Caymans, the Cuban Amazon is one of only two parrot species in Cuba. It mainly feeds on fruit and seeds, including cultivated species, such as mango and papaya. It usually requires tall trees for nesting, but in the Bahamas it nests in holes on the ground.

*Amazona ochrocephala*

## Yellow-crowned Amazon

**LENGTH**  
35–38cm (14–15in)

**WEIGHT**  
350–550g (13–20oz)

**MIGRATION**  
Non-migrant

**HABITAT** Forest, savanna and gallery woodland, thorn scrub, and cultivated land with patchy woodlots

Largely green in colour, with violet-blue wing feathers, the Yellow-crowned Amazon is a remarkably variably coloured parrot: some birds may have almost completely yellow heads, others have yellow solely on the crown, and still others have yellow confined to the back of the neck. The result of this variation is that ornithologists are unable to agree whether the Yellow-crowned Amazon is just one species or three. It feeds primarily on fruit, seeds, and flowers of cultivated plants, such as mangoes, bananas, and avocados. This parrot's "talking" abilities have led to its over-exploitation for the pet trade in some areas, while habitat destruction and degradation are further threats.

## ADULT YELLOW-CROWNED AMAZONS

*Deroptyus accipitrinus*

## Red-fan Parrot

**LENGTH**  
36cm (14in)

**WEIGHT**  
200–300g (7–11oz)

**MIGRATION**  
Non-migrant

**HABITAT** Primary dryland tropical forest, sometimes in clearings and at edges

The unusual plumage of the Red-fan Parrot has led to its placement in its own genus. Two subspecies are distinguished, one of which has a white forecrown. The distinctive head pattern of the species immediately draws attention, and has led to it being heavily trapped in some regions. The underparts present a rich mosaic of maroon feathers with pale blue tips and edges. The back and wings are green.



## ADULT RED-FAN PARROT

## FAN-LIKE CREST

At rest, the Red-fan Parrot's remarkable head pattern is inconspicuous, but when the parrot is alarmed or excited, it raises its elongated neck and nape feathers to create a ruff-like effect. The blue-tipped red feathers fan out across its head, adding to its raptor-like shape, which has given rise to the bird's alternative name – the Hawk-headed Parrot.

*Cyclopsitta diophthalma*

## Double-eyed Fig Parrot

**LENGTH**  
13–16cm (5–6½in)

**WEIGHT**  
25–55g (7/8–2oz)

**MIGRATION**  
Non-migrant

**HABITAT** Forested areas, including mangroves and open woodland, sometimes in parks and gardens

Most of this small parrot's plumage is in varying shades of green, but the vast array of different head patterns displayed by the Double-eyed Fig Parrot has led to ornithologists naming eight different subspecies. These range from those with primarily red on the face and crown to others that have either mainly blue or yellow on the head. Some of these subspecies are restricted to small islands, though ironically, the Double-eyed Fig Parrot is one of the mainland Australian subspecies that gives most cause for conservation concern, due to the dwindling area of habitat available to it.

As indicated by its name, the Double-eyed Fig Parrot feeds mainly on figs, although it consumes the seeds rather than the flesh. The nesting cycle of the species is poorly known, but it generally seems to lay just two eggs.

## ADULT DOUBLE-EYED FIG PARROT

# CUCKOOS AND TURACOS

**ORDER** Cuculiformes  
**FAMILIES** 3  
**SPECIES** 161

are found worldwide, and include well known migrants, while turacos are confined to sub-Saharan Africa. The Hoatzin, from South America, is thought to be related to cuckoos and turacos.

## ANATOMY

Cuckoos and turacos are heavy-bodied birds with small heads and beaks, broad wings, and long tails. Cuckoos themselves are often drab, but many turacos have brilliant plumage, coloured by red and green pigments that are unique to the turaco family. All have strong legs, and feet with two toes pointing forwards and two pointing back, enabling them to climb as well as perch. Hoatzins have a different foot anatomy, and their young are unique in having two small claws on the leading edge of each wing. They use these claws to clamber about in trees after they have left the nest.

### BROOD PARASITISM

Bracing itself with its feet, a young cuckoo ejects the last of its foster parents' eggs. Having disposed of the competition, it eats all the food that the adult birds bring to the nest and will quickly be bigger than they are.

FOUND MAINLY IN woodlands and forests, cuckoos and turacos form two distinctive but related families of birds. Cuckoos

## BEHAVIOUR

Most cuckoos and turacos live and feed away from the ground. Exceptions are the ground cuckoos, which include the Greater Roadrunner. Arboreal cuckoos feed mainly on insects, but ground cuckoos tackle larger prey, including lizards and snakes. Turacos are fruit-eaters, but they occasionally take insects and grubs. Turacos build large nests high in trees, but about half the species in the cuckoo family are brood parasites, using other birds to raise their young. In North America, Cowbirds parasitize over 100 species of small songbird.



### SPECIALIZED TASTES

Cuckoos specialize in eating caterpillars – particularly those that are protected by allergenic hairs. Like its relatives, this Squirrel Cuckoo can swallow, without coming to any harm, food that would be poisonous to other birds.

### *Opisthocomus hoazin*

#### Hoatzin



<b>LENGTH</b>	61–66cm (24–26in)
<b>WEIGHT</b>	700g (25oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Well-vegetated riverbanks and edges of swamps and lakes

An interesting bird to look at, the Hoatzin's appearance is reminiscent of a prehistoric creature. This bird is the size of a pheasant with a spiky crest, a long neck, and a long tail. It nests in small colonies, laying 2 or 3 eggs. It is, however, an unusual bird in many respects. One such oddity is that it digests its vegetarian diet of leaves using bacterial fermentation, in a similar way to cows.

### ESCAPE CLAWS

The Hoatzin chicks are uniquely equipped with two claws on each of their wings. When threatened, the chicks escape by falling into the water below the nest. When the danger passes, they use the claws on their wings to clamber back to the nest.



ADULT HOATZIN



### *Tauraco persa*

#### Guinea Turaco



<b>LENGTH</b>	40–43cm (15½–17in)
<b>WEIGHT</b>	300g (11oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Lowland, lower montane, and gallery forest

Also called Green Turaco, the Guinea Turaco typically has green plumage. It has a small but thick red bill, a green crest, and prominent eye-rings. This bird has crimson patches on its primary feathers and a long tail. Although the Guinea Turaco is a common and a noisy bird, it can be difficult to spot as it frequents the canopy and can easily become inconspicuous. The bird usually feeds on fruit and blossoms. It lays two eggs in a tree platform nest.



ADULT GUINEA TURACO

### *Tauraco erythrolophus*

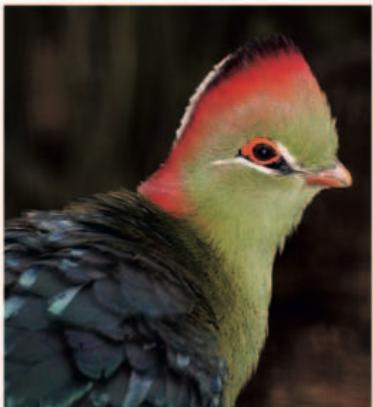
#### Red-crested Turaco



<b>LENGTH</b>	40cm (15½in)
<b>WEIGHT</b>	225g (8oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Tall tropical forest and forest edge; savanna

The Red-crested Turaco has a yellow bill, a white face, and bright crimson flight feathers. But its most noticeable feature is its splendid white-tipped red crest, from which the bird takes its name. This bird is an omnivore and its diet is mostly made up of fruit, leaves, and invertebrates. The chicks hatch at the beginning of the wet season when the food is readily available. This allows them to feed on a high proportion of protein-rich insects, important for their development.



ADULT FISCHER'S TURACO

*Tauraco porphyreolophus*

## Purple-crested Turaco



**LENGTH**  
40–46cm (15½–18in)

**WEIGHT**  
225–250g (8–9oz)

**MIGRATION**  
Non-migrant

**HABITAT** Coastal and gallery forest, and broad-leaved woodland

The Purple-crested Turaco is aptly named for its dark violet crest. Its iridescent plumage is mainly green and violet in colour. It has bright red flight feathers. In the past, these red primary feathers were much prized as adornments by the Zulu tribe. The Purple-crested Turaco feeds mainly on fruit and berries, but also accepts food from feeding stations in suburban gardens. The bird is generally found in pairs or in small family parties, though larger congregations also occur.



ADULT PURPLE-CRESTED TURACO

*Tauraco fischeri*

## Fischer's Turaco



**LENGTH**  
40cm (15½in)

**WEIGHT**  
250g (9oz)

**MIGRATION**  
Non-migrant

**HABITAT** Coastal lowland forest

This bird is easily distinguished from other similar species by its beautiful head markings. Fischer's Turaco has a diagnostic short white-tipped red crest extending back to the nape, which gives it a stunning appearance. This species is considered to be near threatened. As the suitable forest areas within the bird's range become increasingly fragmented, a further decline in its population is inevitable. Its re-classification as a threatened species is also likely in the near future.

*Corythaixoides concolor*

## Grey Go-away-bird



**LENGTH**  
48cm (19in)

**WEIGHT**  
250g (9oz)

**MIGRATION**  
Non-migrant

**HABITAT** Acacia savanna and dry, open woodland

As its name suggests, the Grey Go-away-bird has a uniform grey plumage. However, the bird does have a few notable features such as the long tail and an impressively long, pointed shaggy crest that the bird raises and lowers according to its mood. The Grey Go-away-bird tends to occupy drier, more

open habitats in its range in southern Africa than its more colourful, forest-dwelling relatives. But even while the Grey Go-away-bird is a dry country specialist, it is dependent on suitable water sources and shuns truly dry areas. The common name of this species is derived from its call, a harsh nasal "kay-waaaay" or "go away".

ADULT GREY GO-AWAY-BIRD



ADULT GREAT BLUE TURACO

## Great Blue Turaco



**LENGTH**  
75cm (30in)

**WEIGHT**  
975g (35oz)

**MIGRATION**  
Non-migrant

**HABITAT** Tall forest and secondary growth

Extremely popular with bird-watchers, the Great Blue Turaco is the largest member of the extraordinary turaco family. The bird has green, blue, and yellow plumage, a bright yellow red-tipped bill, a blue and black crest, and a broad long, black-tipped tail. Although the sexes look similar, the female is larger than

the male. The juvenile is noticeably duller, with a smaller crest.

The Great Blue Turaco is usually found feeding high in the tree canopy in pairs or in small family groups. This bird moves with surprising speed and agility for its size, and is also adept at leaping about in the canopy. Fruit forms the bulk of its diet but when it becomes temporarily scarce, the bird feeds on flowers, leaves, and even algae. This species is considered a delicacy and is hunted for the bush meat trade. Other threats to it include trapping for the cage-bird trade and forest degradation. The bird's large range, however, acts a buffer for its population, and at present, it is not considered to be at risk.

*Clamator jacobinus*

## Jacobin Cuckoo



<b>LENGTH</b>	34cm (13½in)
<b>WEIGHT</b>	65–70g (2³/₈–2¹/₂oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Open woodland and scrub; also dry plains up to 2,000m (6,500ft)

The Jacobin Cuckoo is a black and white bird, sporting a prominent crest and a long tail. It feeds on a range of insects such as caterpillars, in trees or on the ground. It is a brood parasite and its hosts consist of several species of babbler in India, while bulbuls, shrikes, and chatters are usually targeted in Africa. The eggs of the host are sometimes ejected by the juvenile. A noisy species, its call is a persistent and loud “pipew pipew pipew”.

*Clamator glandarius*

## Great Spotted Cuckoo



<b>LENGTH</b>	35–39cm (14–15½in)
<b>WEIGHT</b>	125g (4oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Mainly semi-dry areas of woodland and scrub, but also rocky hillsides

The Great Spotted Cuckoo is found in southern Europe, the Middle East, and southern Africa as a summer migrant. It has a silvery grey crest, dark neck, white markings on the back, and white-spotted wings. Its throat is pale yellow and its underparts are white. It commonly feeds on the ground, taking a range of insects and small reptiles. This cuckoo is a brood

parasite, laying its eggs in the nests of crows, magpies, and starlings. Its egg has a shorter incubation period than the host's, which means that the young cuckoos grow faster and get a larger share of food from their foster parents. The adult Great Spotted Cuckoo will sometimes lay a second egg in the host nest, but the younger bird usually starves.



ADULT GREAT SPOTTED CUCKOO

*Hierococcyx varius*

## Common Hawk-Cuckoo



<b>LENGTH</b>	33cm (13in)
<b>WEIGHT</b>	100g (3⁵/₈oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wooded areas of deciduous and semi-evergreen forest; also gardens and tree plantations

Found throughout much of India, Bangladesh, and Sri Lanka, the Common Hawk-Cuckoo has a hawk-like appearance, with a grey head, brown back, rufous breast, and a long, barred tail. It feeds on insects and small lizards. It lays its eggs in the nests of babblers and laughing thrushes, and the cuckoo nestling ejects the young of the host species from the nest.

*Cuculus canorus*

## Common Cuckoo



<b>LENGTH</b>	33cm (13in)
<b>WEIGHT</b>	125g (4oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Wide variety of habitats from woodland to reedbeds and open country to 2,000m (6,500ft)

The male Common Cuckoo is dark grey above, with a blackish brown tail, spotted and tipped with white and unevenly barred in black. The female

is similar, although it is rufous on its upper breast. There are four subspecies, identified by the areas where they breed and winter: the geographical breeding sites of this cuckoo stretch from western Europe to east Asia and its wintering grounds are in southern Africa, India, and southeast Asia.

The call of the species, consisting of two notes, is a familiar sound of spring. The adult has the unusual ability to feed on hairy caterpillars, which are plentiful in woodland in summer. The global population is not threatened, although the numbers of western European Common Cuckoos declined in the 20th century.



## BROOD PARASITE

Like all cuckoos, the Common Cuckoo is a brood parasite. It lays its eggs in the nests of other bird species. The hosts are typically insectivorous birds, such as flycatchers, pipits, warblers, wagtails, and buntings. They feed the cuckoo nestlings, who usually throw the host's eggs and chicks out of the nest.

ADULT COMMON CUCKOO

*Cuculus poliocephalus*

## Lesser Cuckoo



<b>LENGTH</b>	25cm (10in)
<b>WEIGHT</b>	50g (1³/₄oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Broad-leaved or coniferous forest between 1,500m (4,900ft) and 3,500m (11,500ft)

Although smaller, the male Lesser Cuckoo is generally similar to the Common Cuckoo (above) in appearance. However, the female is sometimes rufous in colour and the juvenile has a black face. The call is a loud chattering sound. The breeding

sites are typically at an altitude of more than 1,000m (3,300ft) to 3,500m (11,500ft) in the Himalayas, and they range stretch from Japan to Nepal.

Like other members of its family, the Lesser Cuckoo is a brood parasite and lays its eggs in the nests of warblers, wren-babblers, and other small species. Its eggs are generally unmarked, but can vary in colour. The adult feeds on caterpillars, beetles, and other insects.

This species migrates mainly towards the southwest, and some birds reach East Africa, where it is the only cuckoo found in pine forests. Its global population is not threatened, although local populations are influenced by trends within the host species.

ADULT LESSER CUCKOO



*Cacomantis variolosus*

## Brush Cuckoo



<b>LENGTH</b>	21–28cm (8½–11in)
<b>WEIGHT</b>	35g (1¼oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rainforest, secondary forest, and mangroves, up to 2,000m (6,500ft)



ADULT BRUSH CUCKOO

The Brush Cuckoo is found through much of southeast Asia and in northern and western Australia, but does not reach Tasmania. Its head and upperparts are brownish grey. It has rufous underparts, with a grey throat and upper breast. The male and female have similar plumage.

The Brush Cuckoo is a brood parasite, laying its eggs in the nests of over 60 different bird species. The selection of hosts depends on the species that nest in the same range as this cuckoo and vary from sunbirds to shrikes. The Brush Cuckoo's eggs are white, with varying patterns of brown spots, which match the eggs of the host species. The host's eggs or young are ejected by the young cuckoo, which hatches after an incubation period of just 13 days. The young are fed by the host bird for up to a month after fledging. The adult Brush Cuckoo mainly feeds on caterpillars, but also takes a variety of large insects and spiders from the foliage of trees and bushes.

*Chrysococcyx cupreus*

## African Emerald Cuckoo



<b>LENGTH</b>	20cm (8in)
<b>WEIGHT</b>	35–45g (1¼–1½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Evergreen forest, open woodland, and cultivation

As its common name suggests, the male African Emerald Cuckoo is mostly a glossy green on the head and upperparts. The female is duller, with a brown head and barred undersides, although the wings and tail retain some green coloration.

The African Emerald Cuckoo is a brood parasite and mainly targets insectivorous species such as bulbuls, warblers, robin-chats, and weavers. The female cuckoo removes a single egg from the host's nest with the young cuckoo ejecting the rest of the eggs or young of the host after hatching at 13–14 days. The young birds fledge at 18–20 days and remain with the host for up to two weeks. A solitary bird, this cuckoo mainly feeds on caterpillars gleaned from the forest canopy. It is found in Africa, south of the Sahara, but has declined over parts of the range.



ADULT HORSFIELD'S BRONZE CUCKOO

*Chrysococcyx basalis*

## Horsfield's Bronze Cuckoo



<b>LENGTH</b>	17cm (6½in)
<b>WEIGHT</b>	20g (1⅓oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open woodland and scrub, mainly in arid or semi-arid areas

Both the male and female of this species are greenish brown with paler, barred underparts, and a bold, dark eye-stripe. This cuckoo lays its eggs in the nests of around 28 bird species, choosing hosts that construct domed, rather than open, nests. The adult cuckoo forages on the ground and in foliage, taking mainly caterpillars and a variety of insects.

*Scythrops novaehollandiae*

## Channel-billed Cuckoo



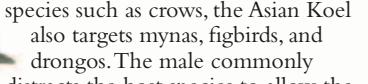
<b>LENGTH</b>	60cm (23½in)
<b>WEIGHT</b>	600–625g (21–22oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Edges of forest or along rivers and other open areas, particularly damp or semi-dry areas



ADULT CHANNEL-BILLED CUCKOO

Named after its large curved bill, an unusual feature in the cuckoo family, the Channel-billed Cuckoo is grey in colour, with a long, barred tail. The adult feeds mainly on fruit, such as figs. It is a brood parasite, choosing hosts that are similar in size, such as crows and magpies. It is not known whether the young cuckoos eject the host's eggs and young, although the adult cuckoos are known to damage the eggs of the host when targeting the nest.



**HABITAT** Damp forest and scrub, sometimes around human habitation

Mainly a brood parasite of larger species such as crows, the Asian Koel also targets mynas, figbirds, and drongos. The male commonly distracts the host species to allow the female to lay eggs, but the host's eggs and young are not ejected. The male Asian Koel has ruby-red eyes and glossy black plumage. The female and the juvenile are dark grey-brown, with white spots on the throat and white bars on the underparts. The adults mostly feed on fruit, although some invertebrates are taken. The call of the Asian Koel is a loud "ko-el ko-el" crescendo.



MALE ASIAN KOEL

*Piaya cayana*

## Squirrel Cuckoo



LENGTH	46cm (18in)
WEIGHT	100g (3½oz)
MIGRATION	Non-migrant

**HABITAT** Range of forests and plantations, but generally avoids denser lowland forest

The Squirrel Cuckoo has a pale throat and chest, brown upperparts, and grey underparts. The tail is long, with its underside marked by alternating black and white chevrons. It mainly feeds on caterpillars, although a range of insects are also taken, including army ants. The species builds a platform nest made of leaves and branches. Its range stretches through much of South America, including coastal Central America.



ADULT SQUIRREL CUCKOO

*Centropus superciliosus*

## White-browed Coucal



LENGTH	36–42cm (14–16½in)
WEIGHT	150–175g (5–6oz)
MIGRATION	Non-migrant

**HABITAT** Dense bush beside rivers and in other wetland areas



ADULT WHITE-BROWED COUCAL

Named for the white stripe above its eye, the White-browed Coucal is a rich brown colour on its back, with a streaked dark head. The female is larger than the male, although there is little difference in plumage. Its diet ranges from insects to small reptiles, mice, frogs, and small birds. The White-browed Coucal sometimes patrols the edges of burnt grass after a fire to catch trapped prey. When disturbed, the young are able to emit a foul-smelling liquid.



ADULT BIRD

*Coua gigas*

## Giant Coua



LENGTH	58–62cm (23–24in)
WEIGHT	425g (15oz)
MIGRATION	Non-migrant

**HABITAT** Deciduous forest and scrub in areas of calcium-rich soil

The largest species of a family entirely confined to Madagascar, the Giant Coua is more like a pheasant than a cuckoo. Mainly brown on the upperparts with a rufous belly, it has an ornate unfeathered face, its dark eye framed by a blue area with a pink

patch at the rear of the eye. Its call is a deep repetitive sound delivered from the ground or a low tree.

The main food of this species consists of insects and seeds gathered by foraging through the leaf layer on the forest floor. The birds usually forage in pairs, but also alone or in family groups. Despite the ground-living existence of the adults, the nest, constructed from leaves and twigs, is placed 3–10m (10–33ft) above the ground. The Giant Coua is less common in the southern part of its range due to hunting. Birds within the protected parts of its range are surrounded by areas where deforestation is advancing rapidly.

ADULT GIANT COUA

*Centropus phasianinus*

## Pheasant Coucal



LENGTH	53–80cm (21–31in)
WEIGHT	200–500g (7–18oz)
MIGRATION	Non-migrant

**HABITAT** Damp grassland and forest in lowland areas, particularly around rivers and marshes

Named for its striking pheasant-like appearance, the Pheasant Coucal is black, with contrasting streaked reddish brown upperparts and wings. The female is larger than the male. This species collects most of its food on the ground. Its diet includes insects, reptiles, nestling birds, and young mammals. The nest is made up of grass stems and is constructed on the ground.

*Crotophaga sulcirostris*

## Groove-billed Ani



LENGTH	32cm (12½in)
WEIGHT	70–80g (2½–2¾oz)
MIGRATION	Non-migrant

**HABITAT** Scrub from sea-level to 2,500m (8,000ft), particularly in disturbed areas of growth

Found in Central America and northern South America, the Groove-billed Ani is a glossy, black bird with a heavy, curved bill. The male is slightly larger than the female. The bird takes a wide range of insects and small reptiles when foraging on the ground. Insects are also taken from cow dung and, less commonly, ticks are taken from the backs of cattle. The breeding season varies, depending on the part of the range, but coincides with the rainy season in drier areas.

A sociable species, the Groove-billed Ani is a communal breeding bird, with up to five pairs breeding together. Up to 18 eggs have been recorded in some nests, although each female lays only 3 or 4. A male may have several mates, and also takes part in incubation. Fledging occurs 10 days after hatching, but the young are tended for three weeks after leaving the nest.

ROOSTING ADULTS



*Guira guira*

## Guira Cuckoo



<b>LENGTH</b>	36cm (14in)
<b>WEIGHT</b>	150g (5oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Scrub from sea-level to more than 1,200m (4,000ft); also more open areas

A row of prominent feathers around the head give the Guira Cuckoo a striking appearance. Both the male and female have an orange-yellow bill and a bright orange head crest, although the female is slightly larger. Two forms exist, which differ only in the colour of the bill, being either yellow or orange. The Guira Cuckoo feeds mainly on insects, but

also on mice, small reptiles, and the young of other birds. A highly sociable species, this bird feeds and roosts in large groups of up to 20 birds, often huddling together for warmth. The Guira Cuckoo is not a brood parasite, but has been known to lay its eggs in the nests of other species, sharing incubation with the host. It also breeds in groups, with up to 10 eggs being found in some communal nests.

ADULT GUIRA CUCKOO

*Dromococcyx phasianellus*

## Pheasant Cuckoo



<b>LENGTH</b>	36cm (14in)
<b>WEIGHT</b>	80g (2½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Tropical forest up to 1,500m (4,900ft)

Dark brown above, with pale brown underparts, the Pheasant Cuckoo has a prominent white stripe running from the eye to the back of the head and a long graduated tail. The male and

female are similar and do not differ in size. The diet of the Pheasant Cuckoo mainly consists of large insects, such as grasshoppers, and lizards. It is a brood parasite, often laying its eggs in the nests of tyrant-flycatchers.

The Pheasant Cuckoo is not common and is localized in distribution. Its range stretches from south Mexico to Argentina and Paraguay, with the Central American subspecies being described as distinct by some scientists. The Pheasant Cuckoo is a resident bird and there are no known migratory movements, but it is a solitary, secretive species that is difficult to study.



ADULT GREATER ROADRUNNER

*Geococcyx californianus*

## Greater Roadrunner



<b>LENGTH</b>	56cm (22in)
<b>WEIGHT</b>	300–325g (11–12oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Arid areas, including scrub and more open areas, to an altitude of 2,500m (8,202ft)

The Greater Roadrunner prefers to run rather than fly and is able to run for short distances at a speed of 30kph (18mph). It has a prominent dark crest, a heavy, hooked bill, and its plumage is mainly streaked in brown and white. Its long tail reveals white tips when it is spread. The male is larger, but its plumage is similar to that of the female. The species "sunbathes" by positioning its feathers so that the black skin on its back can absorb sunlight.

During courtship, the male Greater Roadrunner performs an unusual display, parading before the female as it bows and alternately lifts and drops its wings. The nest is constructed on a site raised 1–3m (3½–10ft) above the ground. The female lays 2–6 eggs. Larger clutches are produced after the rains.

## PREY BATTERING

An opportunistic carnivore, the Greater Roadrunner collects a wide variety of food from the ground, including carrion from roadkill, large invertebrates (even venomous tarantulas and scorpions), reptiles, small birds, and mammals. It batters its prey with its strong, pointed bill or smashes it against a rock, and eats it whole. It tackles scorpions by seizing the tail.

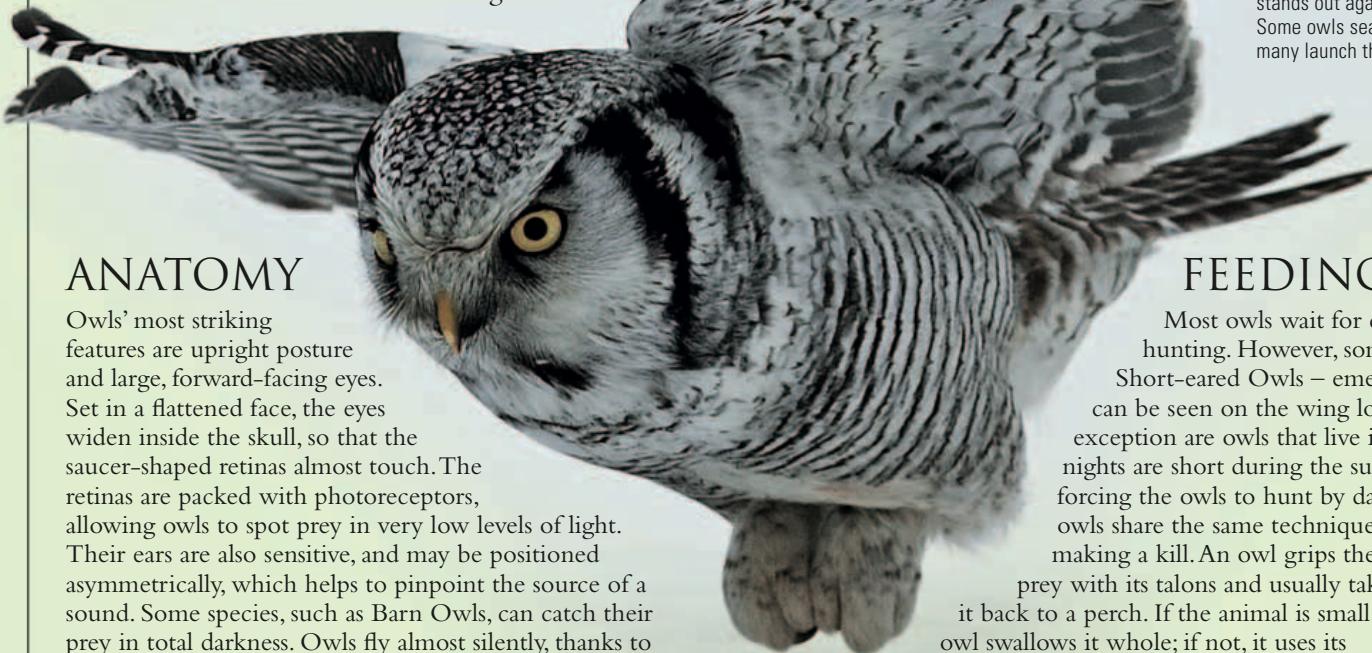


# OWLS

**ORDER** Strigiformes  
**FAMILY** 2  
**SPECIES** 194

FOUND IN EVERY CONTINENT except Antarctica, owls are predatory birds with forward-facing eyes and sharp, grasping claws. Externally, they resemble birds of prey, but their closest living relatives are thought to be nightjars and allied species. Most owls hunt at night; their secretive

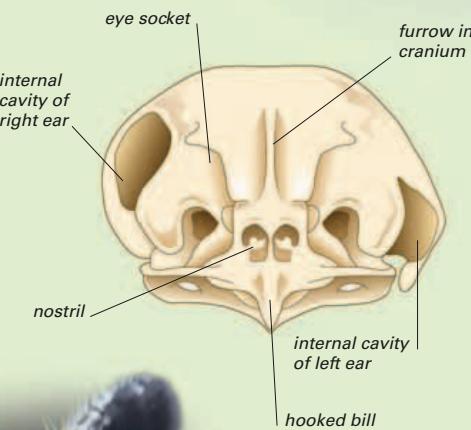
habits – together with distinctive calls – mean that they are heard more often than they are seen. By day, they usually roost in trees, using camouflaged plumage to remain hidden. Owls feed almost entirely on live animals. Most catch rodents and small mammals but, as a group, their diet includes nocturnal insects, songbirds, and fish. They can find food even in winter and few migrate.



## ANATOMY

Owls' most striking features are upright posture and large, forward-facing eyes. Set in a flattened face, the eyes widen inside the skull, so that the saucer-shaped retinas almost touch. The retinas are packed with photoreceptors, allowing owls to spot prey in very low levels of light. Their ears are also sensitive, and may be positioned asymmetrically, which helps to pinpoint the source of a sound. Some species, such as Barn Owls, can catch their prey in total darkness. Owls fly almost silently, thanks to soft, muffling fringes on their flight feathers. However, during the breeding season, they may produce far-carrying cries – hooting, piercing screeches, or trills. In some species, pairs take part in long duets.

**ASYMMETRICAL EARS**  
Several groups of owls, including barn owls, have ear openings that differ both in position and in size. This unusual asymmetry helps an owl to pinpoint sounds in the vertical plane – in other words, sounds from straight ahead of them when they are on the wing.



### EAR TUFTS

Owls may have feathery tufts that look like ears: in this Long-eared Owl they are particularly well developed. However, as in all birds, the true ear openings are hidden beneath their plumage, where they lead to cavities inside the skull, which amplify sounds.

### DAYLIGHT HUNTER

Swooping on its prey, a Northern Hawk Owl stands out against the late snows of spring. Some owls search for prey on the wing, but many launch themselves from a perch.

## FEEDING

Most owls wait for darkness before hunting. However, some species – such as Short-eared Owls – emerge before dusk, and can be seen on the wing long after dawn. Another exception are owls that live in the far north. Here, nights are short during the summer breeding season, forcing the owls to hunt by day. All owls share the same technique for making a kill. An owl grips the prey with its talons and usually takes it back to a perch. If the animal is small, the owl swallows it whole; if not, it uses its hooked bill to tear it apart. Once it has finished feeding, it digests all the soft tissue, but regurgitates bones, feathers, and fur as pellets.



### OWL PELLETS

Pellets are formed in an owl's gizzard, where hard remains become trapped. The gizzard compresses them into a smooth shape, for regurgitation.

## BREEDING

In the far north, Snowy Owls nest in open tundra, choosing a slight rise where they have a good view. However, this kind of behaviour is unusual among owls. Some take over abandoned hawks' or crows' nests, but most are cavity nesters, bringing up their young in tree-holes, under rocky overhangs or, more rarely, in burrows. Owls use little or no nesting material, and lay up to a dozen white, rounded eggs. The eggs hatch in sequence, producing chicks of varying age and size. Once hatching begins, both parents deliver food to the young. If food is short, the oldest chick gets the most – which ensures that at least some of the young survive. Owl chicks can take up to eight weeks to leave their nest.



### STAGGERED HATCHING

Three Great Grey Owl chicks look out from their nest. Flanked by its larger siblings, the one in the middle is the least likely to survive to adulthood if the parents have difficulty finding food.

 *Tyto novaehollandiae*

## Australian Masked Owl



LENGTH

33–57cm (13–22½in)

WEIGHT

425–1250g (15–45oz)

MIGRATION

Non-migrant

**HABITAT** Forests and open woodland, as well as farmland with large trees

The Australian Masked Owl is similar to the Barn Owl (below), but is larger, with a rounder, black-bordered face, a more powerful bill and talons, and completely feathered legs. It is blackish brown with grey and white spots on the upperparts. The underparts are white with brown spots. The female is a darker colour than the male. The Tasmanian subspecies (*T. n. castanops*) is a much darker brown than the pale birds found on the mainland and is also larger; the female being the largest of the *Tyto* genus.

 *Tyto alba*

## Barn Owl



LENGTH

30–45cm (12–17½in)

WEIGHT

275–600g (10–21oz)

MIGRATION

Non-migrant

**HABITAT** Widespread, but favours lowland areas with some cover

**ADULT  
BARN OWL**



### SILENT HUNTER

The Barn Owl is equipped with both excellent vision and hearing, making it a fearsome predator. Its ability to locate prey by using sound is aided by its asymmetrically placed ears, which allows it to localize sounds generated by its prey. It either flies slowly over an area, listening for movements of its prey, or perches in wait, before swooping to attack it.

 *Megascops asio*

## Eastern Screech Owl



LENGTH

16–25cm (6½–10in)

WEIGHT

175–200g (6–7oz)

MIGRATION

Non-migrant

**HABITAT** Woodland, parks, and gardens

Small and stocky with prominent ear tufts, the Eastern Screech Owl occurs in two main colour forms: a greyish brown and a more striking rufous form. The species is found in the eastern half of USA and southern Canada. The closely related Western Screech Owl occurs in the west of the continent. However, the eastern



### ADULT (GREY FORM)

species can be told apart from the western species by its paler bill, black-edged facial disc, and less patterned underparts.

 *Otus ireneae*

## Sokoke Scops Owl



LENGTH

15–18cm (6–7in)

WEIGHT

50g (1³/₄oz)

MIGRATION

Non-migrant

**HABITAT** Forest

**RED LIST CATEGORY** Endangered



### ADULT SOKOKE SCOPS OWL

The tiny Sokoke Scops Owl occurs in greyish brown and rufous colour forms. It has very slight ear tufts. The species was believed to occur only in the Arabuko-Sokoke Forest of coastal Kenya, but has recently also been found in the East Usambara Mountains of Tanzania. The species is classified as endangered as its forest habitat in Tanzania is being rapidly cleared. In Kenya, its habitat is protected.

**ADULT EURASIAN SCOPS OWL**

 *Otus scops*

## Eurasian Scops Owl



LENGTH

16–20cm (6½–8in)

WEIGHT

60–125g (2¹/₈–4oz)

MIGRATION

Migrant

**HABITAT** Open woodland, orchards, parkland, and gardens

This small, tufted owl with grey-brown plumage breeds from southern Europe to the Middle East and also North Africa. The territorial call of the male is very distinct – a short, low “teu” that is repeated every two to three seconds, rather like a car alarm. Duets with the female, which has a higher-pitched call, are frequent.

 *Ptilopsis granti*

## Southern White-faced Owl



LENGTH

22–25cm (8½–10in)

WEIGHT

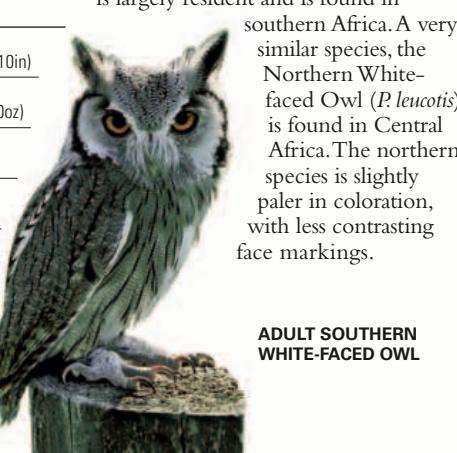
175–275g (6–10oz)

MIGRATION

Non-migrant

**HABITAT** Dry woodland, savanna, and semi-desert

The Southern White-faced Owl is a distinctive species with long black-centred ear tufts, bright orange eyes, a



### ADULT SOUTHERN WHITE-FACED OWL

black-bordered white face, and a white line that stretches along the wing. It also has a tuft of white facial feathers that looks like a moustache. The species is largely resident and is found in southern Africa. A very similar species, the Northern White-faced Owl (*P. leucotis*) is found in Central Africa. The northern species is slightly paler in coloration, with less contrasting face markings.



ADULT GREAT HORNED OWL

**EAR TUFTS**

Several owls, including the Great Horned Owl, have prominent ear tufts or "horns", as they are also called. The function of these tufts remains hotly disputed. Some argue that they aid daytime camouflage, breaking up the shape of the owl and blending it with its perch. Others believe that the tufts are used for behavioural signalling and species recognition. What appears clear, however, is that they have no role in hearing.

*Bubo virginianus***Great Horned Owl**

<b>LENGTH</b>	51–60cm (20–23½in)
<b>WEIGHT</b>	0.9–1.5kg (2–3½lb)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Most forest types, grassland, shrubland, and rocky areas with steep gorges

This large, mainly nocturnal, owl has large erect ear tufts, and its grey-brown plumage is mottled above and barred below, helping it roost undetected during daytime. It has rust-brown facial discs and a white chin and throat.

Occurring throughout the Americas, from the northern tree line south to Patagonia, the Great Horned Owl occupies the widest habitat range of any owl. This is because it takes a wide variety of prey and will use virtually any nesting site – including rockfaces and old buildings – that offers sufficient cover.

*Bubo lacteus***Verreaux's Eagle-owl**

<b>LENGTH</b>	60–65cm (23½–26in)
<b>WEIGHT</b>	1.7–2.6kg (3½–5½lb)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open savanna and semi-desert areas, including adjacent riparian areas and woodland



**PERCHING ADULT** An opportunistic hunter, it takes any available prey. In the southwest of its range, herons are its favoured prey, while elsewhere, a variety of mammals, reptiles, and birds are taken at night. It will also wade into water in search of fish and insects.

*Bubo bubo***Eurasian Eagle-owl**

<b>LENGTH</b>	60–75cm (23½–30in)
<b>WEIGHT</b>	2.3–3kg (5½–6½lb)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Rocky country with cliffs, wooded patches, and quarries, all far from human habitation

A powerful and voracious predator, the Eurasian Eagle-owl is the largest owl in the world. Also known as the Great, Common, or Northern Eagle-owl, it has large ear tufts (upright in the male, but drooping in the female). It usually hunts at night and feeds on small or medium-sized mammals (especially hares) and even preys on large birds such as herons and buzzards.

**ADULT MALE***Bubo scandiaca***Snowy Owl**

<b>LENGTH</b>	55–70cm (21½–28in)
<b>WEIGHT</b>	1.8–2.3kg (4½–5½lb)
<b>MIGRATION</b>	Migrant

**HABITAT** Open tundra with terrestrial perches and sparse low vegetation, usually in lowland

A spectacular white owl of the northern polar tundra, the Snowy Owl is named for its white plumage. The male is entirely white, with narrow grey or brown barring on the upperparts. The female is larger and is also white, but with extensive barring on the upperparts and spotting on the crown. Both sexes have bright golden or orange irises and heavily feathered legs and toes. The nestling is grey with a white face. The first year bird is white with heavy, dark barring. Males and females become whiter as they get older.

The Snowy Owl feeds on mammals up to the size of hares, particularly lemmings and voles, and

**ADULT SNOWY OWL**

birds up to the size of geese. The Snowy Owl hunts at dusk and dawn, making a long powerful swoop from a low perch to snatch its prey off the ground. It occasionally takes fish, amphibians, crabs, and insects. Its call is a series of chattering, barking notes.

The Snowy Owl is usually monogamous and often pairs for life. The male's courtship flight is undulating and consists of flaps followed by a glide. The size of the clutch depends on prey availability: the more prey there is, the more eggs the female will lay. Breeding success is dependent on food supply and the timing of the spring thaw.



### CAMOUFLAGED PLUMAGE

The thick white plumage, and heavily feathered feet of the Snowy Owl make it well adapted for life north of the Arctic Circle. This owl nests on the ground, usually on a mound or boulder with good visibility and access to hunting. Its white plumage helps to camouflage it, concealing it from its prey and also allowing it to roost undisturbed in the day.



### *Bubo blakistoni*

## Blakiston's Fish Owl

	<b>LENGTH</b> 60–70cm (23½–28in)
	<b>WEIGHT</b> 1.7–2.3kg (3¼–5½lb)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Dense mixed or broad-leaf forest and forested valleys along clear rivers

**RED LIST CATEGORY** Endangered



### ADULT BLAKISTON'S FISH OWL

Blakiston's Fish Owl or the Eagle-owl is one of the largest and rarest of all owls, with just 500 pairs remaining. The destruction of its habitat has contributed to its decline, as has the depletion of the stocks of fish that form much of its diet. Its habit of concentrating around fish holes in the winter ice also makes it susceptible to persecution. Pairs mate for life and occupy distinct territories within their forest habitat. The female usually lays two eggs, which she incubates while the male stands guard and feeds her.



### ADULT PEL'S FISHING OWL

### *Scotopelia peli*

## Pel's Fishing Owl

	<b>LENGTH</b> 55–63cm (21½–25in)
	<b>WEIGHT</b> 1.7–2.2kg (3¼–4½lb)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Forest edges along lowland rivers, swamps, lakes, and estuaries

The largest of the fishing owls, Pel's, or African Fishing Owl, has a round head and lacks ear tufts. Generally pale chestnut in colour, there is substantial individual variation in plumage colour and in barring. This species hunts by night from a perch about 1m (3½ft) above water, gliding to snatch its food from the surface, its curved talons helping to grasp its slippery prey. Its main quarry is fish, but it also takes crabs and frogs.

### *Strix nebulosa*

## Great Grey Owl

	<b>LENGTH</b> 59–69cm (23–27in)
	<b>WEIGHT</b> 0.8–1.7kg (1¾–3½lb)
	<b>MIGRATION</b> Partial migrant

**HABITAT** Boreal or coniferous forest with open areas such as montane meadows

The Great Grey Owl, also known as the Dark Wood-owl or Lapland Owl, is a stunning inhabitant of the northern taiga forests. The adult has a large, round head with concentric grey circles on its facial disc and small pale "staring" eyes.

This owl can detect movement up to 60cm (2ft) under the snow. When it hears a movement, it glides up to 100m (330ft) before pouncing, breaking through the snow-covered ground to extract a vole or other small mammal. It also takes birds up to the size of a grouse. The Great Grey Owl is usually monogamous, and its young are fed by both sexes. It breeds in boggy northern forests.

### ADULT AND CHICK



*Strix aluco*

## Tawny Owl

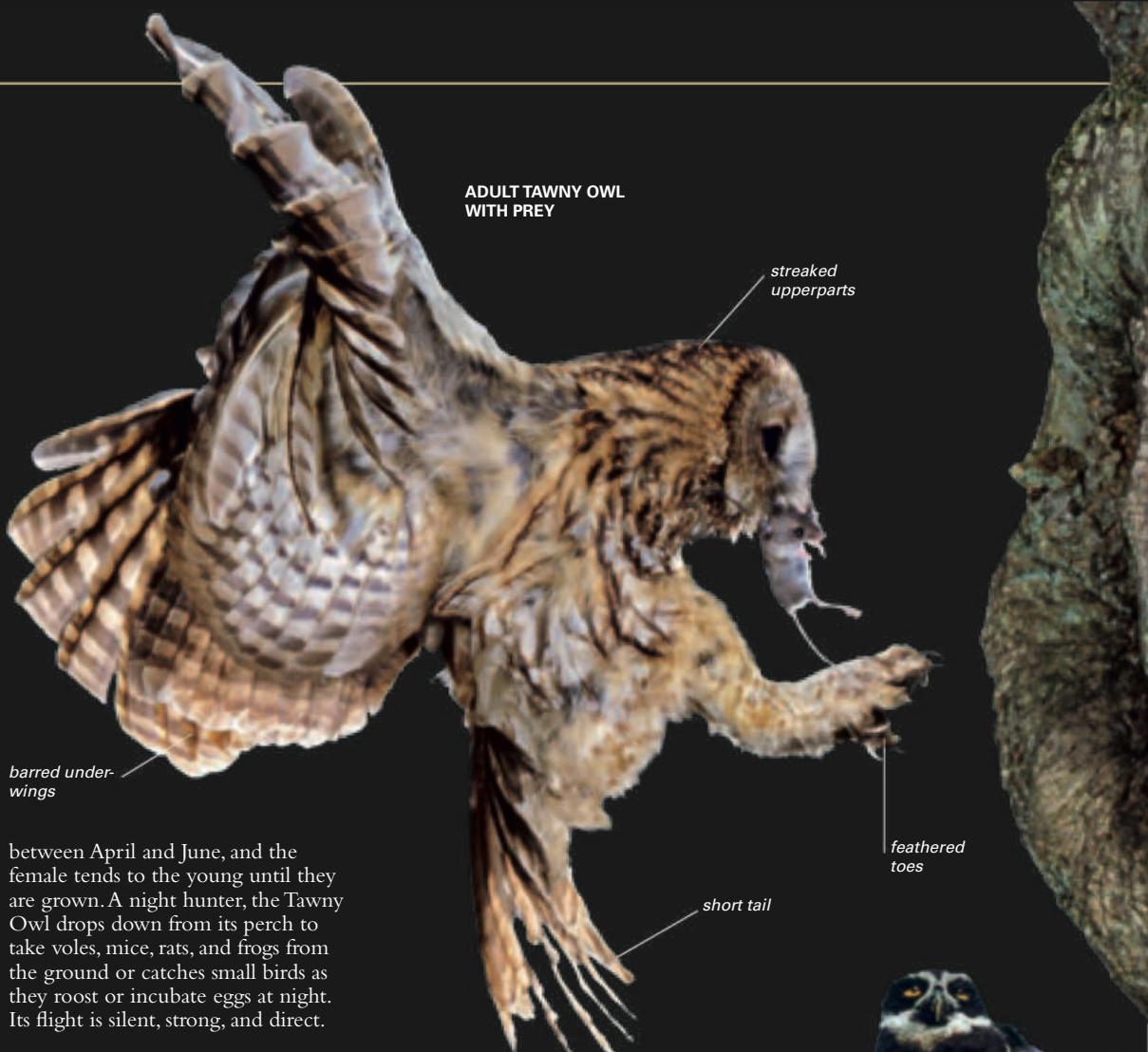


<b>LENGTH</b>	37–39cm (14½–15½in)
<b>WEIGHT</b>	425–525g (15–19oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Deciduous, mixed, and coniferous woods; towns with parks and large gardens

Widespread across Europe, Asia, and North Africa, the Tawny Owl is one of the world's most familiar owls. It exhibits a range of colour forms, from a rich rufous through all shades of brown to pale grey, although these are rarely observed as this is a nocturnal species. The Tawny Owl has a large, round head, large black eyes, white bristles around the bill, an obvious facial disc, white marks on the shoulders, and a short tail.

The male uses a long drawn-out hooting call during courtship or to communicate with its mate. More often heard is, however, the "ke-wick!" call used by both the male and the female to keep in contact with other Tawny Owls. These owls mate for life and stay together throughout the year. They nest in holes in trees, old buildings, and cliffs and defend their nests aggressively, even attacking humans who come too close. The 2–5 eggs in the clutch are laid



between April and June, and the female tends to the young until they are grown. A night hunter, the Tawny Owl drops down from its perch to take voles, mice, rats, and frogs from the ground or catches small birds as they roost or incubate eggs at night. Its flight is silent, strong, and direct.

*Strix uralensis*

## Ural Owl



<b>LENGTH</b>	58–62cm (23–24in)
<b>WEIGHT</b>	700–875g (25–31oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Pine, beech, and mixed woods with clearings, and forest edges



ADULT URAL OWL

The Ural Owl resembles a large Tawny Owl (above), with the same kind of facial disc, but with a relatively longer tail. The breeding cycle of the Ural Owl is linked to fluctuations in vole populations, but it will also eat other mammals and birds such as young hares, wood pigeons, and grouse. It is nocturnal and nests in hollow trees.

*Lophotrix cristata*

## Crested Owl



<b>LENGTH</b>	38–43cm (15–17in)
<b>WEIGHT</b>	475–625g (17–22oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Lowland primary or secondary rainforest with undergrowth, mostly near water

*Strix varia*

## Barred Owl



<b>LENGTH</b>	50–60cm (19½–23½in)
<b>WEIGHT</b>	625–800g (22–29oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Dense mature woodland, but also spreads into areas cleared by logging

Related to the Ural Owl (left), but with a less pronounced facial disc and shorter tail, this owl's name comes from the distinctive horizontal bars on its upper breast. The Barred Owl hunts mainly from perches, swooping down on small mammals and birds, but also feeds on insects and other invertebrates.

A nocturnal species, the Barred Owl roosts high in trees, nestled against the trunk or on large branches. It nests and roosts in holes and also in the abandoned nests of large raptors. It is aggressive in defence of its nest.

The Crested Owl has distinctive white ear-tufts extending into white eyebrows. Otherwise, its plumage is chocolate or reddish brown. A grey subspecies is found in Mexico and Central America.

Mainly nocturnal, the Crested Owl responds when disturbed at its daytime roost by stretching its body and raising its ear-tufts. Dependent on rainforest, it is disappearing from deforested parts of its range.



ADULT BARRED OWL

*Pulsatrix perspicillata*

## Spectacled Owl



<b>LENGTH</b>	41–48cm (16–19in)
<b>WEIGHT</b>	775–900g (28–32oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Old-growth tropical and sub-tropical forest and plantations

The contrast with the dark plumage of the head and upperparts makes this owl's white "spectacles" particularly striking. Its throat is also white. The Spectacled Owl is active at night. It hunts mainly from perches, flying between branches, where it waits for prey. It preys on roosting birds up to the size of pigeons, and ground- and tree-living mammals, as big as opossums, and will also pounce on insects. The Spectacled Owl is disappearing from parts of its range where old-growth forest has been cleared.

*Surnia ulula*

## Northern Hawk-Owl



<b>LENGTH</b>	36–41cm (14–16in)
<b>WEIGHT</b>	300–350g (11–13oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Boreal coniferous forest and open country with trees

A slim, long-bodied, long-tailed owl, the Northern Hawk-Owl often flies by day. The hawk-like appearance is reinforced by its yellow eyes and falcon-like wing shape.

Like other owls of the boreal forest, the Northern Hawk-Owl's breeding success is dependent on the number of voles and lemmings available for it to feed on, and it shifts its territories from year to year accordingly. Although these owls do not migrate, they can be found a long way south of their usual range in years when the small rodent population decreases.

This species generally nests in hollow trees, often choosing abandoned woodpecker nests, but it takes readily to nest boxes. About 5–13 eggs are laid, and the female remains on the nest to incubate the eggs, while the male hunts for food.

### FULL-TIME HUNTER

Often mistaken for a diurnal bird of prey, the Northern Hawk-Owl hunts both during day and night. It flies swiftly, close to the ground, alternately flapping its wings in rapid beats and gliding. It waits on a perch and uses its rapid flight to overtake its prey. During courtship, the males will often try to impress females by hunting for food and bringing it to them.



#### DIVING FOR ITS PREY

The Northern Hawk-Owl has exceptional hearing and can plunge into the snow to capture rodents below the surface.



ADULT NORTHERN HAWK-OWL

*Glaucidium californicum*

## Northern Pygmy Owl



<b>LENGTH</b>	17cm (6½in)
<b>WEIGHT</b>	60–75g (2⅓–2⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Taiga and other coniferous forest; mixed forest with pines, aspens, and beeches

One of the smallest owls in its range, this sparrow-sized owl is mostly active at dawn and dusk, although it is also seen in daylight. In fact, its night vision is believed to be poor. Often seen in the open, on posts or bare branches, this owl hunts mammals and insects by dropping down from a perch and ambushes birds by bursting out of concealment. The Northern Pygmy Owl will tackle prey much larger than itself, such as ground squirrels and quails. Although not migratory, in mountainous regions it will move to lowlands in winter.

*Glaucidium brasilianum*

## Ferruginous Pygmy Owl



<b>LENGTH</b>	17–20cm (6½–8in)
<b>WEIGHT</b>	65–75g (2⅓–2⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Tropical and subtropical forest; grassland with trees, parks, and gardens

Hunting from a perch, it swoops down on insects, frogs, mammals, and birds, sometimes taking prey bigger than itself with its relatively powerful claws.

#### ADULT



The name "ferruginous", which means rusty, covers only one colour form of this widely distributed species, which varies from a rich reddish brown to a dull grey. It is small and stocky with disproportionately large talons. Its round head is covered with stripes. Often seen in daylight, it is most active at dawn and dusk.

*Glaucidium capense*

## African Barred Owlet

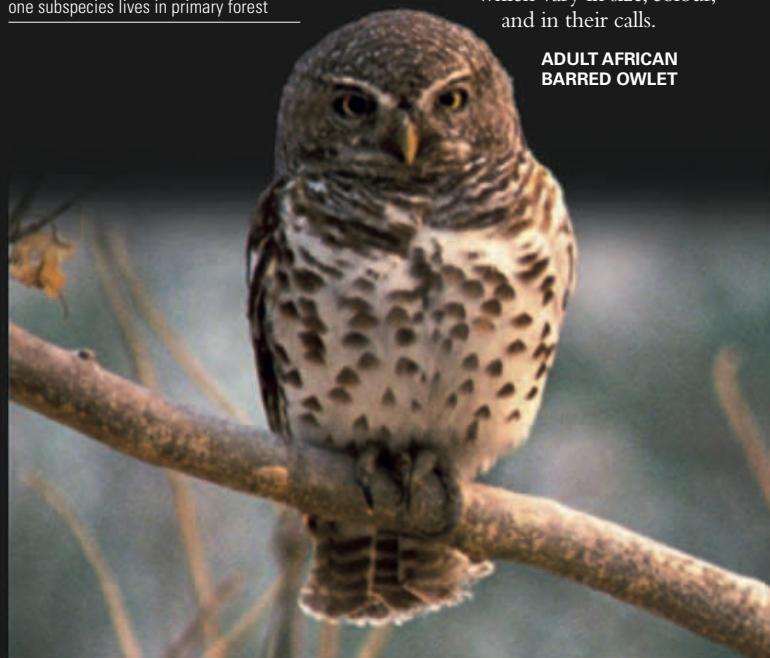


<b>LENGTH</b>	22cm (8½in)
<b>WEIGHT</b>	125g (4oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Woodland edges and riverside forests; one subspecies lives in primary forest

Despite its name, the barring on the upper breast of this owl is less striking than the spots that cover the rest of its underparts. The African Barred Owl is active at dawn and dusk and is also seen in daylight. Its feet are relatively small, which restricts its range of prey to insects and the smallest frogs, lizards, birds, and mammals. Secretive about the whereabouts of its nest, it feeds its young only after dark. There are four subspecies of this owl, which vary in size, colour, and in their calls.

ADULT AFRICAN BARRED OWLET



*Xenoglaux loweryi*

## Long-whiskered Owllet



**LENGTH**  
14cm (5½in)

**WEIGHT**  
45–50g (1⁵/₈–1¾oz)

**MIGRATION**  
Non-migrant

**HABITAT** Cloudforest at 1,900m–2,200m (6,200–7,200ft)

One of the smaller owl species, the Long-whiskered Owllet is confined to a tiny range in Peru. The common name refers to the wispy feathers on its face, originating around the eyes and the bill. The golden-brown eyes are emphasized by prominent eyebrow stripes, and it has a collar of white spots. The plumage of the Long-whiskered Owllet is dark brown, with dark mottling on the upperparts and white markings on the belly.

Very little information is available but its diet is presumed to mostly include insects. It is not considered to be globally threatened despite its limited range, although habitat loss could be a serious threat in the future. No reliable figures exist for the population of the species; it may not be uncommon within its range.



ADULT ELF OWL

*Micrathene whitneyi*

## Elf Owl



**LENGTH**  
14cm (5½in)

**WEIGHT**  
40g (1⁷/₁₆oz)

**MIGRATION**  
Partial migrant

**HABITAT** Desert containing cacti or dry woodland up to 2,000m (6,600ft)

Similar to the Long-whiskered Owllet (left) but more distinctly marked, the Elf Owl has a pronounced facial disc and several white markings on the back and wings with blurry streaks below. Its food is entirely made up of invertebrates. Four subspecies are known, ranging from a migratory population in southwest USA to a resident population in Mexico.



ADULT BURROWING OWL

*Athene cunicularia*

## Burrowing Owl



**LENGTH**  
19–25cm (7½–10in)

**WEIGHT**  
120–250g (4–9oz)

**MIGRATION**  
Partial migrant

**HABITAT** Dry open habitats, including manmade ones, such as airports

Unlike other owls, this species makes its home underground (see panel, below). It also spends much of its time hunting on the ground, its diet varying according to the time of year and the availability of prey, such as insects, small mammals, and reptiles. It has white eyebrows, a prominent white stripe on the chin, and bars and spots on its breast and belly. This owl is migratory in North America, wintering in Central America; the South American population is sedentary.



## NEST BURROWS

Although capable of excavating its own burrow, the Burrowing Owl nests in a wide range of burrows dug and abandoned by small mammals, such as the Ground Squirrel, or in larger ones made by the American Badger. It clears and tidies unused burrows by kicking dirt backwards. It has occasionally been known to share burrows with mammals or other owls, although each hole is isolated from other nests.

*Athene noctua*

## Little Owl



**LENGTH**  
21–23cm (8½–9in)

**WEIGHT**  
55–60g (2–2¹/₄oz)

**MIGRATION**  
Non-migrant

**HABITAT** Wide range of open habitats from semi-desert to farmland



ADULT LITTLE OWL



ADULT NORTHERN SAW-WHET OWL

*Aegolius acadicus*

## Northern Saw-whet Owl



**LENGTH**  
18–20cm (7–8in)

**WEIGHT**  
100g (3⁵/₈oz)

**MIGRATION**  
Migrant

**HABITAT** Woodland, prefers coniferous forest

The Northern Saw-whet Owl has a white patch between the eyes, brown facial discs, and chestnut-brown upperparts, with white and buff spots, and brown streaks and blotches on its underparts. It feeds on small rodents, large insects, and bats. Found across much of North America, it winters in the mid-west of the USA.

*Ninox boobook*

## Southern Boobook



**LENGTH**  
25–36cm (10–14in)

**WEIGHT**  
250–300g (9–11oz)

**MIGRATION**  
Non-migrant

**HABITAT** Wide range of habitats from forest to farmland, up to 2,300m (7,500ft)



Named for its high-pitched, two-syllable “boobook” call, the Southern Boobook has a pale brown, heart-shaped face, which contrasts with the heavily streaked dark brown upperparts. It is white below, with rufous-brown streaks and spots. It roosts in trees during the day and feeds at dusk, hunting insects and birds in mid-air, although small mammals and reptiles make up most of its diet. It is found throughout Australia and islands to the north, including parts of New Guinea and Timor. Up to 10 subspecies have been listed but some are disputed.

ADULT SOUTHERN BOOBOK

*Pseudoscops grammicus*

## Jamaican Owl



**LENGTH**  
27–34cm (10½–13½in)

**WEIGHT**  
Not recorded

**MIGRATION**  
Non-migrant

**HABITAT** Open woodland, forest edges, or parkland

Confined entirely to Jamaica, this bird is dark brown on the back to red-brown on the breast and belly. The ear tufts and the facial discs, which have a pale lower rim, are well developed. It is nocturnal and feeds on invertebrates, frogs, lizards, and mice. Eggs are laid between December and June in a nest built in a tree-cavity, which is usually well concealed by vegetation. Its limited range makes it vulnerable to habitat loss.

## ADULT JAMAICAN OWL

*Uroglaux dimorpha*

## Papuan Hawk-owl



**LENGTH**  
30–33cm (12–13in)

**WEIGHT**  
Not recorded

**MIGRATION**  
Non-migrant

**HABITAT** Lowland rainforest and forest edges to 1,500m (4,900ft)

Limited to Papua New Guinea and Irian Jaya, this bird is rarely seen, sparsely distributed, and under threat from deforestation. When relaxed, its sleek build and long tail give it a hawk-like appearance, which is further emphasized by the streaked brown plumage. Its diet includes insects, mammals, and medium-sized birds almost as large as the owl. Little is known about its breeding cycle, although downy chicks have been observed during August.

*Asio flammeus*

## Short-eared Owl



**LENGTH**  
38cm (15in)

**WEIGHT**  
200–500g (7–18oz)

**MIGRATION**  
Migrant

**HABITAT** Open country such as tundra, marsh, and grassland

The summer range of the Short-eared Owl extends well into treeless Arctic regions. Wintering birds are found in southern USA and in subtropical parts of Africa and Asia. The plumage varies with the subspecies, but the rounder facial discs and smaller ear tufts differentiate the species from the Long-eared Owl (above). It feeds on small mammals but has been known to eat small birds. The bird almost exclusively roosts on the ground or in low bushes. Pairs tend to form in late

*Asio otus*

## Long-eared Owl



**LENGTH**  
35–40cm (14–16in)

**WEIGHT**  
225–450g (8–16oz)

**MIGRATION**  
Partial migrant

**HABITAT** Dense vegetation close to open areas or a wider range of habitats in winter



The Long-eared Owl is found throughout much of the northern hemisphere to the subarctic tree limits in summer. There are a number of subspecies with different plumage tones, but all have the distinct facial discs and ear tufts. This owl mainly preys on small mammals and is nocturnal or crepuscular during the breeding season. It often forms loose social groups. The male tends to supply more food to the young than the female, and the process continues even after they have fledged. It is a long-lived species.

## ADULT LONG-EARED OWL



winter, with the male embarking on an aerobic display accompanied by wing-clapping. The female almost always builds the nest – unusual in this family of owls – and incubates the eggs, the usual clutch size being 5 or 6 eggs. Fledglings take 50 days to become independent.

## JUVENILE IN DEFENSIVE POSTURE

The young Short-eared Owl raises its wings when threatened so that it appears larger than normal.

## ON THE LOOKOUT

The Short-eared Owl hunts in daylight. It flies with deep wingbeats and glides on stretched wings a few feet above the ground, pouncing on prey when it is located.





**NORTHERN SAW-WHET OWL**

This Northern Saw-whet Owl has made its nest in a birch tree. Found in many North American woodlands, the species often uses holes made by woodpeckers.

# NIGHTJARS AND FROGMOUTHS

**ORDER** Caprimulgiformes

**FAMILIES** 5

**SPECIES** 115

ACTIVE AT DUSK OR after dark, nightjars, frogmouths, and their relatives feed mainly on insects caught in mid-air

or on the ground. They roost by day in trees or on the ground, relying on their superb camouflage to avoid detection. Frogmouths build rudimentary nests in tree-forks, but nightjars lay their eggs directly on the ground, without making a nest of any kind.

## ANATOMY

Nightjars and their relatives have rounded bodies, with large heads and short necks. They have large eyes, and their bills are short but very wide, giving them an enormous gape. Their wings are narrow and sharply pointed, creating a hawk-like silhouette in flight. Apart from Australian Owlet-Nightjars, all have short legs and tiny feet. Mottled and streaked in brown and grey, their plumage includes some of the finest examples of bird camouflage, enabling them to roost on the ground or on dead branches with little risk of being seen. Many have distinctive and repetitive calls, to be heard after dark during the breeding season.

### ROOSTING NIGHTJAR

Superbly camouflaged, a Slender-tailed Nightjar waits for dusk, to start to feed.

## FEEDING

Nightjars trawl the air for insects, using their funnel-like bills to catch prey. Their mouths are fringed with bristles, which help them to trap their food. They fly silently and buoyantly, pursuing individual insects – particularly moths – a few metres above the ground. Other members of this order, including potoos and frogmouths, dart out from a perch, catching insects in mid-air, or small animals on the ground. The South American Oilbird is the only vegetarian in the group. It feeds on oil palm fruit and nests deep in caves, using echolocation to navigate in darkness.



**GIANT GAPE**

With an enormous gape for its size, the Common Potoo can swallow the largest tropical moths.



*Podargus strigoides*

## Tawny Frogmouth



<b>LENGTH</b>	34–53cm (13½–21in)
<b>WEIGHT</b>	275–350g (10–13oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest, mallee scrub, open land with trees, including farmland and parks

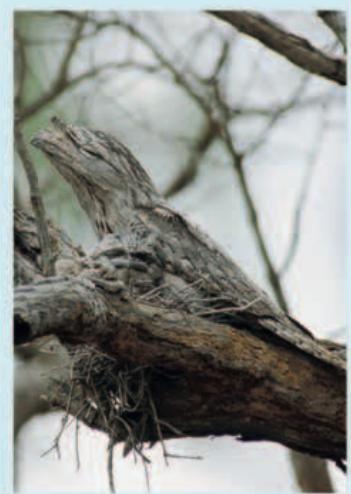
### ADULT AND YOUNG AT NEST

The only frogmouth species in Australia and Tasmania, the Tawny Frogmouth varies in colour and size across its range. The grey plumage is mottled in red or brown, blending in with the colour of branches. A boldly marked subspecies is found in east and southeast Australia. It is up to twice the size of the delicately marked subspecies in the north of the country.

The Tawny Frogmouth hunts from perches, where it waits patiently for prey. Its huge mouth allows it to tackle relatively large creatures, including scorpions, spiders, frogs, lizards, snakes, and mice, which it captures by diving silently upon them. Prey that is not killed outright is beaten to death against the perch. Active after dusk and before dawn, it roosts on bare branches and tree trunks during the day.

## CAMOUFLAGE

The Tawny Frogmouth spends the day roosting on a bare branch, in a semi-upright position at an angle to the branch. When disturbed, it stiffens itself and sleeks down its body feathers, so that with its dull coloration and the tufts of feathers on its face, it looks exactly like the stump of a branch. Although it may appear to be asleep, the bird is very alert, and follows the movements of an intruder through slitted eyes, moving its head very slightly.



**CONVINCING DISGUISE**

The streaked plumage of the Tawny Frogmouth mimics the rough, fissured texture of the bark of a tree, while the bill and facial tufts look exactly like the broken end of a branch.



*Steatornis caripensis*

## Oilbird



<b>LENGTH</b>	40–50cm (15½–19½in)
<b>WEIGHT</b>	350–475g (13–17oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Nests in caves and deep rocky clefts; feeds in undisturbed forest

Reddish brown in colour, the Oilbird has white markings on the head, throat, and wings. Unlike other nightjars and their allies, the Oilbird is a fruit-eater. Also, unlike them, it nests

### TYPICAL ROOSTING POSITION

colonially in caves, where it finds its way about by echolocation. Oilbirds can travel long distances in search of fruit. Although they do not migrate, some oilbirds disperse away from their caves after breeding. The colonies contain thousands of pairs of birds, which emerge together at dusk, providing a spectacle to tourists. In the past, young birds were harvested to be boiled into oil, which was used for cooking or to fill lamps. Oilbirds are now protected across most of their range, but continue to be at risk from the destruction of the primary forest in which they feed on fruit.

*Aegotheles cristatus*

## Australian Owlet-Nightjar



<b>LENGTH</b>	21–25cm (8½–10in)
<b>WEIGHT</b>	45g (1½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open woodland, mallee and other scrub, waterside trees

Active at dusk and dawn, the Australian Owlet-Nightjar has distinctive dark markings on its face and head. The barred plumage is grey in the male and brown in the female. It eats beetles, caterpillars, spiders, and millipedes, which it catches by swooping from a branch and snatching them from the ground or from trees. It also feeds on ants on the ground. In cold weather, it may become torpid, to conserve energy.

ADULT AUSTRALIAN OWLET-NIGHTJAR



*Nyctibius griseus*

## Common Potoo

<b>LENGTH</b>	33–38cm (13–15in)
<b>WEIGHT</b>	150–175g (5–6oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest, mangroves, scrub, savanna, and other open habitats with trees

The melancholy call of the Common or Grey Potoo has misled many hearers into believing they were listening to a mammal – or even a human voice. Its grey-brown plumage with a fine black and buff pattern provides effective camouflage against tree bark. With its big head and outward-bulging eyes, it can be mistaken for an owl. It feeds on insects, which it catches in the air. The Common Potoo nests in a knot-hole or depression in a branch.



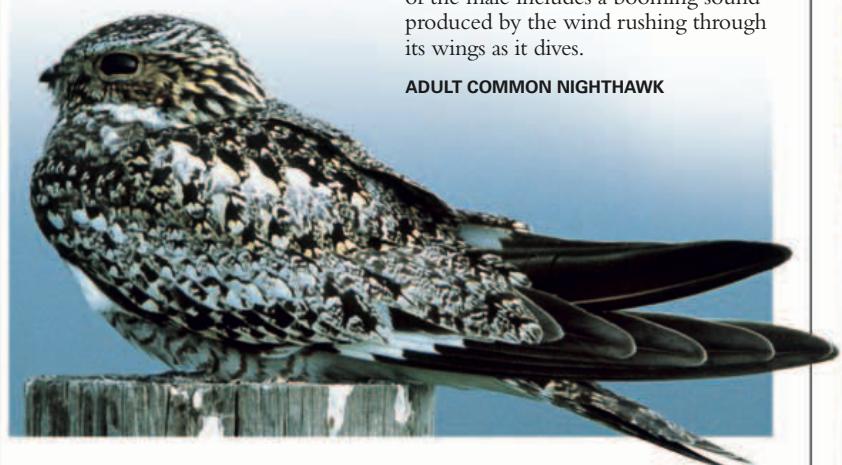
COMMON POTOO AT NEST

*Chordeiles minor*

## Common Nighthawk

<b>LENGTH</b>	22–25cm (8½–10in)
<b>WEIGHT</b>	45–100g (1½–3½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Open, dry country, grassland, farmland, and other human-modified landscapes



ADULT COMMON NIGHTHAWK

*Nyctidromus albicollis*

## Pauraque

<b>LENGTH</b>	22–28cm (8½–11in)
<b>WEIGHT</b>	45–90g (1½–3¼oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Forest, forest edges and clearings, scrub, plantations, and mangroves

PAURAKE ROOSTING ON THE GROUND



Not just the most common, the Pauraque is also one of the most frequently encountered nightjars across much of its vast range. It has a grey-brown to rufous-brown plumage, rounded wings, and a long tail. The buff eye-ring and facial stripe contrast with the reddish sides of the face. Unusually among nightjars, which move awkwardly on the ground, the Pauraque has relatively long legs and can run fast – although it prefers to fly. It roosts and nests on the ground, under bushes.

*Phalaenoptilus nuttallii*

## Common Poorwill



<b>LENGTH</b>	18–20cm (7–8in)
<b>WEIGHT</b>	30–60g (1½–2½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Arid and semi-arid country, woodland, and forest clearings

The Common Poorwill is the smallest American nightjar, and the only bird in the world known to “hibernate” for extended periods. It breeds in western North America from Canada to Mexico. When the weather becomes cold and food short, it becomes torpid for periods of weeks or months, spending the entire winter in parts of its range tucked into clefts in rocks. Torpid birds have even been found incubating eggs when it is unusually cold during breeding. This dramatically reduces the birds’ consumption of body fat.

The plumage of the Common Poorwill is mostly grey, patterned with black on the upperparts. The sexes look similar, but the male has bolder white tips to the tail than the female. Like other nightjars, this species hunts at dawn and dusk, starting around half an hour after sunset. It is also active on moonlit nights. It catches insects, such as beetles and moths, by flying up from the ground or from a low perch on a branch or rock. Its flight is noiseless and moth-like. On the ground it hops, or waddles awkwardly.

The song from which the bird’s name comes is often rendered as “poor-jill” rather than “poor-will”. From nearby, an extra syllable can be heard:



## ADULT COMMON POORWILL

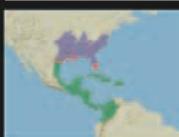
“poor-will-ow” or “poor-jill-ip”. The male sings from the ground or low branches, beginning before breeding starts, to attract a mate and establish its territory. Some individuals will sing throughout the year. The Common Poorwill roosts on the ground. Although it is usually solitary, sometimes pairs and families are found together. Both parents incubate the eggs. It has a threat display, which involves fluffing up its feathers, opening its wide mouth, and hissing like a snake or growling.

## DISTRACTION DISPLAY

The Common Poorwill relies on its dull coloration to hide from predators. But if an intruder comes too close to a nest, the female will sometimes perform a distraction display. This involves beating one wing against the ground and flopping awkwardly on its belly – to suggest that it is injured and will be easy to catch. All the while, it tries to lead the intruder away from its eggs.

*Caprimulgus carolinensis*

## Chuck-will’s-widow



<b>LENGTH</b>	27–34cm (10½–13½in)
<b>WEIGHT</b>	95–125g (3½–4oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Deciduous and mixed woodland, forest edges, pastures, and open country

A large, stout nightjar, the Chuck-will’s-widow has a brownish red throat and buff-brown mottling all over its plumage. Most active after dusk and before dawn, it feeds on flying insects and small birds, including sparrows and warblers, sometimes hunting for cicadas on tree-tops. The three-note song, which gives the bird its name, is repeated up to 30 times a minute. The male has regular song posts on branches or fences.



ADULT CHUCK-WILL’S-WIDOW

*Caprimulgus vociferus*

## Whip-poor-will



<b>LENGTH</b>	22–27cm (8½–10½in)
<b>WEIGHT</b>	40–70g (1½–2½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Forest and open woodland, in lowland and mountains, dry and humid climates

A resting Whip-poor-will can be told apart from the similarly sized Common Nighthawk (see p.289) by the length of the wing. The Nighthawk’s folded wings extend beyond the end of its tail, while the Whip-poor-will’s tail extends beyond its wing-tips. It has a mottled plumage of grey, black, and brown upperparts and grey and black underparts. When displaying, the male flashes its white outer tail feathers.

The Whip-poor-will hunts by sallying from the ground or from perches, but also flies about, “hawking” after insects in clearings and open woodlands. It may swallow grit to aid digestion. The whistled “Whip-poor-will” or “whip-pr-weeaa” rises in pitch at the end and is often mixed with sharp “quit!” notes, the phrase being repeated many times.

*Caprimulgus sericocaudatus*

## Silky-tailed Nightjar



<b>LENGTH</b>	24–30cm (9½–12in)
<b>WEIGHT</b>	55–85g (2–3oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest clearings and forest edges

The Silky-tailed Nightjar is closely related to the Tawny-collared (*C. salvini*) and Yucatan (*C. badius*) Nightjars. These birds differ from one another, and from other nightjars, by small variations in plumage and size. Such visual clues are of little help in distinguishing these birds in poor light, when they are active, so the song is much more important for field identification. The male has a repeated three-note song; “doh, wheeo, eooo”, repeated without variations or pauses for minutes on end.

The Silky-tailed Nightjar hunts on the ground, or from perches. Although there are few details of its foraging methods and food habits, its prey includes beetles, crickets, grasshoppers, and flying ants.

ADULT SILKY-TAILED NIGHTJAR

*Caprimulgus europaeus*

## European Nightjar



**LENGTH**  
26–28cm (10–11in)

**WEIGHT**  
65–100g (2½–3½oz)

**MIGRATION**  
Migrant

**HABITAT** Heathland, open woodland, young or recently logged forestry plantations

Habitat loss and the decline in insect numbers due to pesticide use have led to a decrease in the population of the European Nightjar. It is recognized by its

### ADULT EUROPEAN NIGHTJAR

brown plumage, mottled with black and grey, and large, pointed wings. It pursues its insect prey in sustained flight, swooping up at them from below. Occasionally, it hovers and swoops down. When insects are scarce, the European Nightjar may conserve energy by hunting from a perch, or from the ground to catch flightless insects and spiders. The call is a cricket-like churring, audible at long distances but difficult to locate. The courtship display of the male involves a slow, fluttering flight, with clapping of the wings. The male plays an active part in raising the young.

*Macrodipteryx longipennis*

## Standard-winged Nightjar



**LENGTH**  
22cm (8½in)

**WEIGHT**  
50g (1¾oz)

**MIGRATION**  
Migrant

**HABITAT** Savanna with trees and thorn scrub, open ground, sometimes farmland

While several nightjar species have elongated tails, the “standards” of the breeding male Standard-winged Nightjar are distinctive. They are

### MALE IN DISPLAY FLIGHT

formed from the second innermost primary feather of each wing, which is bare except near the tip. These can be up to 54cm (21½in) long. When males and females gather at display grounds, the male performs its aerial courtship display, involving one or more birds flying slowly in circles or figures of eight around the females, with their wing standards raised. Outside the breeding season, the male molts its standards, which grow longer each year.

The Standard-winged Nightjar feeds on small moths, beetles, and other winged insects. It follows insect swarms, and hunts insects disturbed by grass and scrub fires.

## CAMOUFLAGE

Seen close-up, the European Nightjar’s upper plumage is an intricate blend of browns, greys, buff, and cinnamon, overlaid with bold black streaks. This blends perfectly into the leaf litter on which it nests and roosts during daylight, mimicking the pattern of light and shade thrown by trees and bushes. Relying on this camouflage, the European Nightjar responds to disturbance by flattening itself to the ground to conceal its shape and reduce its shadow, and closing its large eyes to slits.

*Caprimulgus eximius*

## Golden Nightjar



**LENGTH**  
23–25cm (9–10in)

**WEIGHT**  
65g (2½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Lowland semi-desert, rocky or sandy country with sparse grass and scattered scrub

The golden colouring of the upperparts, from which the Golden Nightjar gets its name, is unique among nightjars. The sexes are similar in plumage. It is far better suited to the dry, sandy country in which it is mostly found than the typical nightjar plumage, which is adapted for concealment in leaf litter. This nightjar avoids areas of thick scrub or trees.

The Golden Nightjar forages at dusk, often close to or over water. Its prey includes moths, grasshoppers, mantises, and beetles. Its eggs are laid on the bare ground, often near a clump of grass or some other vegetation providing cover. Although generally non-migratory, birds in parts of the range may wander after the breeding season. Its numbers vary across its large range.

*Macropsalis forcipata*

## Long-trained Nightjar



**LENGTH**  
28–31cm (11–12in)

**WEIGHT**  
Not recorded

**MIGRATION**  
Non-migrant

**HABITAT** Rainforest, forest edges, and forests regenerating after logging, from lowland to mountains

The distinctively elongated outer “retices” or tail feathers, 48–68cm (19–27in), of the male Long-trained Nightjar can be more than twice the length of its body. They are used in a courtship display, during which the males puff out their throats and raise their tail feathers at the right angle,

**MALE WITH TYPICAL ELONGATED TAIL FEATHERS**

# SWIFTS AND HUMMINGBIRDS

ORDER Apodiformes  
FAMILY 3  
SPECIES 429

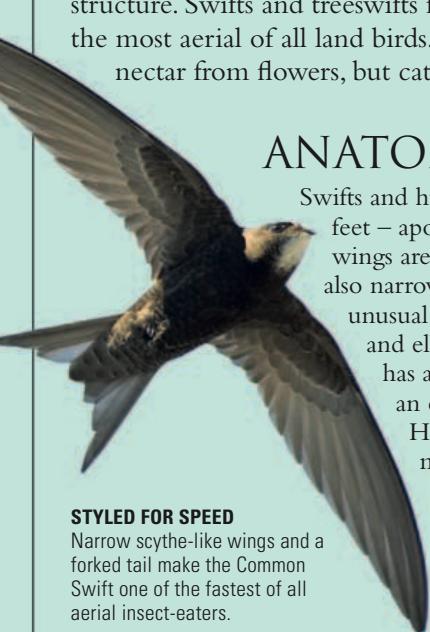
SOME ORNITHOLOGISTS CLASSIFY swifts, treeswifts, and hummingbirds in two separate orders. However, these fast-flying birds share some important features, particularly in the wing

structure. Swifts and treeswifts feed on flying insects, and include the most aerial of all land birds. Hummingbirds feed mainly on nectar from flowers, but catch insects to feed to their young.

## ANATOMY

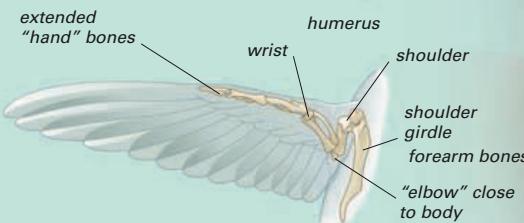
Swifts and hummingbirds both have tiny legs and feet – apodiformes means “without legs”. Their wings are long compared to their bodies, but also narrow. Internally, the wing bones have unusual proportions, with the shoulder joint and elbow joint very close together. A swift has a short bill with a wide gape, making an effective trap for flying insects.

Hummingbird bills are more variable, but all work like tubes, allowing the birds to suck up the nectar with their tongues.



### STYLED FOR SPEED

Narrow scythe-like wings and a forked tail make the Common Swift one of the fastest of all aerial insect-eaters.



### HUMMINGBIRD WING

In hummingbirds and swifts, the “elbow” joint is close to the body, giving the wing muscles greater leverage and allowing the wing to tilt. Hummingbirds use this when they hover.



## BEHAVIOUR

Typical swifts spend most of their lives in the air, while tree swifts catch insects by darting out from a perch. Hummingbirds are better than swifts at perching, but normally hover when feeding. Hummingbirds are restricted to the Americas; swifts are found worldwide, although in temperate regions they are summer visitors, departing as soon as they have bred. Treeswifts fasten their nests to branches, but typical swifts build in many different places, including chimneys, attics, sandy banks, and caves. Most use material collected on the wing, glued together with saliva; Cave Swiftlets use saliva alone. Hummingbirds make exquisite cup-shaped nests, and lay two tiny eggs.

### *Hydrochous gigas*

#### Waterfall Swift



LENGTH  
16cm (6 1/2in)

WEIGHT  
35–40g (1 1/4–1 7/16oz)

MIGRATION  
Non-migrant

HABITAT Mountainous rainforest to 1,500m (5,000ft)

### *Collocalia linchi*

#### Cave Swiftlet



LENGTH  
10cm (4in)

WEIGHT  
Not recorded

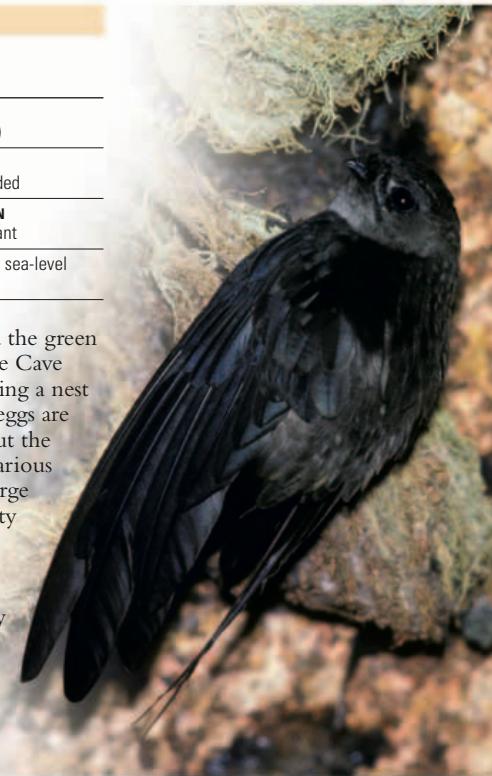
MIGRATION  
Non-migrant

HABITAT Forest and open country from sea-level up to 500m (1,640ft)

The Waterfall Swift is one of the larger species in the family usually known as swiftlets because of their diminutive size. This species is almost as large as the Common Swift (see opposite) and is similar, except that it lacks a forked tail. As the common name suggests, this species is often found near waterfalls and has been seen flying through the water where the flow is relatively gentle. The nest is made of liverworts and moss cemented with saliva and is usually located behind a waterfall. Typically, a single egg is laid, but little is known regarding development periods. The Waterfall Swift has excellent poor-light vision, and most of its foraging activity is done at dawn or dusk.

Noted for its square tail and the green hue to its black plumage, the Cave Swiftlet nests in caves, building a nest from plants and saliva. Two eggs are laid, but little is known about the breeding season. It is a gregarious species and tends to form large feeding flocks. A wide variety of flying insects is taken in and around the crowns of emergent and fruiting trees, such as figs. It is not globally threatened, but is thought to be extinct in the Malay peninsula, previously part of its range.

#### ADULT CAVE SWIFTLET



### *Aerodramus fuciphaga*

#### Edible-nest Swiftlet

LENGTH  
12cm (4 1/2in)

WEIGHT  
15–18g (9/16–5/8oz)

MIGRATION  
Non-migrant

HABITAT Cleared and forested areas on the coast or inland up to 2,800m (9,000ft)

This swiftlet is so named because its nests are harvested in many parts of the range (they are used in Chinese cuisine). Its white, opaque nest is made by the male from its gelatinous saliva, which it winds into a cup-shaped structure and attaches to a cave wall. A slender bird, the adult Edible-nest Swiftlet is relatively plain, with a combination of a brown back and paler underparts typical of swifts, but lacks the forked tail characteristic of this group. It forages mainly in dim light. The species is not migratory, but long flights in search of food between islands or to the mainland have been reported. Its numbers have declined to an alarming extent due to over-exploitation.



ADULT WHITE-RUMPED SPINETAILED SWIFT

*Zoonavena sylvatica*

## White-rumped Spinetailed Swift



<b>LENGTH</b>	11cm (4½in)
<b>WEIGHT</b>	13g (⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Up to 1,700m (5,000ft) in Himalayas and a variety of forest habitats and plantations

The White-rumped Spinetailed Swift is named for the white rump band that extends from its white undersides. It forages in small groups above the tree canopy or close to forested areas, with up to 50 birds in a flock. It constructs solitary nests in hollow tree trunks, with 3 or 4 eggs being produced, mainly between March and April.

*Chaetura pelagica*

## Chimney Swift



<b>LENGTH</b>	12–14cm (4½–5½in)
<b>WEIGHT</b>	21g (⅓oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Forest edges near rivers, but mostly urban areas



ADULT CHIMNEY SWIFT

It is its habit of nesting in urban structures that has given the Chimney Swift its common name; nesting in natural tree-holes is now rare for this bird. It is uniformly grey-brown above, with a pale grey throat and dark brown underparts. The breeding season is from early May to July, but only a single clutch of 4 or 5 eggs is produced.

*Hirundapus caudacutus*

## White-throated Needletail



<b>LENGTH</b>	19–20cm (7½–8in)
<b>WEIGHT</b>	100–150g (3½–5oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Wooded lowland, hills, and valleys; up to 4,000m (13,123ft) in the Himalayas

The tail of the White-throated Needletail looks square-shaped when the bird is at rest. The throat and undertail are white and its back is pale. The White-throated Needletail is gregarious when feeding, but rarely associates with other species. Two subspecies have been identified on the basis of plumage details and geographical range. The northern subspecies is migratory, travelling from Siberia and Japan to New Guinea and Australia. The nest is a scrape in debris of tree hollows and 2–7 eggs are produced.



ADULT WHITE-THROATED NEEDLETAIL

## NEEDLE TAIL

The common name of the White-throated Needletail derives from the needle-like feather spines that lack the usual feather vanes in its tail. The spines can project up to 6mm (¼in) beyond the normal tail feathers. They help to give the bird stability when it clings to vertical surfaces, without compromising the flexibility of the tail in flight.



ALPINE SWIFT IN FLIGHT

*Tachymarptis melba*

## Alpine Swift



<b>LENGTH</b>	20–22cm (8–8½in)
<b>WEIGHT</b>	100g (3½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Wide range of habitats; typically to 1,500m (5,000ft), but up to 3,700m (12,000ft) when feeding

This is a large species with dark brown upperparts, white chin, throat, and belly, and dark undertail. The Alpine Swift typically forages at an altitude higher than that frequented by other species, but it has also been known to feed closer to the ground when the weather is unfavourable. Its food consists of the larger insect species. The breeding season varies, depending on the range, but the species usually has a single brood of three eggs laid in a shallow nest lined with feathers. The nest is usually built on a horizontal surface, but often also in cracks or cavities on vertical rock surfaces. Range expansions have been noted in Europe, and the species is stable and common over much of the range.

*Tachornis furcata*

## Pygmy Swift



<b>LENGTH</b>	10cm (4in)
<b>WEIGHT</b>	Not recorded
<b>MIGRATION</b>	Non-migrant

**HABITAT** Tropical lowland evergreen or secondary forest

As the common name suggests, the Pygmy Swift is a small species and appears slender in flight. Its upperparts are uniformly dark and its pale throat and belly are separated by a darker band on the upper breast. This species feeds on insects in flight. Little is known about its breeding season and habits. The Pygmy Swift is not globally threatened, despite its limited range on the border between northern Colombia and Venezuela.

*Apus apus*

## Common Swift



<b>LENGTH</b>	16–17cm (6½in)
<b>WEIGHT</b>	35–50g (1¼–1¾oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Wide range of habitats from sea-level to high altitude; areas with trees and buildings

The Common Swift has a short head, with almost no bill, a white chin, an all-dark body (which becomes browner in late summer), and a deeply forked tail, with fine white feather edges. The bird feeds on insects in the air and foraging has been recorded up to 4,000m, (13,000ft) with migrating birds higher still at 5,700m (19,000ft). Its breeding range occurs throughout Europe, extending to China and it winters exclusively in southern Africa. The nest is a feather-lined cavity and it produces only a single brood of 2 or 3 eggs a year, leaving soon after the young fledge. This means that the birds are on the breeding range for as little as 12–14 weeks. Although not threatened, the numbers of this swift have declined in Europe.

ADULT COMMON SWIFT



*Eutoxeres aquila*

## White-tipped Sicklebill

LENGTH  
12–14cm (4½–5½in)WEIGHT  
8–13g (⁹/₁₆–⁷/₁₆oz)MIGRATION  
Non-migrant**HABITAT** Forest understorey, forest edges, and near rivers

Named after its extraordinary bill, which is strongly decurved over about two-thirds of its length, this bird mainly feeds on heliconia flowers, using its bill to probe into their curved blooms. It has a predominantly green plumage, dark-streaked underparts, and a white-tipped tail with green outer tail-feathers. Unlike many hummingbirds, which feed while hovering, the sicklebill perches to sip nectar from flowers.

*Phaethornis eurynome*

## Scale-throated Hermit

LENGTH  
14cm (5½in)WEIGHT  
4–6g (⁹/₃₂–⁷/₃₂oz)MIGRATION  
Non-migrant**HABITAT** Understorey of primary forest and old secondary growth

A medium-sized hermit, the Scale-throated Hermit is named for the appearance of its dark throat feathers. It has a curved bill and long white tail-streamers. The female has a slightly more curved bill and shorter wings. This species is likely to be seen in flight or hovering at a forest flower. Its nest is a cone-shaped cup of plant material and cobwebs attached to the tip of a leaf.



SCALE-THROATED HERMIT

*Phaethornis superciliosus*

## Eastern Long-tailed Hermit

LENGTH  
14cm (5½in)WEIGHT  
4–6g (⁹/₃₂–⁷/₃₂oz)MIGRATION  
Non-migrant**HABITAT** Understorey of all types of lowland rainforest, including areas near rivers

Mainly brown above, the Eastern Long-tailed Hermit has dark wings, buff underparts and rump, and a white-tipped tail with long white central tail-feathers. Like most of the medium-sized hermits, its bill is long and slightly decurved. It feeds by trap-lining (foraging in circuits), regularly visiting large tubular-shaped flowers, such as heliconias and passionflowers, scattered over a particular area.

*Phaethornis pretrei*

## Planalto Hermit

LENGTH  
14cm (5½in)WEIGHT  
4–6g (⁹/₃₂–⁷/₃₂oz)MIGRATION  
Non-migrant**HABITAT** Dry forest and other well-vegetated areas in montane regions, including gardens

This species takes its unusual common name from the plateau region of interior Brazil, which forms its core range. Within most of its distribution, the Planalto Hermit is the only hermit with a long bill and tail and is further distinguished by its warm buff coloured underparts. Its nest is cone-shaped, typical of most hermits, but is constructed on vertical structures, such as wires and waste-water pipes, under bridges, or on roots and twigs protected by a rock overhang. Two eggs are laid and incubated for about two weeks by the female alone, and the chicks fledge after a further 20 days.



ADULT PLANALTO HERMIT

*Campylopterus hemileucurus*

## Violet Sabrewing

LENGTH  
13–15cm (5–6in)WEIGHT  
10–12g (³/₈–⁷/₃₂oz)MIGRATION  
Non-migrant**HABITAT** Humid forest, secondary growth, and small banana plantations in foothills and on slopes

MALE VIOLET SABREWING

Both sexes of this large hummingbird are distinctive, but only the male Violet Sabrewing has largely violet plumage. In contrast, the female has grey and green underparts and blue discs on the throat. It has a more decurved bill than the male. Both sexes have a white spot behind the eye and white in the tail. The Violet Sabrewing feeds on nectar from banana flowers and also gleans arthropods from foliage and spiderwebs. Its nest, built mainly in the wet season, is a cup made of green moss and plant fibres, bound with cobwebs. In this season, males form leks of up to 12 birds to display and sing to potential mates.



ADULT HOVERING TO FEED

*Eupetomena macroura*

## Swallow-tailed Hummingbird

LENGTH  
15–17cm (6–6½in)WEIGHT  
6–9g (¹/₃₂–¹¹/₃₂oz)MIGRATION  
Non-migrant**HABITAT** All types of open and non-forested areas, including towns and cities

This large hummingbird, with the long, forked tail that gives it its name, is a common sight even in large cities, where it feeds on trees that line busy streets. It has a black bill and is deep blue

and green in colour, with dark wings. The sexes are quite alike, although the female is slightly smaller and has duller plumage. This bird is dominant at nectar-rich flowers, defending its feeding territory aggressively and attacking other hummingbirds that try to feed at the same flowers. It can also catch insects in flight. The male utters long but low chirps as it perches on a branch. During courtship, the male sings just before sunrise in a lek.

Most Swallow-tailed Hummingbirds build their nests between October and March, although breeding has been recorded in southern Brazil even in June (midwinter). The nest is constructed on a horizontal branch; two eggs are laid and are incubated by the female for up to 16 days.

*Topaza pella*

## Crimson Topaz



LENGTH	21–23cm (8½–9in)
WEIGHT	10–14g (⅓–⅔oz)
MIGRATION	Non-migrant

**HABITAT** Canopy of lowland rainforest, frequently around granite outcrops and along rivers

One of the most striking hummingbirds, the male Crimson Topaz has a glittering crimson-to-purple breast and upperparts. Its head is black and its throat green, while the tail has scissor-like central tail-feathers. All-black individuals are not uncommon in some areas. In comparison, the female is almost nondescript, being mainly green with golden-green throat discs and red outer tail-feathers.

*Chrysolampis mosquitus*

## Ruby Topaz



LENGTH	9cm (3½in)
WEIGHT	5g (⅕oz)
MIGRATION	Partial migrant

**HABITAT** Savanna-like vegetation with scattered trees; gardens and cultivated land

Brilliantly coloured, the Ruby Topaz has a scarlet-red crown, yellow throat and breast, orange-red tail, and otherwise brown-black plumage. However, the male looks virtually all black if seen against the light or at a distance. The female shares the largely red tail, but has green upperparts and grey-white underparts. When displaying, the male circles around the female with its crown feathers raised and its tail fanned out. The Ruby Topaz is a true migrant. North to south migrations are known in Brazil and the species is seemingly absent from parts of Colombia and Trinidad and Tobago in certain seasons.



ADULT RUBY TOPAZ

*Lophornis delattrei*

## Rufous-crested Coquette



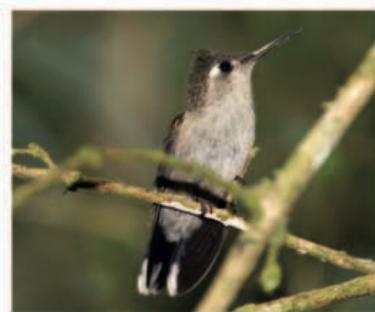
LENGTH	7cm (2¾in)
WEIGHT	3g (⅕oz)
MIGRATION	Non-migrant

**HABITAT** Semi-open habitats, including humid forest edges and clearings

With its dark-tipped rufous crest, the male Rufous-crested Coquette is very distinctive. The female has a bright rufous face and a dark-spotted throat. Both sexes have a white rump-band.

Whereas most colettes are lowland birds, the Rufous-crested Coquette is found in the Andes at altitudes up to 2,000m (6,500ft). Like most other colettes, the species is known to hawk insects in flight as well as to visit a variety of trees and plants to obtain nectar. It is not frequently seen, and not much is known about its breeding behaviour.

MALE RUFOUS-CRESTED COQUETTE



FEMALE PLOVERCREST

*Stephanoxis lalandi*

## Plovercrest



LENGTH	9cm (3½in)
WEIGHT	2–4g (⅕–⅖oz)
MIGRATION	Non-migrant

**HABITAT** Forest understorey and scrub; occasionally along watercourses

Unlike the male, which has an elongated crest, the female Plovercrest has only a short crest. The female also has a white spot behind the eye and lacks the purple breast and underparts of the male. The diet of this species consists principally of nectar, which it obtains from both native and introduced plants in its habitat. However, it is also capable of catching both airborne insects and those that can be gleaned from leaves.

The males form leks during the breeding season, where their chipping calls may be heard almost all day. The clutch of two eggs is tended by the female and nesting lasts for about six weeks from the laying of eggs to the fledging of the young.

*Lophornis magnificus*

## Frilled Coquette



**HABITAT** Plantations and forest edges, secondary growth, and gardens

A tiny hummingbird, the male Frilled Coquette has a rufous crest and a fan-like ruff or frill of white feathers tipped with iridescent green that contrast dramatically with the rich chestnut crown feathers. It has a black-tipped red bill. The female lacks the crest and ruff and has a darker red bill than the male. The Frilled Coquette readily adapts to manmade habitats, often eating at sugar-water feeders, but mainly feeds on small arthropods and the nectar of a wide range of flowers.



MALE FRILLED COQUETTE

*Trochilus polytmus*

## Red-billed Streamertail



LENGTH	11–30cm (4½–12in)
WEIGHT	5g (⅕oz)
MIGRATION	Non-migrant

**HABITAT** Principally forested areas in highlands, but found in most well-vegetated areas

Found only in Jamaica, the Red-billed Streamertail is named for the black tail of the male. It has extremely elongated streamers that trail well behind the bird's body and account for almost half its total length. The male is spectacular, with its glittering grass-green plumage, black head, and dark wings. The female, by contrast, has no tail streamers and has a duller plumage, being chiefly green above and white-grey below, with a red tone to the bill. The species feeds on insects that are airborne, caught in spiderwebs, or gleaned from leaves, and also visits flowers and bird-feeders for nectar. While courting, the male waves its tail streamers from side to side.

 *Thalurania glaukopis*

## Violet-capped Woodnymph



LENGTH	8–11cm (3½–4½in)
WEIGHT	5g (⁹/₁₆oz)
MIGRATION	Non-migrant

**HABITAT** Forest and scrub of all types; and suburbs of towns

The male of this species has a violet-blue crown that gives rise to its common name. It also has brilliant green underparts. The female lacks the crown and has

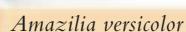


### ADULT MALE

grey-white underparts.  
Both sexes have a long,  
forked tail. This hummingbird  
takes nectar from plants and  
trees and also feeds on insects.



FEMALE VERSICOLORED EMERALD

 *Amazilia versicolor*

## Versicolored Emerald



LENGTH	8–10cm (3½–4in)
WEIGHT	4g (⁹/₃₂oz)
MIGRATION	Partial migrant

**HABITAT** Open and semi-open habitats; also found at rainforest edge

Four subspecies of the Versicolored Emerald are recognized, and while most of these are principally green with or without a white throat, a subspecies in Venezuela and Guyana is quite different. It has a turquoise head and bright white throat. It visits a wide variety of plant species, but prefers those with short tubular flowers. It hawks insects in flight and also gleans them from leaves.



### PAIR ATTENDING CHICK

 *Oreotrochilus chimborazo*

## Ecuadorian Hillstar



LENGTH	13cm (5in)
WEIGHT	8g (⁹/₁₆oz)
MIGRATION	Non-migrant

**HABITAT** Highland grassland between the tree line and the snow line

Despite its name, the Ecuadorian Hillstar is not exclusive to Ecuador. Three subspecies have been described from different mountain ranges, the subspecies differing in the colour of the throat – two with varying amounts of green and the other being entirely iridescent purple. The Ecuadorian Hillstar is found at altitudes of up to 5,200m (17,000ft). In order to combat the extremely low night-time temperatures, it roosts in caves and crevices and becomes quite torpid during darkness. It is very aggressive, being territorial over its chosen patch of flowers. It feeds on nectar by clinging to the plants with its comparatively large feet and also catches insects in flight.

 *Coeligena torquata*

## Collared Inca

LENGTH	15cm (6in)
WEIGHT	7g (¹/₄oz)
MIGRATION	Non-migrant

**HABITAT** Montane cloud forest and their borders in the Andes

The *Coeligena* genus consists of a dozen species of incas and starfrontlets, all of which occur solely in the Andes. Of these, the Collared Inca is one of the most widespread and is easily identified by its bright white throat patch and white tail markings. Six subspecies have been described, which differ principally in their slightly different head and throat patterns. The Collared Inca feeds on nectar and also catches arthropods at lower levels in forests and forest edges. The breeding season is variable, but it is generally in spring and summer.



FEMALE COLLARED INCA

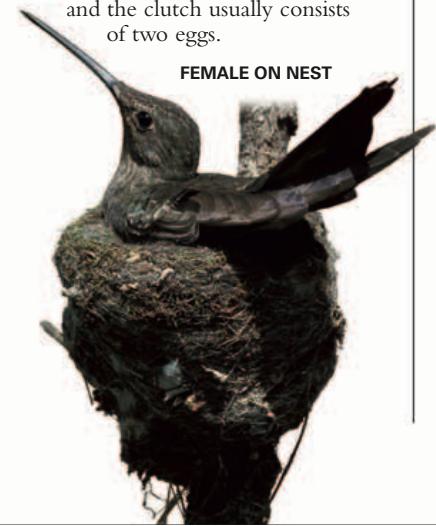
 *Patagona gigas*

## Giant Hummingbird

LENGTH	20–22cm (8–8½in)
WEIGHT	18–20g (⁹/₈–¹¹/₁₆oz)
MIGRATION	Partial migrant

**HABITAT** Arid open and semi-open areas with a few trees at higher altitudes

As its name suggests, this hummingbird, the sole representative of its genus, is relatively large. The sexes are generally similar in plumage, both with brown upperparts, but the male Giant Hummingbird has warm orange underparts and a much larger white rump patch. Despite its size, this hummingbird constructs a small nest and the clutch usually consists of two eggs.



FEMALE ON NEST



FEMALE SWORD-BILLED HUMMINGBIRD

### NECTAR FEEDER

The long bill of the Sword-billed Hummingbird is an adaptation that allows it to extract nectar from flowers with long, pendant corollas that other hummingbirds are unable to access. The male shown here is sipping nectar from a *Datura* flower, but the species visits flowers of at least seven other genera.



*Leucochloris albicollis*

## White-throated Hummingbird

LENGTH  
10–12cm (4–4½in)WEIGHT  
5g (⅓oz)MIGRATION  
Non-migrant**HABITAT** Forest edges, but also scrub, parks, and gardens

Unlike a great many hummingbirds, in which the male is characterized by its more elaborate and brighter plumage, both sexes of the White-throated Hummingbird have almost identical plumage, a distinctive white throat, and a white belly. Only the juvenile has underparts that are a dull grey.

The species forages for nectar at a variety of both native and introduced plants and trees, visiting parks and gardens to feed. It also catches insects by hawking. Like most birds in southern Brazil, it nests in spring to late summer,



ADULT BIRD

building a small cup-shaped nest of plant

down and moss, decorated with lichens and bound with cobwebs. It is sited on a horizontal branch. Two eggs are laid, and they are incubated for two weeks by the female alone. The young fledge in just over three weeks. The White-throated Hummingbird is common, adapting well to human-modified habitats and is easily identified, even in flight, by its distinctive calls.

*Adelomyia melanogenys*

## Speckled Hummingbird

LENGTH  
9cm (3½in)WEIGHT  
5g (⅓oz)MIGRATION  
Non-migrant**HABITAT** Forest and its edges, especially around watercourses and thickets

ADULT SPECKLED HUMMINGBIRD



Among the most common of its family in the Andes, the Speckled Hummingbird is also one of the more widespread hummingbirds. The sexes are basically alike, with a dark ear patch and speckling on the breast.

Up to seven subspecies are recognized, most of which differ in the amount of speckling and colour of the underparts. This bird frequently perches to sip nectar at flowers and also hawks insects in flight or gleans them from foliage.

*Heliodoxa leadbeateri*

## Violet-fronted Brilliant

LENGTH  
11–13cm (4½–5in)WEIGHT  
6–9g (7/32–11/32oz)MIGRATION  
Non-migrant**HABITAT** Forest, including cloud forest and edges, as well as second growth and shade coffee plantations

The so-called briliants are a group of about nine species of hummingbird, all of which are characterized by their predominantly dark green plumage. Like the other species in this group, all of which belong to the genus *Heliodoxa*, the Violet-fronted Brilliant shows little difference between the sexes. However, the male has a violet forecrown and green underparts, while the female lacks the violet forecrown and has white underparts, thickly spotted with golden-green discs. While hummingbirds (unlike most non-passerines) have many subspecies, the Violet-fronted Brilliant is considered monotypic, which means that no subspecies are recognized.

This species mainly feeds on flowers at low levels and, unlike some hummingbirds, is usually found singly, rather than congregating at flowering trees. It also frequently catches insects in flight. The female lays two eggs and incubates them alone. The Violet-fronted Brilliant is a common bird in the Andes and adjacent mountain ranges, where it is found from low in the foothills up to about 2,400m (7,900ft).

MALE VIOLET-FRONTED BRILLIANT



ADULT GREENISH PUFFLEG

*Haplophaedia aureliae*

## Greenish Puffleg

LENGTH  
10cm (4in)WEIGHT  
5–7g (3/16–1/4oz)MIGRATION  
Non-migrant**HABITAT** Understorey of humid forest and forest borders

Like all of the pufflegs, a group of 14 species of hummingbird, this bird has puffy white feathering on its legs. The Greenish Puffleg is one of the more widespread species in the group. Three different subspecies have been described, some of which have a copper tinge to the head and neck. Like most hummingbirds, this species lays two eggs in a cup-shaped nest of moss and fine plant material bound together with cobwebs.

*Lesbia victoriae*

## Black-tailed Trainbearer



**LENGTH**  
15–26cm (6–10in)

**WEIGHT**  
5g (1/16oz)

**MIGRATION**  
Non-migrant

**HABITAT** Mountain forest edges at 2,500–4,000m (8,200–13,000ft)

As its name indicates, the Black-tailed Trainbearer has a spectacular, deeply forked tail, which makes up as much as three-quarters of the total length of the bird's body in the male. The female has a shorter tail, but this still represents around half of its total length. The male has a bright green plumage, with pale undersides, dark wings, and a black tail. The undersides of the female are white and distinctly marked with green discs.

A nectar-feeder, the Black-tailed Trainbearer mainly feeds at flowers, although it is also known to feed on eucalyptus trees. It also takes insects on the wing by hawking. While foraging, the male utters high-pitched notes and when courting it spreads its tail as it chases a female, calling as it does so. The Black-tailed Trainbearer's nest is a cup-shaped structure, made from plant fibres and a covering of moss and lichens. The usual location of its nest is beneath a twig, fern, or a rock. The female lays a single egg, and the incubation takes 18–19 days, with a further 30 days for fledging, a prolonged period for a bird of its size. The breeding season varies widely among the different populations (about three subspecies have been identified in its range), with the longest season stretching from October to March. The species is not globally threatened, although much of the habitat has been modified by human activity.

### MALE FEEDING AT A FLOWER

*Mellisuga helena*

## Bee Hummingbird



**LENGTH**  
5cm (2in)

**WEIGHT**  
2g (1/16oz)

**MIGRATION**  
Non-migrant

**HABITAT** Mature woodland, gardens, and wet areas, but also in more open areas



### MALE LONG-TAILED SYLPH



**HABITAT** Variable forest and gardens from 1,000–3,000m (3,300–10,000ft)

The Long-tailed Sylph is a very colourful bird. The male has a variety of blue and green shades in its plumage. Its green tail makes up to 12cm (4½in) of its total length. The female has a white throat with prominent green patches, and a yellow breast and belly. However, it lacks the long tail of the male. Both the sexes have dark wings.

The bird feeds on nectar by piercing the base of the flower, rather than the conventional way of taking nectar from the front of the bloom. In addition, it feeds by perching on the flowers as well as hovering to feed. The bird takes insects in flight by hawking from a perch.

Its breeding has been recorded between February and October, but it is thought that this bird breeds throughout the year. Its nest is a domed structure, with a side entrance built from moss and plant fibres.

*Aglaiaocercus kingi*

## Long-tailed Sylph



### FEMALE BEE HUMMINGBIRD

The smallest bird in the world, the male Bee Hummingbird has a striking fiery red head and throat, with a green body. The female is slightly larger and lacks the red head markings. Its uppersides are a bluish green and the undersides are greyish white. The bird takes nectar from a wide range of plants, although it also feeds on insects, and the chicks eat insects that come within the range of the nest. Its breeding season is March to June and it lays two eggs at an interval of one day. The incubation is for about 22 days and the chicks have a full set of feathers by 14 days, leaving the nest after about 5 days of flight practice. The species is confined to Cuba and the nearby Isla de la Juventud, and is not migratory.

**PLAINER FEMALE**

The female does not have a red throat. It is larger and has a longer bill than the male.



*Archilochus colubris*

## Ruby-throated Hummingbird

**LENGTH**

9cm (3½in)

**WEIGHT**

3g (⅛oz)

**MIGRATION**

Migrant

**HABITAT** Deciduous and mixed forest in breeding season; tropical forest in winter

**BRIGHTLY COLOURED MALE**  
Identifiable by the iridescent red patch on its throat, the male Ruby-throated Hummingbird is more vividly coloured than the female.

A stunning bird, the male Anna's Hummingbird has an iridescent deep red head and face, a pale throat and belly, and an iridescent green back. In contrast, the female lacks the red head of the male and has pale green plumage, with pale grey underparts.

Anna's Hummingbird feeds on nectar, visiting a wide range of flowers, especially in gardens, with fuchsias being a preference. It hovers to gather nectar from flowers and the male occupies a feeding territory

where there are rich sources of nectar. While feeding on nectar, they also help in pollination. This species also catches insects by hawking.

The male's courtship display consists of hovering before the female, flying up in a high arc, and then diving rapidly towards her, with a loud "chirp".

**MALE ANNA'S HUMMINGBIRD**

*Calypte anna*

## Anna's Hummingbird



**LENGTH**  
10cm (4in)

**WEIGHT**  
3–6g (⅛–⅓oz)

**MIGRATION**  
Partial migrant

**HABITAT** Oak woodland and shrub or more open woodland

**FEEDING NESTLINGS**

Nesting on its own, without any help from the male, the female Anna's Hummingbird builds a cup-shaped nest made of soft materials such as plant down, feathers, hair, and spider webs. Two eggs are laid and incubated by the female for 14–19 days. To feed the nestlings, the female selects flowers that have nectar with a high sugar content. It then regurgitates nectar, as well as small insects and spiders, into their bills, after stimulating them to open their mouths. The young birds make begging calls only after they leave the nest.

**FEEDING A YOUNG NESTLING**

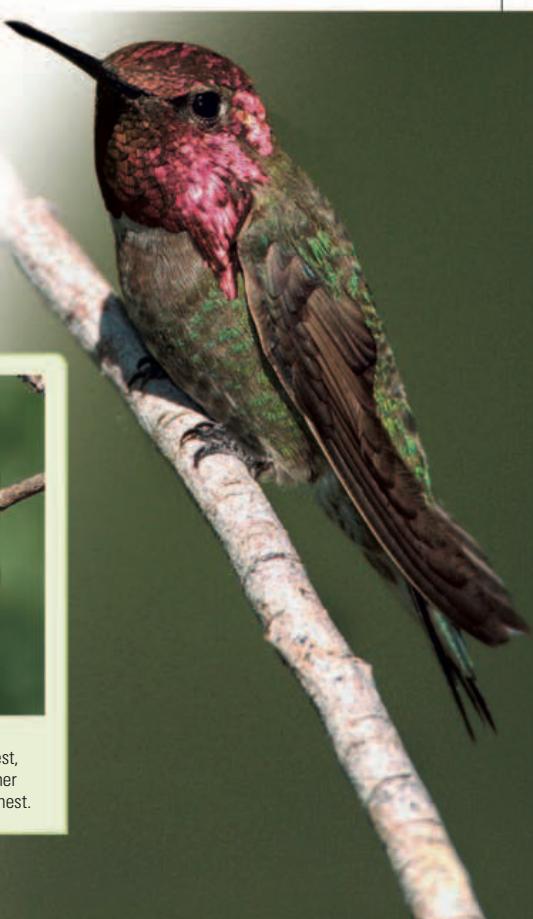
When it hatches, the Anna's Hummingbird nestling is blind and does not make begging calls. The female stimulates it to feed by touching its bill.

**FEEDING AN OLDER NESTLING**

At a later stage, the nestling clings to the nest, perching on its side, and feeds after its mother stimulates it to gape by hovering above the nest.

much plainer than the male. The Ruby-throated Hummingbird feeds primarily on nectar and over 30 species of flowers have been identified as important food sources. It also takes some insects and spiders.

The summer breeding range of this species stretches up to much of eastern USA and into southern Canada, with the wintering birds mostly found in Central America. The male arrives on the breeding grounds between April and May, ahead of the female. It makes a courtship flight, but the female builds the nest. It lays two eggs in a cup-shaped nest, made of plant material, moss, and spider webs built on a horizontal branch. The incubation takes 16 days from the laying of the second egg, and the fledging follows after 15–20 days.



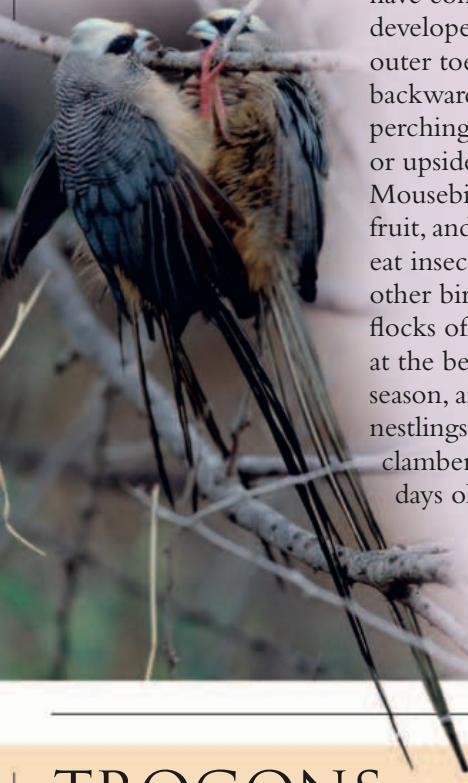
# MOUSEBIRDS

ORDER Coliiformes  
FAMILIES 2  
SPECIES 6

FOUND ONLY IN SUB-SAHARAN AFRICA, mousebirds are grey or brown, and move in a rodent-like, scuttling way when feeding. They have conspicuous crests, well developed legs, and feet with an outer toe that can swivel to point backwards or forwards. Instead of perching, they often hang vertically or upside down from a branch. Mousebirds feed mainly on buds, fruit, and seeds. However, rarely they eat insects, and even the young of other birds. They typically live in flocks of up to 30, which break up at the beginning of the breeding season, and reform when the nestlings are fully fledged. The young clamber out of the nest when a few days old, returning to it at night.

## WHITE-HEADED MOUSEBIRDS

Found in Kenya and Somalia, these birds have long, tapering tails that are typical of all mousebirds.



# TROGONS

ORDER Trogoniformes  
FAMILY 1  
SPECIES 39

southern Asia, with three species in sub-Saharan Africa. All have short bills, rounded wings and tails, and an unique foot anatomy – the inner toe points backwards, a feature not found in any other group of birds. They feed on insects and fruit, typically spending long periods on one perch, interrupted by brief flights to collect food. Trogons nest in cavities, excavating tree holes, or taking over abandoned insect nests.

**MALE MASKED TROGON**  
Despite their brilliant colours, trogons can be surprisingly difficult to spot among foliage and flowers, because they often stay still for long periods of time.



## SECOND-HAND NEST

After pecking an opening, this Violaceous Tragon has taken over a disused termite nest.



*Colius striatus*

## Speckled Mousebird



LENGTH  
30–36cm (12–14in)  
WEIGHT  
35–80g (1 1/4–2 1/2oz)  
MIGRATION  
Non-migrant

**HABITAT** Open woodland and forest edges; secondary growth, abandoned cultivation, and scrub

### ADULT SPECKLED MOUSEBIRD

on insects and fruit, as well as buds, flowers, and blossoms. It breeds almost year-round and some females may be capable of producing a clutch as many as eight times in a single year.

### Blue-naped Mousebird



LENGTH  
33–36cm (13–14in)  
WEIGHT  
35–60g (1 1/4–2 1/2oz)  
MIGRATION  
Non-migrant

**HABITAT** Open woodland in semi-arid regions, thornbush and wooded savanna, and even gardens

The Blue-naped Mousebird has largely blue-grey upperparts, including its long graduated tail, and much darker-coloured wings. It has a striking tufty crest, and a largely red bill. As befits its name, it has a blue nape patch (lacking in juveniles and adults of some subspecies), and pale buffy underparts. It breeds throughout the year. The nest is a shallow cup of twigs, lined with grass, placed in a tree or bush. It usually lays 2 or 3 eggs, which are incubated for 11 days, and the young leave the nest in about 10 days.

*Apaloderma narina*

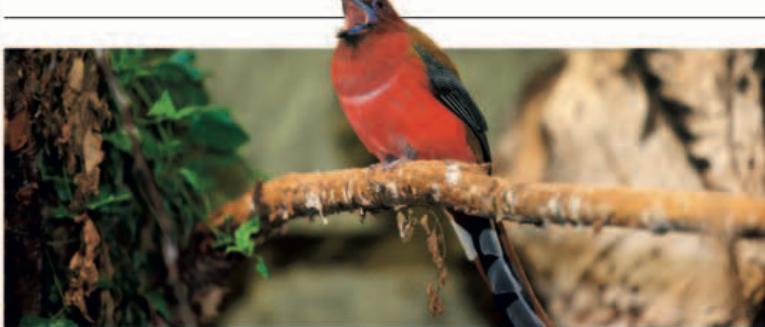
## Narina Tragon



LENGTH  
30–32cm (12–12 1/2in)  
WEIGHT  
50–95g (1 3/4–3 1/4oz)  
MIGRATION  
Non-migrant

**HABITAT** Forested areas, including gallery forest and savanna woodland, often along watercourses

Like many members of its family, the Narina Tragon is mainly green above, the colour extending to the breast in the male, which has bright red underparts. The female, however, has red confined to the belly and a brown face and throat, becoming pink on the breast. Both sexes have a bright yellow bill. This bird perches quietly for long periods, looking for prey and feeds on insects, including larvae, but also spiders, small lizards, and frogs.



*Harpactes erythrocephalus*

## Red-headed Tragon



LENGTH  
31–35cm (12–14in)  
WEIGHT  
75–100g (2 5/8–3 1/4oz)  
MIGRATION  
Non-migrant

**HABITAT** Well-shaded areas in the mid-storey and lower canopy of dense forest to mid-altitudes

### MALE RED-HEADED TROGON

Mainly red in colour, the male Red-headed Tragon has grey-black wings, but males of some subspecies have a brown back. The female has a brown head and breast and mainly brown upperparts. The Red-headed Tragon is one of the most common trogons in Asia. It feeds mainly on insects, but also takes small berries. It catches insects and moths while it is in flight and preys upon invertebrates on the ground by swooping from a perch. Its call is a series of “chaup chaup” sounds. The species nests in spring and summer, usually in an unlined hollow in a rotten tree trunk, where it lays 2–4 eggs. Surprisingly, little else is known of the Red-headed Tragon’s breeding biology.

*Trogon rufus*

## Black-throated Trogan



LENGTH	23–25cm (9–10in)
WEIGHT	50–55g (1¾–2oz)
MIGRATION	Non-migrant

**HABITAT** Understorey and mid-levels of rainforest, occasionally in secondary growth or plantations

One of the most widespread representatives of the family in its range, the male Black-throated Tropic has a green head, upper breast, and back, a dark face and throat, and golden yellow underparts. The female has a brown head and breast and mainly brown upperparts, but is yellow below. Unlike most Neotropical trogons, this bird is not only a fruit-eater – it also takes insects, beetles, and caterpillars.



ADULT MALE

*Trogon elegans*

## Elegant Tropic



LENGTH	28–30cm (11–12in)
WEIGHT	65–70g (2½–2½oz)
MIGRATION	Non-migrant

**HABITAT** Canopy of woodland, including pine-oak forest, from lowland to highland

The only one of its family to breed regularly in the USA, the Elegant Tropic is also widespread and common in Central America. The male has a green chest and back, with grey wings, which have a latticed pattern. It has bright red underparts and a dark-tipped tail, while the female has brown upperparts. Both sexes have a narrow, white breast-band. The nest of this bird is usually sited in a cavity in a rotten tree, but occasionally in an earth bank, and 2 or 3 eggs are laid.

The young are fed on insects, but at other times of the year, the diet consists only of fruit.



MALE ELEGANT TROPIC

*Pharomachrus mocinno*

## Resplendent Quetzal

LENGTH	36–65cm (14–26in)
WEIGHT	175–200g (6–7oz)
MIGRATION	Non-migrant

**HABITAT** Montane and cloud forests, usually in the canopy or subcanopy

With its extravagant colours, the Resplendent Quetzal outshines even the brightly coloured trogons. The male has a yellow bill, a predominantly emerald-green plumage, and red breast. It has truly extraordinary streamers, which constitute almost half the overall length of its body. These feathers are not actually part of the tail, but are some of its undertail feathers. In comparison to the flamboyant male, the female has a dark bill, a shorter tail, and no filamentous wing-feathers. It lacks a bushy crest and has brown underparts.

The Resplendent Quetzal is largely fruit-eating, although insects, small frogs, lizards, and snails offer some variation to the diet. The young are fed almost exclusively on insects for the first 10 days of their lives. Although mainly sedentary, the Resplendent Quetzal performs altitudinal movements in response to the seasonal fruiting of trees. Studies have revealed that it may undertake complex local migrations in Costa Rica, covering different altitudinal zones.

## MALE RESPLENDENT QUETZAL

## NESTING

The Resplendent Quetzal nests in decaying trees or in deep hollows, but usually uses more open holes. Just 1 or 2 eggs are laid and the nesting period lasts almost two months. The mortality rate of the young is 80 per cent – one study found that many chicks die without leaving the nest and that 80 per cent of the survivors fail to reach adulthood.



A CONTORTION ACT

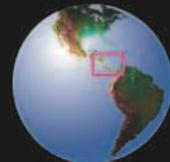
In the nest-hole, the male Resplendent Quetzal accommodates its tail by holding it upright against the back wall of the cavity.





## GREAT SITES

# MONTEVERDE CLOUDFOREST PRESERVE



**LOCATION** In northern Costa Rica, northwest of the capital, San José



Costa Rica has a fabulously varied birdlife. Although it is a small country, 830 species of bird have been recorded there and over a quarter of its surface is managed for conservation. The Monteverde Cloudforest Preserve is a large protected area of mountain forest in north-central Costa Rica, covering around 10,500 hectares (26,000 acres). Much of the land that now makes up the reserve was originally bought by a group of Quakers, who emigrated from the USA in 1951.

## MEETING OF WEST AND EAST

Monteverde straddles the upper slopes of the Cordillera de Tilarán, the spine of mountains down the centre of Costa Rica. The area is a meeting place where birds from both west and east can be seen, together with a wide range of species found only in uplands. The gain in altitude through the reserve brings changes in both temperature and humidity, producing six main forest zones – each with its own wildlife – in horizontal bands up the slopes.

The cloudforest that dominates the mid-altitudes is by far the most spectacular habitat. Here, the air is cool and drenched with mist and rain almost all year, and the majestic trees are festooned with masses of orchids, ferns, mosses, and trailing vines. This is the home of the elusive Resplendent Quetzal. Its favourite food is the fruit of the wild avocado tree, which thrives in the cloudforest. Another fruit-eating resident is the Three-wattled Bellbird, whose bizarre ringing call can carry over 3km (2 miles) across the area's forested ravines.

Monteverde is on a major north-south flyway of migratory birds from North America, especially birds of prey, such as the Broad-winged Hawk, and songbirds, such as vireos and New World warblers. Some migrants pause only briefly on their journey south, but many birds remain for several months, often forming colourful flocks with resident local species such as tanagers and euphonias.

## RESPLENDENT RESIDENT

One of Monteverde's most famous residents, the Resplendent Quetzal (a male is pictured here) often nests near to a wild avocado tree, which ensures a reliable source of food for its young.

## WHAT TO SPOT



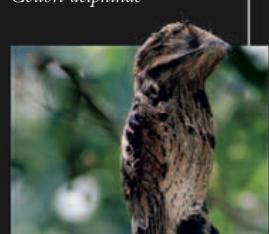
**EMERALD TOUCANET**  
*Aulacorhynchus prasinus*  
(see p.282)



**ORANGE-FRONTED PARAKEET**  
*Aratinga canicularis*



**BROWN VIOLETEAR**  
*Colibri delphinae*



**COMMON POTOO**  
*Nyctibius griseus*  
(see p.289)

# KINGFISHERS AND RELATIVES

ORDER Coraciiformes

FAMILY 11

SPECIES 208

BRIGHTLY COLOURED BIRDS WITH LARGE and distinctive bills, kingfishers and their relatives are found throughout the world. They show a huge range of size, from tiny Caribbean todies, which can weigh as little as 5g ( $\frac{1}{5}$ oz), through bee-eaters, kingfishers, rollers, and hoopoes, to the largest hornbills from southeast Asia, which have a wingspan of up to 1.5m (5ft). Apart from large hornbills, coraciiform birds are essentially carnivorous, feeding on a wide variety of animals from fish to insects, including wasps and bees. All are cavity-nesters, and some breed in extended family groups.

## ANATOMY

Coraciiform birds typically have large heads compared to their bodies, and their bills reinforce this “front-heavy” look. This is most marked in hornbills, which have exceptionally large bills, often topped by a horny shield, or casque. Most birds in this order have broad, rounded wings, but those of bee-eaters are sharply pointed – an adaptation that gives them speed and manoeuvrability for catching insects in mid-air. Internally, kingfishers and their relatives have some unusual anatomical features, including a characteristic pattern of feather tracts – feather-producing regions of the body that are separated by “islands” of bare skin. Another shared feature is their foot structure, with three forward-pointing toes connected for part of their length. Although their feet are small, most of these birds perch well; some spend all their lives in trees.

## BEHAVIOUR

Despite marked differences in size and habitat, many coraciiform birds share the same “spot-and-swoop” hunting technique, often taking off and returning to a favourite perch. Having made a catch, they typically beat it against a branch. Kingfishers use this behaviour to subdue fish, and animals such as lizards, before swallowing them head-first. Bee-eaters catch food in mid-air, then return to a perch to deactivate insect stings. Bee-eaters live and feed in noisy flocks like many of the loud and gregarious birds in this order – kookaburras, in particular, are famous for their laughing calls. Several species will fearlessly try to drive away intruders.

*Coracias garrulus*

### European Roller



**LENGTH**  
31cm (12in)

**WEIGHT**  
150g (5oz)

**MIGRATION**  
Migrant

**HABITAT** Breeds on sunny lowlands with patches of woodland; winters on dry, wooded African savanna

Predominantly electric blue, with a chestnut back and wing patches, the European Roller is a large-headed, long-necked roller. It spends long periods on a perch looking for prey. It is an intercontinental migrant; almost the entire population winters south of the Sahara. In spring, the species makes spectacular mass movement northwards along the East African coast.



ADULT EUROPEAN ROLLER

**CARMINE BEE-EATER COLONY**

Nesting colonies of bee-eaters can contain hundreds of birds, often divided into smaller groups, known as clans.

*Coracias spatulatus*

### Racquet-tailed Roller



**LENGTH**  
36cm (14in)

**WEIGHT**  
100g (3 $\frac{1}{2}$ oz)

**MIGRATION**  
Non-migrant

**HABITAT** Undisturbed, mature woodland and well-wooded savanna

The Racquet-tailed or “Weigall’s” Roller is the smallest and lightest roller. It has long tail streamers, which have an elongated outer tail feather with a spoon-like tip. In flight, its dark blue wings contrast with a bright azure wing-stripe. It swoops to the ground to take locusts, beetles, and small lizards. It is primarily a species of the dense woodland.



#### AERIAL STRIKE

With its wings swept back, a Eurasian Kingfisher dives to catch a fish. Kingfishers spot their prey either by tracking over the water's surface, or by watching from a perch.

## BREEDING

Kingfishers and their relatives rarely use any nesting material, but they often devote considerable energy to excavating burrows. Bee-eaters and river kingfishers dig long tunnels in banks of earth, while many others in this family nest in cavities in trees. Once the female is installed in the nest, some male hornbills “imprison” their partner by sealing the entrance with mud; a small opening left in the wall allows the male to deliver food. Coraciiformes lay up to 10 eggs each time they breed, and their young are blind and naked on hatching.



ADULT INDIAN ROLLER

*Coracias benghalensis***Indian Roller**

<b>LENGTH</b>	32cm (12½in)
<b>WEIGHT</b>	150–175g (5–6oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open farmland, wooded groves, roadsides, villages, parks, and other open areas

A stocky bird with a brown back, the Indian Roller is particularly spectacular in flight; its azure stripe across the wings being visible from a distance. Its crown, inner wing, belly, and outer tail are turquoise and the flight feathers are mostly dark blue. The throat is streaked white. It feeds on insects, rodents, and reptiles.



ADULT ORIENTAL DOLLARBIRD

*Eurystomus orientalis***Oriental Dollarbird**

**LENGTH**  
30cm (12in)

**WEIGHT**  
125–150g (4–5oz)

**MIGRATION**  
Partial migrant

**HABITAT** Various types of woodland, savanna, parks, wasteland, and farmland with scattered trees

A swift flier and aerially dexterous, the Oriental Dollarbird, also known as the Red-billed or Eastern Broad-billed Roller, hunts after insects or carries out spectacular territorial and display flights. It gets its name from the large, coin-like white mark on each underwing, which is conspicuous in flight. It is blue-green in colour, with a black cap.

*Geobius squamiger***Scaly Ground Roller**

<b>LENGTH</b>	28cm (11in)
<b>WEIGHT</b>	150g (5oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Dark, humid rainforest up to mid-altitudes, sometimes in secondary growth

**RED LIST CATEGORY** Vulnerable

The Scaly Ground Roller is the second largest rainforest member of its family. It is endemic to Madagascar. A thickset, terrestrial bird, most of its plumage is covered by dark scaling and its wings are short and rounded. Rummaging through dense leaf litter, it feeds on invertebrates such as earthworms.



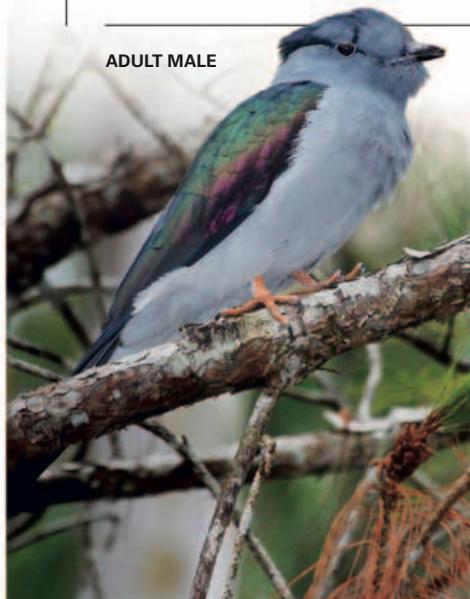
ADULT SCALY GROUND ROLLER

*Leptosomus discolor***Cuckoo-roller**

<b>LENGTH</b>	45cm (17½in)
<b>WEIGHT</b>	250g (9oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Variety of forested and woodland habitats, sometimes open country

The male Cuckoo-roller has a flamboyant velvety purple and grey plumage, with a shiny dark green back, wings, and tail. The female and juvenile are mostly brown, marked with darker streaks. The plaintive call of the Cuckoo-roller is frequently heard as it circles and glides over the forests of Madagascar.



ADULT MALE

*Tanysiptera galatea***Galatea Paradise Kingfisher**

<b>LENGTH</b>	38cm (15in)
<b>WEIGHT</b>	50g (1¾oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Primary lowland rainforest, narrow strips of forest in savanna, all in lowlands

Also known as Common or Rossel Island Racquet-tail, the Galatea Paradise Kingfisher is a spectacular bird. It is dark blue above, with a shiny blue crown and a red bill. The male has white central tail feathers that extend up to 20cm (8in) longer than the rest of the tail. The call of this species – four evenly pitched, long, mournful whistles that accelerate into a trill – is very different from other kingfishers. It is mainly a “wait and see” predator. It feeds by concealing itself in the forest before pouncing on terrestrial invertebrates.

**EXTENDED FAMILIES**

Most kookaburra species tend to live in extended family units. A Laughing Kookaburra offspring stays around its territory, helping its parents incubate, hunt, brood, feed, and raise the next generation of offspring.

<b>LENGTH</b>	40cm (15½in)
<b>WEIGHT</b>	325–350g (12–13oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Eucalyptus forest and woodlands, often along watercourses; also parks and farmland

Few bird calls are as well known as that of the Laughing Kookaburra. The choruses of this very large kingfisher are normally uttered at dawn and dusk by two or more birds, usually in response to a neighbouring group. The “laugh” comprises a complex sequence of repetitive chuckles, shrieks, and cackles with “ooo” sounds, each lasting around two seconds and rising in intensity to a loud laugh. The result is a cacophony of sound.

The Laughing Kookaburra has a large, heavy, hook-tipped bill and has a distinctive plumage: both the male and female have a dark crown and eye-mask contrasting with the white head and underparts, brown wings mottled in blue, and a rufous uppertail. The male has a blue patch on the rump and a barred tail, while the female has a brown rump patch.

These birds are monogamous and pair for life, defending their territory all year. They are often helped to raise chicks by male offspring from earlier broods, who also defend the nest.

ADULT LAUGHING KOOKABURRA

*Pelargopsis capensis*

## Stork-billed Kingfisher



**LENGTH**  
35cm (14in)

**WEIGHT**  
150–200g (5–7oz)

**MIGRATION**  
Non-migrant

**HABITAT** Lowland watercourses, both within deep forest and in open country such as paddy fields

With the distinction of having the largest bill of any kingfisher, the Stork-billed Kingfisher is a heavy-looking bird. Its large head and bill lend it a top-heavy appearance. Despite its size, however, it can be inconspicuous as it sits quietly in the forest understorey, watching for prey. Its main prey is fish and crustaceans. However, it will also use its bill to advantage in dispatching lizards, rodents, and young birds.

It immobilizes its prey by hitting it against a branch before swallowing. It defends its territory aggressively, chasing away birds as big as storks and eagles.

### ADULT STORK-BILLED KINGFISHER

*Halcyon leucocephala*

## Grey-headed Kingfisher



**LENGTH**  
22cm (8½in)

**WEIGHT**  
40g (1⅞oz)

**MIGRATION**  
Partial migrant

**HABITAT** Woodland and thickets, especially along watercourses, bushy grassland, and parkland

A relatively small kingfisher, the Grey-headed or Chestnut-bellied Kingfisher has a distinctive plumage. Its head and breast are grey, its back is black, and its belly is chestnut. The wings, rump, and tail are bright blue. The male is slightly brighter than the female.

The Grey-headed Kingfisher is primarily insectivorous, preying on grasshoppers, crickets, and locusts in particular. Most prey is taken from the ground, but some insects are caught in flight. Small prey are swallowed whole, while larger insects may be smashed against a perch. Pairs display by singing from a treetop and flicking open their vivid blue wings. They also circle high above the ground, calling constantly, before diving back to a tree.

The timing and extent of the species' migratory movements vary across its African range. Only birds in Cape Verde, the East African coast, and perhaps in equatorial Africa are resident, while those at mid-latitudes and some southern areas undertake a complex three-stage migration.

### ADULT DISPLAYING ITS WINGS



### ADULT RUDDY KINGFISHER



**LENGTH**  
25cm (10in)

**WEIGHT**  
80g (2¾oz)

**MIGRATION**  
Partial migrant

**HABITAT** Evergreen forest and temperate woodland around streams; also in mangroves in the south

This shy, medium-sized kingfisher has a distinctive plumage. It has a large bright red bill, a pale rufous head and underparts, violet-tinged wings and mantle, and a contrasting azure rump. Its legs are red. The male and female are similar in plumage, although the male may be brighter.

Its prey depends on its habitat. In forests away from water, it will catch beetles, grasshoppers, cicadas, and small lizards. In aquatic habitats, it feeds on mayflies, fish, frogs, and crustaceans. The Ruddy Kingfisher is resident in the tropical south of its range, but migratory in the temperate north.

*Todiramphus chloris*

## Collared Kingfisher



**LENGTH**  
24cm (9½in)

**WEIGHT**  
55–80g (2–2½oz)

**MIGRATION**  
Partial migrant

**HABITAT** Mangroves and other coastal vegetation, sometimes penetrating inland to open areas

A common bird in its large range of southeast Asia to Australia, the Collared Kingfisher is also known as the White-collared, Sordid, or Black-masked Kingfisher. The plumage varies across the 49 races of the species, with differences in the blueness or greenness of the upperparts, the extent of the pale spot above the bill, and the whiteness of the underparts.



### ADULT COLLARED KINGFISHER

*Todiramphus sanctus*

## Sacred Kingfisher



**LENGTH**  
22cm (8½in)

**WEIGHT**  
45–65g (1½–2¾oz)

**MIGRATION**  
Partial migrant

**HABITAT** Eucalyptus and open woodland, scrub, forest edges, farmland, and coastal habitats

The Sacred, Wood, Tree, or Green Kingfisher has a prominent black eye mask and a green back, wings, and tail, with pale underparts. Its diet includes insects, worms, small fish, lizards, birds, and mice, which it spots by perching on a vantage point and scouring the area below for movement.



*Syma torotoro*

## Yellow-billed Kingfisher



**LENGTH**  
20cm (8in)

**WEIGHT**  
40g (1 $\frac{7}{16}$ oz)

**MIGRATION**  
Non-migrant

**HABITAT** Primary and secondary rainforest, monsoon, and mangrove forest, and mature plantations

The Yellow-billed, Lowland, or Saw-billed Kingfisher is found in the forests of New Guinea. This small kingfisher often raises its crown feathers, creating an alarmed appearance. It has a strong orange-yellow bill, white throat, rufous head and underparts, greenish blue upperparts, and a dark blue tail.

The juvenile has a dark grey bill.

The species feeds primarily on insects, but will also take worms, small lizards, snakes, and reptile eggs. It perches in the canopy, higher than many kingfishers, swaying from side to side as it searches for prey. When it spots a movement, it swoops and grabs its prey. Its call is a whistling trill.

ADULT YELLOW-BILLED KINGFISHER

*Ispidina picta*

## African Pygmy Kingfisher



**LENGTH**  
12cm (4 $\frac{1}{2}$ in)

**WEIGHT**  
11–14g (3 $\frac{1}{8}$ –1 $\frac{1}{2}$ oz)

**MIGRATION**  
Migrant

**HABITAT** Dense forest, woodland, and grassland

ADULT AFRICAN PYGMY KINGFISHER



One of the smallest of all kingfishers, the African Pygmy or Miniature Kingfisher is predominantly blue and rufous in its plumage and has an orange bill. The juvenile has a black bill. This kingfisher inhabits dense forest, where it sits quietly on a perch 1m (3 $\frac{1}{4}$ ft) above the ground, flicking its tail or bobbing its head as it searches for prey. It mostly takes insects, but will also eat small lizards and frogs. Unusually among kingfishers, it will follow and prey on ant swarms.

*Alcedo atthis*

## Common Kingfisher



**LENGTH**  
16cm (6 $\frac{1}{2}$ in)

**WEIGHT**  
25–35g (7 $\frac{1}{8}$ –1 $\frac{1}{4}$ oz)

**MIGRATION**  
Partial migrant

**HABITAT** Still or slow-flowing water, including streams, small rivers, canals, small lakes, and ponds

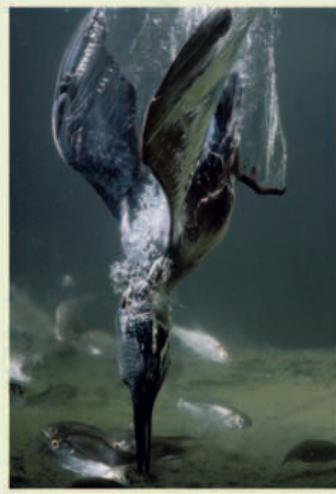
In most of its range, the Common, River, or Eurasian Kingfisher is the only small blue kingfisher present. It is thus one of the most familiar of the world's kingfishers. It has a bright orange cheek patch, a white throat, and a white patch on the neck sides. Its crown and wings are greenish blue, the back and tail bright cobalt blue, and the underparts bright orange. The male has a black bill. Despite these bright colours, this bird can be difficult to spot as it sits motionless on a shady waterside branch.

From its perch 1–2m (3 $\frac{1}{4}$ –6 $\frac{1}{2}$ ft) above the water, the Common Kingfisher will spot a fish and dive steeply into the water, catching its prey to a depth of 1m (3 $\frac{1}{4}$ ft). Where no suitable waterside vantage point is available, it will hover before diving. Its prey is mainly fish up to about 12cm (4 $\frac{1}{2}$ in) long, but the Common Kingfisher will also take shrimps, aquatic insects, amphibians, and butterflies. Adults carry fish, with the head facing outwards, in their bills, so that the meal can easily be passed to, and swallowed by, hungry chicks. Chicks are fed every 45 minutes at first, which reduces to every 15 minutes until they are 18 days old. The nest is in a tunnel chamber in a sandy bank, with chicks sitting on a bed of fish-bones.

ADULT MALE

### DIVE-FEEDING

On spotting a fish underwater, the Common Kingfisher dives vertically, streamlining its body by drawing its wings back just before it fully submerges. Underwater, its eyes are covered with protective membranes. After catching its prey, it rises vertically back to its perch.





ADULT LITTLE KINGFISHER

*Alcedo pusilla*

## Little Kingfisher



**LENGTH**  
11–13cm (4½–5in)

**WEIGHT**  
10–15g (⅓–⅔oz)

**MIGRATION**  
Non-migrant

**HABITAT** Wooded channels and coastal mangroves; occasionally gardens

## FOREST AND WATER

A bird of lowland rainforest streams, the Little Kingfisher inhabits shaded areas with overhanging vegetation. It is also found near lakes and estuaries and shows a preference for coastal mangroves. As befits its size, the Little Kingfisher feeds on tiny fish, insect larvae, small crustaceans, and shrimps. It sits on a low perch, such as a branch overlooking a pool, lake, or stream, and often bobs its head and wings while watching for prey. Once it spots its prey, it plunges into the water, catches its food, and returns to its perch.



generally differing only in their shades of blue coloration and the presence (or lack) of a complete blue band on the breast.

Breeding is throughout the wet season, particularly January. The Little Kingfisher excavates its own nest holes, either in streamside banks, rotten wood, or in termite nests, and lays around 3–5 eggs. Food is brought to the nest by both adults, as frequently as every five minutes, to meet the needs of the demanding chicks, which give buzzing calls. Some of the races have very small ranges, sometimes being restricted to just one island. Although the Little Kingfisher is usually common, it is threatened in some places due to the destruction of its habitat by the clearance of mangroves.

*Chloroceryle americana*

## Green Kingfisher



**LENGTH**  
20cm (8in)

**WEIGHT**  
30–40g (1⅕–1⅗oz)

**MIGRATION**  
Non-migrant

**HABITAT** Wooded streams and rivers, but also lakes, marshes, mangroves, and coasts

### MALE GREEN KINGFISHER



The male Green Kingfisher has white underparts, a broad chestnut breast band, and green spots on the flanks. The female has buff-white underparts with two green chest bands, which link to the green spots along the sides of the belly. Some subspecies show more white on the wings. Often spotted on a bare branch or other open perch, the Green Kingfisher is noticeable as it bobs its head or flicks its tail. It flies low and straight just above the water surface and then dives to catch its prey, mostly small fish. It also eats aquatic insects.

These kingfishers are solitary, rarely seen in pairs or groups. However, their perches, where they spend long periods of time looking out for prey, are often close together. The species utters a distinctive "choot" or "chew" call. It also has an alarm call, which is a soft, ticking rattle. It nests near water in tunnels, which it excavates itself, and 3 or 4 eggs are laid. It feeds its young on small fish and insects.

*Megaceryle torquata*

## Ringed Kingfisher



**LENGTH**  
40cm (15½in)

**WEIGHT**  
250–325g (9–12oz)

**MIGRATION**  
Non-migrant

**HABITAT** Rivers, streams and lakes, usually in open areas

to see, often perching on powerlines and other manmade structures. It is an extremely patient hunter, often waiting for hours on its perch for a fish. It dives down to capture its food, returning to its perch before swallowing its prey head-first. Its large bill enables it to devour crabs and lizards, as well as fish, and it sometimes hunts far from water.



MALE RINGED KINGFISHER

*Megaceryle alcyon*

## Belted Kingfisher



<b>LENGTH</b>	28–33cm (11–13in)
<b>WEIGHT</b>	125–150g (4–5oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Stretches of clear water, from streams to garden ponds and tidal creeks; lowlands to highlands

The most widespread of North America's kingfishers, the Belted Kingfisher is a noisy and conspicuous bird, which is remarkably resistant to habitat change. It is even tolerant of some pesticides and other pollutants, and in recent years the population has expanded due to the creation of sand and gravel pits. While the female has reddish underparts, the male is largely white below, with a grey-blue band across the breast.

This bird eats a wide variety of fish, but also consumes frogs, salamanders, insects, crustaceans, and even young birds and small mammals. To catch fish, it dives into the water from a perch or by hovering above it, and will sometimes follow egrets, catching small prey disturbed by them. This species nests in holes in banks, sometimes in mudslides.

## FEMALE BELTED KINGFISHER

*Ceryle rudis*

## Pied Kingfisher



<b>LENGTH</b>	25cm (10in)
<b>WEIGHT</b>	70–100g (2½–3½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** From lakes, rivers, and estuaries to mangroves, ditches, marshes, and reservoirs

With striking black-and-white plumage, the Pied Kingfisher is probably one of the most numerous of its family, its raucous calls drawing attention in wetlands throughout its range. The female has only one black band on the breast, whereas the male has two. Fish are its main prey, but this adaptable bird also takes frogs, tadpoles, crabs, and molluscs. The nests of this species are sometimes grouped in small colonies and "helpers" may tend the young, especially if food is scarce.

## ADULT PIED KINGFISHER



## HOVERING FOR PREY



The Pied Kingfisher has mastered the art of hovering in one spot above the water for long periods of time, even when it is windy, while it looks out for prey. It does not need to return to its perch and can exploit additional food resources, including fish species only found far from shore, which are unavailable to other kingfishers.

*Todus multicolor*

## Cuban Tody

<b>LENGTH</b>	10cm (4in)
<b>WEIGHT</b>	5–7g (½–¼oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** All types of woodland, wet and dry, deciduous and evergreen, and orchards



## ADULT CUBAN TODY

The Cuban Tody has the most striking pattern in its genus, characterized by its bright blue lower cheeks and pink flanks. Its food mostly consists of insects, often taken by flycatching in mid-air,

*Todus todus*

## Jamaican Tody

<b>LENGTH</b>	11cm (4½in)
<b>WEIGHT</b>	7g (¼oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** All forest types, except plantations and the highest areas of the island



Found only in Jamaica, the Jamaican Tody is a small and colourful bird, predominantly green above, with a red throat and yellow underparts, with some pink on the sides.

It has a large head and a long, flat bill. It perches on small

*Momotus momota***Blue-crowned Motmot**

**LENGTH**  
39cm (15½in)

**WEIGHT**  
125g (4oz)

**MIGRATION**  
Non-migrant

**HABITAT** Humid rainforest and forest edges; some dry plantations

Often seen perching quietly and motionless in the shady forest, usually in the lower or middle parts of trees, the Blue-crowned Motmot will sometimes announce its presence with a soft "hoop-hoop" call and

**ADULT BLUE-CROWNED MOTMOT**

**FEEDING HABITS**

Looking out for prey from a perch, the Blue-crowned Motmot glides down to the ground to take earthworms, spiders, insects, and even small lizards and snakes. It also takes insects from among leaves. Some motmots will even come to bird-feeders for fruit.



may slowly swing its tail from side-to-side. In common with most other motmots, its two long central tail feathers have a bare shaft section that is featherless, leaving a paddle-shaped vane at the tip of each feather. Its plumage is green and it has a blue cap and a black eye-stripe.

Its nest is inside a long burrow up to 4m (13ft) long, excavated in the side of a bank, or hollow, with the entrance well hidden. It excavates its nest during the rainy season (August–September) when the soil is soft. By the time nesting takes place in March, the tunnel entrance does not look new and is less likely to be noticed by predators.

*Baryphthengus ruficapillus***Rufous-capped Motmot**

**LENGTH**  
44cm (17½in)

**WEIGHT**  
150g (5oz)

**MIGRATION**  
Non-migrant

**HABITAT** Humid and wet tropical rainforest, as well as semi-open areas with regenerating forest

One of the largest of the motmots, the Rufous-capped Motmot is easily distinguished from other types by its bright rufous crown, black face mask, and lack of "paddles" at the end of its tail. Its soft, hooting "hoorooro" call is quite distinctive. It feeds on the ground and its bill has a coarse serrated edge in the centre of the upper mandible, which enables it to grasp beetles and fruit easily.



**ADULT RUFOUS-CAPPED MOTMOT**

As a fruit-eater, it helps plants to disperse their seeds. In common with all motmots, it has each middle toe fused to the adjacent outer one.

*Eumomota superciliosa***Turquoise-browed Motmot**

**LENGTH**  
34cm (13½in)

**WEIGHT**  
65g (2³/₈oz)

**MIGRATION**  
Non-migrant

**HABITAT** Forest edges and scrubland

Mostly green in colour, with a rufous back and underparts, this motmot has tail feathers that look like pendulums as the adult swings its tail from side to side. The juvenile has complete central tail feathers, but loses part of the feathering where the vane is more brittle. Confined to Central America, the Turquoise-browed Motmot is the national bird of both Nicaragua and El Salvador. It is more easily seen than most motmots because of its habit of perching on branches and fences.

**ADULT TURQUOISE-BROWED MOTMOT**

Named for its red throat feathers, which resemble a beard when they are puffed out, the Red-bearded Bee-eater is mainly green in colour. Its bill is the largest and most curved of all the bee-eaters. Unlike most bee-eaters, it is not a colonial breeder. Its nest burrows are about 1.2m (4ft) long and while many may be excavated, only one is actually used. It hunts for food alone or with its mate, chasing after insects from a concealed perch. It often sits motionless, but gives its descending "ka-ka-ka-ka" call.

*Nyctyornis amictus***Red-bearded Bee-eater**

**LENGTH**  
29cm (11½in)

**WEIGHT**  
80g (2⁷/₈oz)

**MIGRATION**  
Non-migrant

**HABITAT** Lowland evergreen forest near streams, swamps, or lagoons

*Merops hirundineus*

## Swallow-tailed Bee-eater



**LENGTH**  
21cm (8½in)

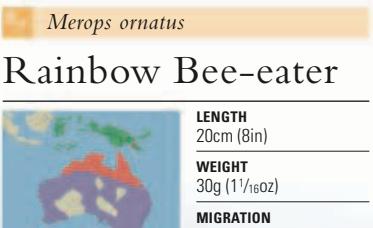
**WEIGHT**  
20g (1⅛oz)

**MIGRATION**  
Partial migrant

**HABITAT** Mature woodland with grassy clearings, mainly in lowland areas

Recognizable by its deeply forked tail, the colourful Swallow-tailed Bee-eater is mainly green in colour with a black eye-stripe, a yellow throat, and blue throat-band. It moves from place to place in search of insect prey, largely honeybees, but also beetles, butterflies, and dragonflies. It hawks for insects from a high treetop or telegraph wire. A sociable species, this bird breeds in pairs or small groups and forms small family flocks of 8–10 birds.

### ADULT SWALLOW-TAILED BEE-EATER

*Merops ornatus*

## Rainbow Bee-eater



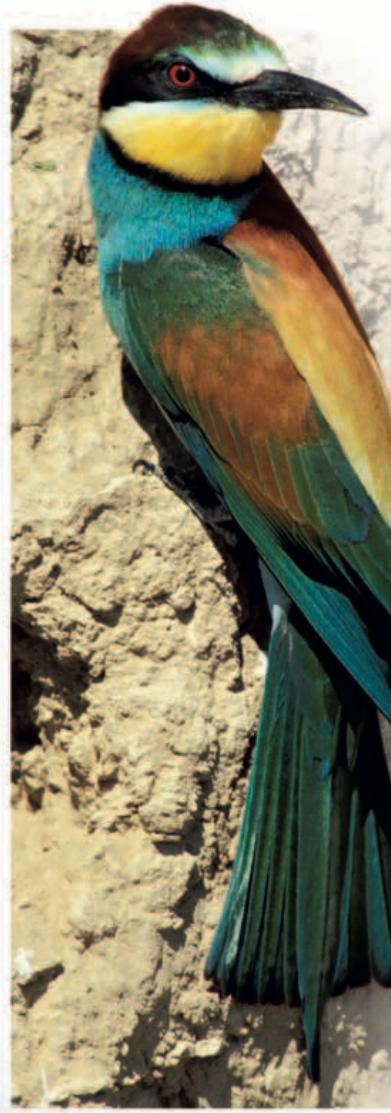
**LENGTH**  
20cm (8in)

**WEIGHT**  
30g (1⅛oz)

**MIGRATION**  
Partial migrant

**HABITAT** Pastures and lightly wooded open countryside, even city parks

Also known as the Rainbowbird for its vibrant green, blue, violet, and yellow plumage, the Rainbow Bee-eater is the only one found in Australia. In common with other bee-eaters it enjoys basking in the sun with its wings spread, feathers raised, bill open, and head to one side. It digs its nesting burrow with its bill, pushing loose material out by the feet. A pair stays together for life and some pairs have one or more helpers at the nest.

*Merops apiaster*

## European Bee-eater



**LENGTH**  
24cm (9½in)

**WEIGHT**  
45–80g (1½–2½oz)

**MIGRATION**  
Migrant

**HABITAT** River valleys, pastures, and cultivated land with bushes, as well as open wooded areas

This common and widespread species is one of the largest and most colourful of the bee-eaters. Its plumage is green and it has a black eye-stripe, a yellow throat, and a bluish green tail. Like many bee-eaters, its two central tail feathers are elongated.

It is a very sociable species, breeding in colonies, migrating in noisy flocks, and also wintering together. Some pairs have helpers who assist them in raising their young. When a mate returns to its partner, they greet each other by fanning and vibrating their tails, while giving excited calls. The bird usually hunts from a perch, but may hawk, gliding at a considerable height. Honeybees form a major part of its diet and a bee-eater will “de-sting” them before eating by rubbing the tip of the bee’s abdomen against its perch.

### ADULT EUROPEAN BEE-EATER

*Merops nubicoides*

## Southern Carmine Bee-eater



**LENGTH**  
26cm (10in)

**WEIGHT**  
60g (2½oz)

**MIGRATION**  
Migrant

**HABITAT** Bushy and wooded grassland, flood plains, marshes, and lake shores

### ADULT SOUTHERN CARMINE BEE-EATERS

Vivid red (carmine) in colour, with a greenish blue crown and a black stripe around the eyes, the Southern Carmine Bee-eater has a black bill and tail streamers that can reach 12cm (4½in) in length. While its diet includes honeybees, this species also feeds on grasshoppers and locusts. It perches on the backs of animals and waits for them to flush out larger insects. Cattle, antelopes, elephants, ostriches, bustards, and secretary birds are some of its favourite perches. This species also feeds high in the air, sometimes up to 100m (325ft), staying aloft for as long as 10 minutes. It also picks up grit and shells from the ground.

A very sociable species, this bird breeds in large colonies numbering hundreds, even thousands, of nests.



*Upupa epops*

## Eurasian Hoopoe



LENGTH	26–32cm (10–12½in)
WEIGHT	50–90g (1¾–3¼oz)
MIGRATION	Migrant

**HABITAT** Open country and parkland; even treeless steppes, provided there are walls in which to nest

When it takes flight, the Eurasian Hoopoe reveals its the splendid black and white bars on its wings. Its bill is slim and slightly curved and it has a handsome black-tipped crest that is briefly raised into a fan-shape when it lands, but is otherwise kept closed. Its plumage is pink-beige in colour, its rump is white, and its black tail has a broad white band. The juvenile is duller and has off-white wing-bars.

The Eurasian Hoopoe spends most of its time on the ground, foraging in short grass and open lawns. It uses its long bill to probe for invertebrates and small vertebrates, such as insects, worms, small reptiles, rodents, and sometimes even carrion. It nests in a hole in a tree or



ADULT EURASIAN HOOPOE

## NESTING

The Eurasian Hoopoe can produce up to three broods in a year. Nests are usually placed in tree-holes, but cavities in walls, buildings, or in rocks are also used. Up to seven eggs are laid and both parents bring food to the nest, although only the female incubates the eggs. Incubation takes about 15 days and the nesting period lasts for about four weeks.



ADULT GREEN WOOD HOOPOE

wall (see panel), and sometimes lines the nest with plants, feathers, and wool. The Eurasian Hoopoe's call is a low, soft, far-carrying "oop, oop, oop", which is often repeated. It calls from a rooftop or tree, with its crest raised, but is usually very quiet.

A familiar bird in its range because of its association with human habitation, the Eurasian Hoopoe is found in pairs or in groups. The species is widespread in Europe, Asia, and Africa. Some populations are resident, but birds in the northern range migrate south to the tropics during winter.

*Tockus leucomelas*

## Southern Yellow-billed Hornbill



LENGTH	40cm (15½in)
WEIGHT	150–250g (5–9oz)
MIGRATION	Non-migrant

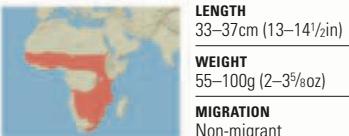
**HABITAT** Open savanna woodland and semi-desert with trees

This relatively small, long-tailed hornbill is one of several African species with a yellow bill, though females differ from males in having a smaller bill with much-reduced casque on top. It has a black crown with black markings on the neck and breast. Its back and wings have white spots and stripes. It has a distinctive area of red skin around its eyes and on both sides of the lower mandible. Juvenile birds have mottled bills. The Southern Yellow-billed Hornbill forages mainly on the ground, sometimes even digging into it. Its large bill is used to catch scorpions and some rodents, but it principally eats arthropods, fruits, seeds, and its diet even extends to predating birds eggs. It nests in natural cavities in trees. The female lays 3 or 4 eggs and incubates them for about 25 days. The Southern Yellow-billed Hornbill is rather common and widespread in the savannas of southern Africa.

ADULT MALE

*Phoeniculus purpureus*

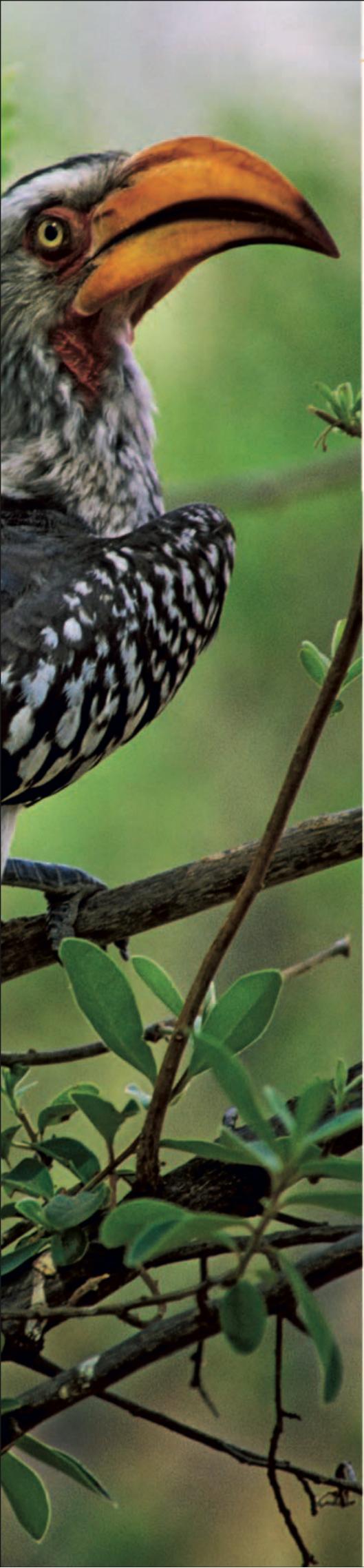
## Green Wood Hoopoe



LENGTH	33–37cm (13–14½in)
WEIGHT	55–100g (2–3½oz)
MIGRATION	Non-migrant

**HABITAT** Savanna, palm groves, open woodland, and gardens with large trees

The largest and most widespread of the eight species of Africa's wood hoopoes, the Green Wood Hoopoe has black plumage with a violet-green iridescence and white spots on the tail. It has a long red bill, which it uses to prise out insects and larvae from crevices in the bark of trees.



ADULT FEMALE

*Tockus erythrorhynchus***Red-billed Hornbill**

<b>LENGTH</b>	40–48cm (15½–19in)
<b>WEIGHT</b>	100–225g (3½–8oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Dry woodland and savanna, usually with little ground vegetation

One of the most common and widespread of Africa's savanna-dwelling hornbills, the Red-billed Hornbill has a striking plumage of grey, white, and black. The male has a black patch on the lower part of the bill. In some areas, in the dry season, the species may congregate in groups of up to several hundred birds. Such flocks may make local movements in search of food, which is mainly taken on the ground.

*Tockus fasciatus***African Pied Hornbill**

<b>LENGTH</b>	48–55cm (19–21½in)
<b>WEIGHT</b>	200–325g (7–12oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest, including secondary growth and even plantations and wooded farmland

The African Pied Hornbill is a glossy black bird with a white belly and white outer tail feathers. It has blue skin around the eye. Its bill is mostly yellow with a red or black tip, depending on the subspecies. The female is smaller and has a black bill tip. Insects and fruit form the bulk of this species' diet, but frogs, mice, lizards, and even bats are taken.

*Rhinopomastus cyanomelas***Common Scimitarbill**

<b>LENGTH</b>	26–30cm (10–12in)
<b>WEIGHT</b>	25–40g (7/8–17/16oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wooded areas, including savanna; rarely found in dense forest

Mainly black in colour, with a blue and violet iridescence, the Common Scimitarbill is a long-tailed bird. It has a narrow, decurved bill, which is longer in the male. The female and juveniles have brown coloration on the head. One subspecies has white in the wings. The Common Scimitarbill is acrobatic, frequently hanging upside-down to find food, and it feeds on insects and other invertebrates. It nests in tree-cavities where 2–4 eggs are laid and the chicks hatch after an incubation period of about 16 days. Most of the food is brought by the male, while the female remains in the nest, tending the young.



ADULT COMMON SCIMITARBILL

*Ocypterus birostris***Indian Grey Hornbill**

<b>LENGTH</b>	50–61cm (19½–24in)
<b>WEIGHT</b>	375g (13oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Deciduous woods, parkland, and thorn forest, cultivated areas, and gardens

As its name suggests, this relatively small-billed hornbill has grey plumage set off by a dark decurved bill with a pale yellow tip, black eye-stripes, and a long tail. The female is typically smaller with a less obvious casque on the bill. The Indian Grey Hornbill mainly lives on small fruit, but it also takes insects in flight, lizards on the ground, and even preys on the nestlings of other birds. In the breeding season, a pair of Grey Hornbills may be assisted by an additional male to help bring food to the nest. The most widespread hornbill in the Indian subcontinent, it is quite common as it is able to adapt to human-modified areas.

ADULT BIRD

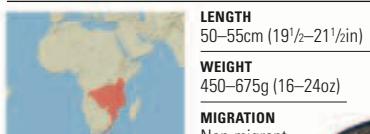




ADULT GREAT HORNBILL

*Bycanistes bucinator*

## Trumpeter Hornbill



**HABITAT** Coastal and riverine forest into deciduous woodland up to 2,200m (7,200ft)

Found in southern Africa, the Trumpeter Hornbill is considered to be an intelligent bird. The red skin around its eyes and the black casque are the bird's noticeable features. Its plumage is mainly black, with white underparts and a white rump. The Trumpeter Hornbill is known to feed on as many as 14 different types of fruit, as well as insects and small animals taken from foliage or sometimes while in flight. It is highly gregarious and



ADULT TRUMPETER HORNBILL

can be found in flocks of two to five individuals, sometimes even up to 50. The nest is protected by both the sexes, and the complete nest cycle takes 88–117 days. The female incubates the 4 or 5 eggs in the clutch. Although thinly spread over a wide range, the species can be locally common in some areas.

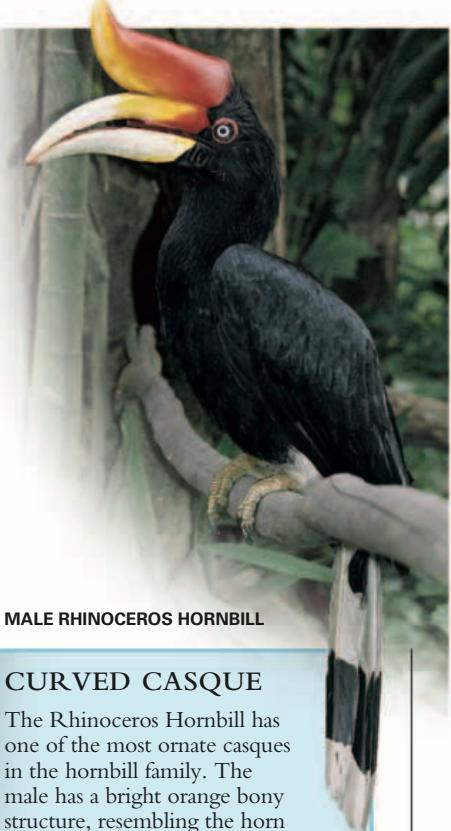
*Buceros rhinoceros*

## Rhinoceros Hornbill

<b>LENGTH</b> 80–90cm (31–35in)
<b>WEIGHT</b> 2–3.5kg (4½–7¾lb)
<b>MIGRATION</b> Non-migrant

**HABITAT** Primary and taller secondary evergreen forest up to 1,400m (4,600ft)

The male Rhinoceros Hornbill is characterized by the large casque on its long bill, which is red at the base. It has a black head, breast, and back and a white abdomen. The female shares the same plumage, but the front of its casque is rounded and less decorative. This bird feeds on fruit, small animals, and birds' eggs. This species is fast declining in numbers.



MALE RHINOCEROS HORNBILL

## CURVED CASQUE

The Rhinoceros Hornbill has one of the most ornate casques in the hornbill family. The male has a bright orange bony structure, resembling the horn of a rhinoceros, with an upcurved point at the front. It displays the casque to the female during courtship, although it is also used as a jousting weapon by competing males.

*Aceros waldeni*

## Walden's Hornbill

<b>LENGTH</b> 60–65cm (23½–26in)
<b>WEIGHT</b> 1.2kg (2½lb)
<b>MIGRATION</b> Non-migrant

**HABITAT** Evergreen forest with closed canopy

**RED LIST CATEGORY** Critically endangered

Like other hornbills, Walden's Hornbill has a distinctive casque on its bill. This bird is mainly black in colour, with a rufous head, neck, and upper breast. It is known to eat fruit such as figs. It often nests in an old woodpecker hole. Walden's Hornbill has a restricted range of just a few islands in the Philippines and was hardly recorded for 80 years following its discovery in the 1870s. It is under considerable pressure by hunters today.

*Bucorvus leadbeateri*

## Southern Ground Hornbill

<b>LENGTH</b> 90–100cm (35–39in)
<b>WEIGHT</b> 2.2–6kg (4½–13lb)
<b>MIGRATION</b> Non-migrant

**HABITAT** Woodland and savanna up to an altitude of 3,000m (10,000ft)

Despite having a casque that is lighter in weight than other hornbills, the Southern Ground Hornbill is one of the largest and heaviest. Both sexes have red skin patches beneath the bill, but the female differs in its smaller skin patch with an area of blue. It usually nests in a cavity; two eggs are laid, but the younger chick usually starves within a week.

## FEEDING ADULTS



# WOODPECKERS AND TOUCANS

ORDER Piciformes

FAMILIES 5

SPECIES 396

WOODPECKERS AND TOUCANS are highly distinctive forest and woodland birds. Woodpeckers are unrivalled at chiselling into tree trunks, while toucans are instantly recognizable by their gigantic, colourful bills. Together with jacamars, puffbirds, honeyguides, and barbets, they form a large order centred in the tropics. Only woodpeckers are widespread in temperate regions, while the order is absent from Madagascar, Australia, and New Zealand. Piciformes feed mainly on insects or on fruit, but honeyguides specialize in beeswax.

## ANATOMY

All piciformes have well-developed bills, and strong feet with two toes pointing forwards and two backwards.

Woodpeckers and barbets use their toes to cling vertically to tree trunks and branches, while woodpeckers also have stiffened tail feathers, to help brace them as they feed. Barbets have short bills, but woodpecker bills are straight and sharp, with powerful neck muscles delivering the force needed to hammer into wood. Woodpecker skulls are extra thick to cushion the brain – vital for birds that peck thousands of times a day. Unusually among birds, many woodpeckers have long, prehensile tongues, with barbed or sticky tips. Using these, they can probe into ants' nests, or tunnels made by wood-boring insects. Puffbirds and jacamars use their sharp-tipped bills to catch flying insects, but a toucan's bill acts like gigantic forceps for collecting fruit.

Aracaris and toucanets have similar bills, but smaller and less conspicuous.

### JACAMAR BILLS

Jacamars have long, finely pointed bills, often held with an upward slant. They use them to catch large flying insects, including dragonflies and butterflies.

### TOUCAN BILLS

Relative to their bodies, toucans have some of the bulkiest bills of all birds. An internal structure similar to honeycomb means that they are lighter than they look, so a toucan can lean forward without tipping over.

### BARBET BILLS

Barbets have large, heavy, bristly bills. They eat insects and plants, and may peck into wood in search of a meal. They also use their bills to dig nest holes.

### BRACE POSITION

Clinging to a tree, this Pileated Woodpecker demonstrates the sturdy "tripod" stance formed by its two feet and its strong, stiff tail.



### FLAP AND FOLD

Like all its relatives, the Black Woodpecker flies by flapping its wings in brief bursts, and then folding them by its sides.

## BEHAVIOUR

Toucans and aracaris often feed and roost in small groups, while Acorn Woodpeckers live in extended families, each with their own shared territory. However, in general, piciform birds live alone or in pairs. Most feed in trees, and move clumsily on the ground, although there are exceptions. Ground Woodpeckers have evolved a terrestrial lifestyle, feeding mainly on termites and ants, using trees only as a refuge. When airborne, piciformes tend to fly in short bursts, flapping their wings for several seconds, then folding them by their sides – which produces a characteristic up-and-down flight. Apart from northern woodpeckers, few species migrate. Honeyguides are remarkable: having

located a bees' nest, they attract ratels or humans to it, by fluttering and calling. Once the nest has been broken open, the honeyguide feeds on the wax.

## BREEDING

Jacamars and puffbirds nest in burrows, but apart from these, most piciform birds nest in cavities in trees. Woodpeckers can hack their way into hard, living wood, but barbets usually choose wood that is dead, and soft, making excavating easier work. Toucans cannot use their bills in this way: instead, they nest in natural tree holes, or holes that woodpeckers have used and abandoned. All piciformes lay white, rounded eggs, and typically both parents share the task of incubation. However, honeyguides are brood parasites, laying their eggs in the nests of other birds. When a honeyguide hatches, it has a sharp hook at the end of its bill, which it uses to kill any other young birds in the nest. As a result, it gets all the food that its foster parents deliver.



### SECOND-HAND HOME

An Emerald Toucanet looks out of its nest hole. Toucans and aracaris use existing holes, creating fierce competition when they are scarce.

*Aulacorhynchus prasinus*

## Emerald Toucanet



LENGTH

30–37cm (12–14½in)

WEIGHT

100–250g (3½–9oz)

MIGRATION

Non-migrant

**HABITAT** Wet montane forest to altitudes over 3,000m (10,000ft)

As its common name suggests, the plumage colour of the Emerald Toucanet is predominantly green. Its lower face is bright blue and the upper mandible of the bill is yellow, with a purple base. The diet mainly consists of fruit, but some insects, small reptiles, and eggs of other bird species are also taken, with small flocks foraging in a trailedd flight through trees. The nest is made in an unlined tree-cavity and both parents incubate the eggs.

*Aulacorhynchus sulcatus*

## Groove-billed Toucanet



LENGTH

33–37cm (13–14½in)

WEIGHT

150–200g (5–7oz)

MIGRATION

Non-migrant

**HABITAT** Tropical montane forest, typically 900–2,000m (3,000–6,500ft)**MALE GROOVE-BILLED TOUCANET**

The three geographical subspecies of the Groove-billed Toucanet have different bill characteristics. The sexes are similar, but the female has a shorter bill and tends to be slightly smaller. Mainly a brilliant green in colour, this bird has a blue patch around the eyes and a white throat. Its diet is varied, although it takes more birds' eggs than the Emerald Toucanet (above). It is even known to form raiding parties for this type of feeding. The breeding behaviour is not well known.

*Pteroglossus castanotis*

## Chestnut-eared Aracari



LENGTH

43–47cm (17–18½in)

WEIGHT

225–300g (8–11oz)

MIGRATION

Non-migrant

**HABITAT** Wet forest around rivers and lakes, occasionally over 1,000m (3,300ft)

The Chestnut-eared Aracari is named for the rich brown facial coloration behind its eye. The bill is ornate, with bands of yellow on black in front of a blue face. The female has a shorter bill.

The diet of the Chestnut-eared Aracari is varied, consisting mainly of fruit, but also includes nestlings and eggs – this species is known to raid nests of other birds. It can be spectacularly acrobatic when feeding on fruit, even hanging upside-down. The range of the species includes much of central South America, particularly in the Amazonian region. This bird is not migratory, though there is some movement within the range during the winter.

**ADULT CHESTNUT-EARED ARACARI***Pteroglossus frantzii*

## Fiery-billed Aracari



LENGTH

45cm (17½in)

WEIGHT

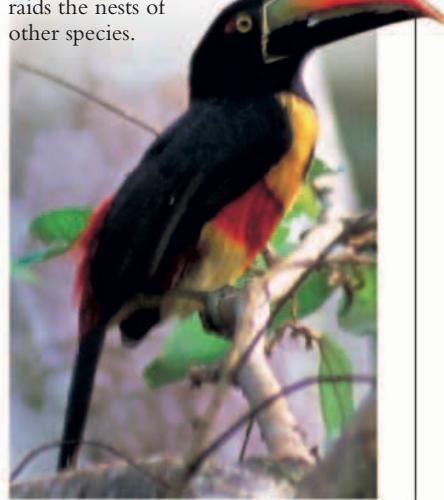
225–275g (8–10oz)

MIGRATION

Non-migrant

**HABITAT** Wet lowland forest and secondary forest, mostly below 1,200m (4,000ft)

The red upper mandible differentiates the Fiery-billed Aracari from the similar Collared Aracari (left). There is some range overlap, although the Fiery-billed Aracari is confined to Costa Rica and Panama. The limited range means the birds require constant monitoring as a contraction in their range has been recorded. Its diet is varied, and it raids the nests of other species.

**ADULT COLLARED ARACARI***Pteroglossus torquatus*

## Collared Aracari



LENGTH

43–48cm (17–19in)

WEIGHT

150–300g (5–11oz)

MIGRATION

Non-migrant

**HABITAT** Wet primary forest up to 1,000m (3,300ft), occasionally, 1,500m (4,900ft)

Similar to the Chestnut-eared Aracari (above), the Collared Aracari differs in that it has a paler upper mandible and a bright red rump. The head is dark and the facial pattern around the eye is orange, with variations in geographical subspecies. The female is darker and has a shorter bill, with its size range relating to differences in the subspecies. The diet is varied and includes fruit, birds' eggs, small reptiles, and insects. It systematically rips open any nest that is encountered, irrespective of whether the nest is occupied or not.

**ADULT FIERY-BILLED ARACARI**

*Selenidera maculirostris*

## Spot-billed Toucanet



LENGTH	33–37cm (13–14½in)
WEIGHT	150–200g (5–7oz)
MIGRATION	Non-migrant

HABITAT Subtropical moist forest and palm groves



MALE SPOT-BILLED TOUCANET

The Spot-billed Toucanet is named for the black markings on its yellow-tipped bill. The sexes are markedly different – the male has a black head divided by a yellow stripe at the back of the head, stretching from the pale green face. The female is smaller, with an orange head and front.

*Andigena laminirostris*

## Plate-billed Mountain-toucan



LENGTH	46–51cm (18–20in)
WEIGHT	275–350g (10–13oz)
MIGRATION	Non-migrant

HABITAT Moist montane forest, mainly at 1,300–2,500m (4,300–8,200ft)

A colourful species, the Plate-billed Mountain-toucan has a blue neck, the front extending to a pale blue and yellow face and a black hood. The bill is predominantly black, but the basal area is chestnut, with a yellow patch on the upper mandible. It has brown wings, a yellow rump, and a green tail tipped in orange. The female has similar plumage, but is generally smaller and has a shorter bill.

Nearly all the dietary requirements of the adults are met by fruit, although a greater proportion of animal prey from insects, small reptiles, and birds' eggs is provided for the young. The range of the species is limited to small areas of Colombia and Ecuador, with the breeding season varying in the two countries. Pairs sometimes rear two broods in a season, but may not breed annually. Both sexes feed the young.

ADULT PLATE-BILLED MOUNTAIN-TOUCAN

*Ramphastos toco*

## Toco Toucan



LENGTH	55–61cm (21½–24in)
WEIGHT	500–850g (18–30oz)
MIGRATION	Non-migrant

HABITAT Riverine and forest edges, orchards, and rarely, in urban areas up to 1,750m (5,750ft)

One of the largest species of toucan, the Toco Toucan has an enormous yellow bill tipped with a black patch, which looks heavy but is actually hollow. The face is pale orange and the lower face and throat are white. The rest of the plumage is black, with a white uppertail and orange vent. The female is similar to the male. The food of the species is varied, from fruit and insects to birds' eggs taken in the canopy or on the ground in small foraging groups.



ADULT TOCO TOUCAN

*Ramphastos dicolorus*

## Green-billed Toucan



LENGTH	42–48cm (16½–19in)
WEIGHT	250–400g (9–14oz)
MIGRATION	Non-migrant

HABITAT Tropical and subtropical montane forests mainly between 1,000–1,500m (3,300–4,900ft)

Named after its pale green bill, the Green-billed Toucan has a bright red front, a yellow to orange upper breast and throat, and red vent. The face is orange and its back, wings, and tail are black. The female is similar, but has a shorter bill. The differences in size between the sexes is a reflection of the size variation in the species across the

ADULT GREEN-BILLED TOUCAN

*Ramphastos sulfuratus*

## Keel-billed Toucan

LENGTH	46–51cm (18–20in)
WEIGHT	275–550g (10–20oz)
MIGRATION	Non-migrant

HABITAT Wet lowland forest, usually below 800m (2,600ft), but up to 1,600m (5,200ft) in some areas



ADULT KEEL-BILLED TOUCAN



**TOCO TOUCAN**

The Toco Toucan uses its spectacular orange bill to reach for food, mainly fruit, on the ends of branches that are too thin to support its weight.

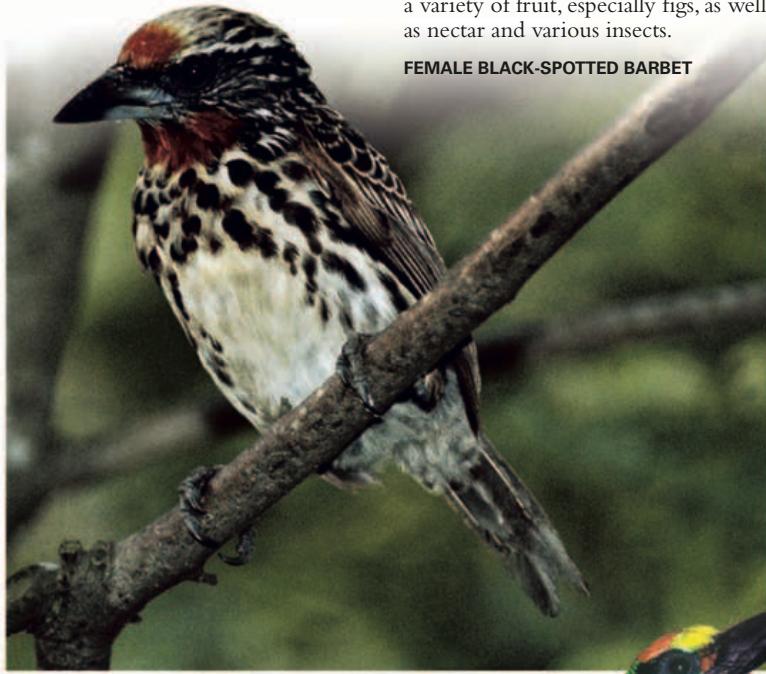
*Capito niger*

## Black-spotted Barbet



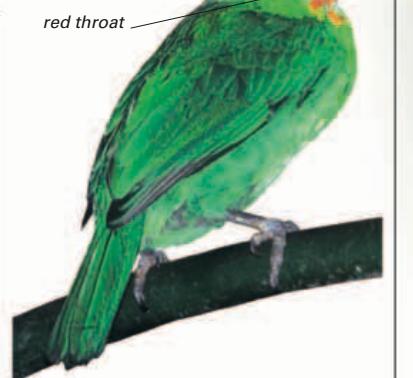
LENGTH	16–19cm (6½–7½in)
WEIGHT	40–70g (1⅞–2½oz)
MIGRATION	Non-migrant

**HABITAT** Forest and tall secondary growth, including gardens and plantations



FEMALE BLACK-SPOTTED BARBET

red throat



MALE RED-THROATED BARBET

*Megalaima mystacophanous*

## Red-throated Barbet



LENGTH	23cm (9in)
WEIGHT	60–95g (2⅓–3⅔oz)
MIGRATION	Non-migrant

**HABITAT** Forest and tall secondary growth, large gardens, and rubber and cacao plantations



ADULT FIRE-TUFTED BARBET

Predominantly green in colour, the Red-throated Barbet has a long, heavy bill and a red crown. The male has a red throat, while the female usually has a blue face, with the red restricted to the crown. This species probably breeds year-round, but little is known about its breeding habits in the wild. Like many lowland forest birds of its native range, it is at risk from deforestation.

The Black-spotted Barbet has a red forehead and throat. The female is more heavily spotted than the male, which lacks noticeable streaking or spotting on the breast and has much darker cheeks and wings, with a pale bar on the wings. Like all South American barbets, the Black-spotted Barbet inhabits treetops where it moves sluggishly, flicking its tail and head periodically. It nests in a hole, excavated high in a tree, and feeds on a variety of fruit, especially figs, as well as nectar and various insects.

*Megalaima haemacephala*

## Coppersmith Barbet



LENGTH	15–17cm (6–6½in)
WEIGHT	30–55g (1⅞–2oz)
MIGRATION	Non-migrant

**HABITAT** Forest, usually on edges, and drier country; also scrub, plantations, gardens, and mangroves

The most widespread of the Asian barbets, the Coppersmith Barbet is small and much less dependent on forest habitats than its relatives. Considerable variations in plumage have led scientists to recognize as many as nine different subspecies. Some of these show a red head marked with black lines, while others show a yellow head marked with black and a contrasting red forehead. All have green upperparts and are pale with

## ADULT (NORTHERN PHILIPPINES SUBSPECIES)

dark streaks below. The Coppersmith Barbet sings persistently, even on moonlit nights. The song is a series of low "tok" or "tonk" notes, although the tempo may vary. During courtship, it puffs out its throat feathers, bobs and turns its head, and flicks its tail. The nesting season is long, and many pairs probably have two broods. Three eggs are normally laid and both sexes incubate them, with the young hatching in about two weeks. Thereafter, both adults take an active part in nesting duties, feeding the young and removing their faecal sacs.

The Coppersmith Barbet mainly feeds on a diverse range of fruit, from figs to mangoes. However, it also takes insects, which it catches in flight, and their larvae. Large groups of these birds may congregate at abundant food sources, such as areas rich in fruit-bearing trees.

 *Pogoniulus chrysoconus*

## Yellow-fronted Tinkerbird



**LENGTH**  
12cm (4½in)

**WEIGHT**  
8–20g (½–1⅓oz)

**MIGRATION**  
Non-migrant

**HABITAT** Dry woodland and scrub, riverine and montane forest, and wooded savanna

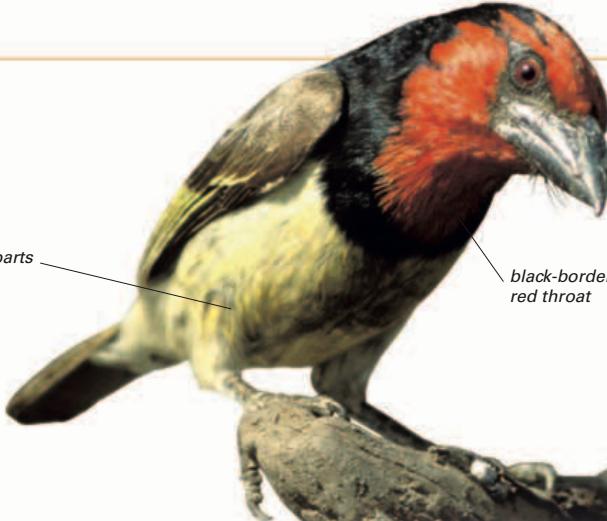


ADULT YELLOW-FRONTED TINKERBIRD

The Yellow-fronted Tinkerbird is distinguished from its close relatives by the yellow forehead patch found in both sexes. The plumage is heavily streaked and spotted black and white. It aggressively defends its feeding areas, driving off other small barbets, although occasionally joining mixed-species flocks. The species feeds mainly on fruit and insects. It nests above head level in a stump or dead branch; the young fledge usually in just over four weeks.

yellow underparts

black-bordered red throat



### ADULT (RED-HEADED FORM)

 *Lybius torquatus*

## Black-collared Barbet



**LENGTH**  
18cm (7in)

**WEIGHT**  
35–50g (1¼–1¾oz)

**MIGRATION**  
Non-migrant

**HABITAT** Most wooded habitats, but avoids dense forest, including farmland and gardens

The Black-collared Barbet has several subspecies and two different forms – the typical red-headed form (shown above) and the yellow-headed variety with a whiter belly. In complete contrast, one subspecies has a dark, pale-spotted head, often with a white back. The Black-collared Barbet gleans and probes for insects on the bark and leaves of trees, and occasionally flycatches from a perch. It is a prolific breeder, with some pairs producing up to four broods in a single nesting season. Its habitat, however, is shrinking.

 *Lybius dubius*

## Bearded Barbet



**LENGTH**  
26cm (10in)

**WEIGHT**  
80–100g (2½–3½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Wooded areas, from sea level to high ground, and garden

Like most African barbets, the Bearded Barbet has pronounced teeth-like grooves in its large yellow bill. Its plumage is principally red and black in colour and the male and the female are similar in overall appearance. The Bearded Barbet lives in groups and is generally common. However, its breeding behaviour and diet are surprisingly little known.



ADULT BEARDED BARBET

 *Trachyphonus erythrocephalus*

## Red-and-yellow Barbet



**LENGTH**  
20–23cm (8–9in)

**WEIGHT**  
40–75g (1⅞–2⅓oz)

**MIGRATION**  
Non-migrant

**HABITAT** Open woodland and wooded savanna, even desert-like terrain, but with trees

One of the most distinctive barbets, the Red-and-yellow Barbet has a striking head pattern and bold white spots on its upperparts and tail. It is also known for its ability to live in close proximity to humans, taking advantage of the feeding opportunities presented by household waste. Its natural diet, however, includes fruit, seeds, insects, lizards, and even small birds and their eggs. The bird mainly forages on the ground, moving in groups that methodically search and probe natural and manmade crevices for food. The Red-and-yellow Barbet is dominant over other species of barbet within its range.

### NESTS IN TERMITE MOUNDS

The Red-and-yellow Barbet builds its nest in an earth bank or termite mound, with the nest chamber reached by a short tunnel slightly less than 1m (3½ft) long. In each group, the primary male mates with one female and also incubates the eggs. The rest of the group act as “helpers”, bringing food and, perhaps, excavating the chamber.

### ADULT RED-AND-YELLOW BARBET



### ADULT (RED-HEADED FORM)

 *Lybius torquatus*

## Black-collared Barbet



**LENGTH**  
18cm (7in)

**WEIGHT**  
35–50g (1¼–1¾oz)

**MIGRATION**  
Non-migrant

**HABITAT** Most wooded habitats, but avoids dense forest, including farmland and gardens



*Indicator indicator*

## Greater Honeyguide



## LENGTH

20cm (8in)

## WEIGHT

50g (1³/₄oz)

## MIGRATION

Non-migrant

**HABITAT** Open woodland, wooded edges, bushland, plantations, gardens, and riparian woodland

As indicated by its name, the Greater Honeyguide can lead humans to bee nests with its piping call. Once it has broken open the nest and eaten its fill, the honeyguide moves in to feed on beeswax, honeybee grubs, and eggs. However, such behaviour is erratic and in some places, does not occur at all – some adult birds never “guide” this way.

The male is dark grey-brown, with white underparts and streaked wings, a black throat, and a yellow shoulder patch, while the female is duller and lacks the black throat.



MALE GREATER HONEYGUIDE

*Picumnus minutissimus*

## Guianan Piculet



## LENGTH

10cm (4in)

## WEIGHT

13.5g (⁷/₁₆oz)

## MIGRATION

Non-migrant

**HABITAT** Wide variety of habitats, including secondary forest, plantations, mangroves, riparian vegetation

This is the world's smallest woodpecker. It inhabits coastal lowlands from Guyana east to French Guiana. Its has lightly barred olive-brown upperparts, scaly underparts, and a finely barred throat. The male has a red crown patch. It forages like a tit, hanging from small branches, searching for ants and small beetles.

*Jynx torquilla*

## Eurasian Wryneck



## LENGTH

16cm (6¹/₂in)

## WEIGHT

35g (1¹/₄oz)

## MIGRATION

Migrant

**HABITAT** Open forest, clearings, woodland, wooded pasture; migrants in open, treeless habitats

A small, long-tailed woodpecker with a dull plumage marked by bars, mottling, and dark stripes, the Eurasian Wryneck can be identified by the prominent dark stripe around its eye. It gets its common name from its ability to turn its head by almost 180 degrees. When disturbed at the nest, pairs of Eurasian Wrynecks use this snake-like head movement as a threat display along with hissing sounds.

Unlike most woodpeckers, the Eurasian Wryneck does not climb using its tail as a support, but perches perpendicular to horizontal branches.

## ADULT EURASIAN WRYNECK

With its short, narrow, pointed bill, the Eurasian Wryneck chisels soil or decaying wood rather than digs for prey. Its food is mainly ants, especially larvae and pupae, and it will forage on the ground, often opening up anthills with its bill. Other prey ranges from aphids and beetles to occasional molluscs and tadpoles.

Although not globally threatened, the species has declined rapidly in central and western Europe. This may be due to climate changes such as wetter summers.

*Picumnus temminckii*

## Ochre-collared Piculet



## LENGTH

10cm (4in)

## WEIGHT

12g (⁷/₁₆oz)

## MIGRATION

Non-migrant

**HABITAT** Humid forest, especially forest edges, scrub, and bamboo

A tiny woodpecker of the Atlantic forests of southeast South America, the Ochre-collared Piculet is relatively poorly known. Aptly named for its ochre neck collar, which differentiates it from the similar White-barred Piculet (*P. cirratus*), it has a black crown that is spotted white at the back. In the male, the forecrown is red. Both sexes have olive-brown upperparts, white underparts barred in black, and a black tail with white outer feathers. Foraging in the lower levels on thin branches and stalks, the species feeds on ants and insect larvae. The sound of light tapping, as it seeks to excavate a small hole in a branch, is often the first clue to this diminutive woodpecker's presence.



MALE OCHRE-COLLARED PICULET

*Sasia abnormis*

## Rufous Piculet



## LENGTH

9cm (3¹/₂in)

## WEIGHT

9g (¹¹/₃₂oz)

## MIGRATION

Non-migrant

**HABITAT** Secondary forest with decaying trees, swamp forest, bamboo stands, and low vegetation

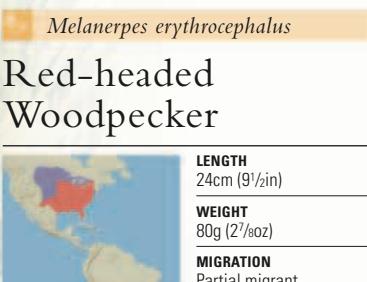
A woodpecker with colourful plumage, the Rufous Piculet has an olive-green rear crown and a rufous-orange head. The upperparts are olive-green and the underparts are rufous-orange. The male is distinguishable by its yellow forehead.

The reason why the Latin name of this species suggests that the Rufous Piculet is abnormal is because it has only three toes (most other woodpeckers have four). The purpose of this adaptation is unclear, but what is certain is that it does not hinder its rapid movement on trees.

As with other piculets, this species can be detected by its incessant tapping as it excavates small holes in trees. It inserts its long tongue in the holes to extract ants, larvae, spiders, and small beetles.

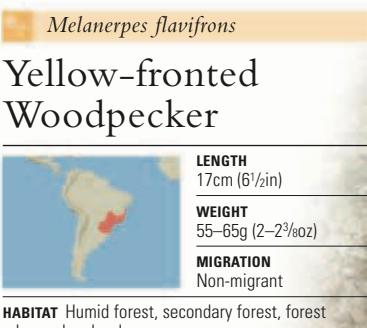


ADULT RED-HEADED WOODPECKER



HABITAT Lowland forest with dead trees, open areas and understorey; wooded savanna and swamps

As its name suggests, the Red-headed Woodpecker has an entirely red head and throat. The back, forewings, and tail are black, contrasting with the white rear wings, underparts, and rump. This species is one of the most omnivorous woodpeckers, taking a very wide range of prey. It flycatches for insects, snatches worms and lizards from the ground, and also feeds on nuts, fruit, and seeds. Unlike many other woodpeckers, it does not bore holes in trees for food.



Yellow-fronted Woodpecker



HABITAT Humid forest, secondary forest, forest edge and orchards

This small, brightly coloured woodpecker is a noisy denizen of the Atlantic forests of eastern South America. The Yellow-fronted Woodpecker has a yellow forehead, eye-ring, and throat, contrasting with a blue-black eye mask and upperparts. The breast is olive, the flanks barred black, and the belly is red. The male's crown is red and the female's is blue-black: a classic difference for sexually dimorphic woodpeckers. Like other members of its genus, the Yellow-fronted Woodpecker sometimes stores its food (fruit, berries, seeds, and insects).

MALE YELLOW-FRONTED WOODPECKER

*Melanerpes formicivorus*

## Acorn Woodpecker

<b>LENGTH</b>	23cm (9in)
<b>WEIGHT</b>	80g (2½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Oak and pine woodland, Douglas fir and redwood stands; in open areas on migration

Some woodpeckers are so dependent on a particular food source that they store a sufficient amount to see them through the winter. The Acorn Woodpecker provides an excellent example of this practice (see panel, below).

This noisy and gregarious woodpecker has a striking appearance. The white iris contrasts with a broad black eye-stripe, pale yellow forehead and throat, and a red crown. The rest of the plumage is dark blue, black, and white. As its common name suggests, acorns are the primary food source for this woodpecker. However, this species will also eat pine-seeds, insects, and, occasionally, eggs and lizards. It also drinks sap and nectar.

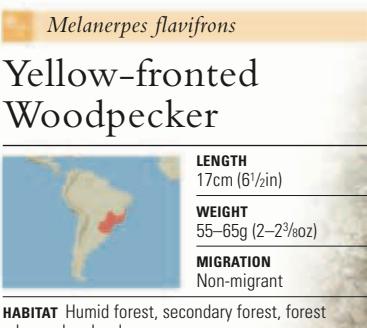


ADULT ACORN WOODPECKER

## STORING FOOD

Acorns form half the winter diet of northern populations of the Acorn Woodpecker.

This species sets up "granaries" of acorns to help it through the winter months. Over the years, birds drill up to 50,000 holes in an old tree. They insert acorns into these and retrieve them when hungry. A granary is excavated, used, and defended by a group of birds, often family members.

*Melanerpes uropygialis*

## Gila Woodpecker

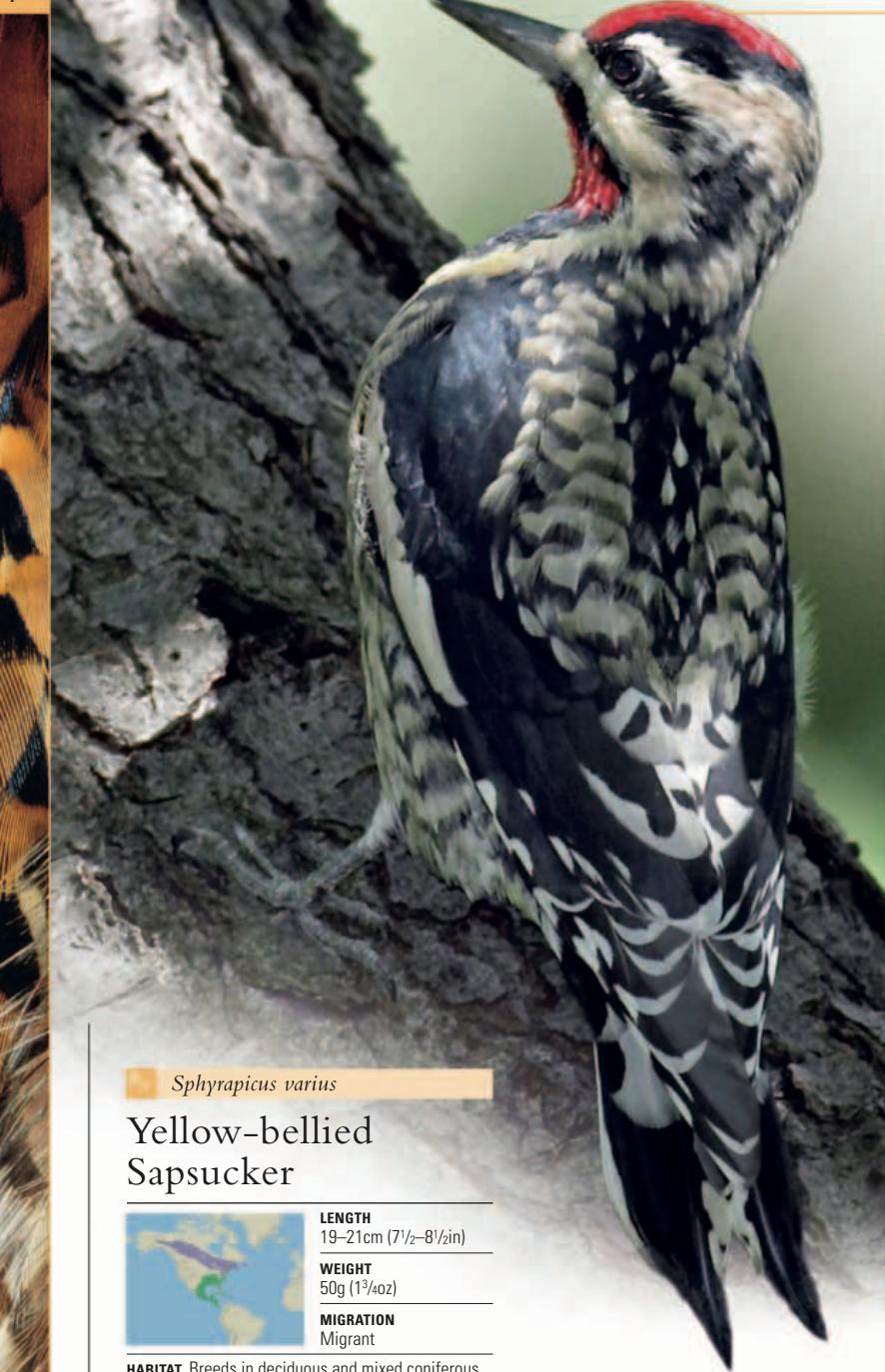
<b>LENGTH</b>	23cm (9in)
<b>WEIGHT</b>	60–70g (2⅓–2⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Arid habitats with scattered trees or cacti, including desert, subtropical forest, and urban areas

The Gila Woodpecker is distinctive in appearance and behaviour. It has a tan head, throat, breast, and belly. The back, wings, rump, and vent are barred black and white, and the male has a neat red cap. Unlike other woodpeckers, the Gila Woodpecker thrives in deserts, with almost no trees. This species usually nests in mesquite or saguaro cacti. It is omnivorous and eats food items ranging from ants to eggs and nestlings, from cactus fruit to household scraps. Accordingly, it forages at all levels – from ground to "canopy" and uses various techniques. Individuals call noisily to one another, with their abrasive, high-pitched calls, advertising their territory.



ADULT ON CACTUS



*Sphyrapicus varius*

## Yellow-bellied Sapsucker



LENGTH	19–21cm (7½–8½in)
WEIGHT	50g (1³/₄oz)
MIGRATION	Migrant

**HABITAT** Breeds in deciduous and mixed coniferous forests; winters in forests and more open areas

As its name suggests, the Yellow-bellied Sapsucker has pale yellow underparts. The patterns on its head, in red, black, and white, are also distinctive. The species can be conspicuous during the early spring, when males drum territorially, occasionally on manmade objects, such as metal street signs and lamp-posts.

This is one of four similar species that nest only in North America, but is the

### MALE YELLOW-BELLIED SAPSUCKER

most migratory of them, breeding in a belt stretching west from Newfoundland to Alaska and south to below the Great Lakes and spending its winters in southern USA, Central America, and the Caribbean. This species feeds on tree sap, extracting it by making two types of holes in trees: deep, round ones that extend into the tree; or shallower, rectangular holes that need to be tended so that the sap flows.

*Campetherina cailliautii*

## Green-backed Woodpecker



LENGTH	16cm (6½in)
WEIGHT	40g (1⁷/₁₆oz)
MIGRATION	Non-migrant

**HABITAT** Wide range of habitats, from savanna to forest

This woodpecker belongs to the same genus as the Nubian Woodpecker (above right). Although the ranges of the two species overlap, there is little scope for confusion as the Green-backed Woodpecker is much smaller and lacks the noticeable cheek stripe of its larger relative, giving it a more plain-faced appearance. The Green-backed Woodpecker also tends to feed high in the canopy, mainly on ants and termites. The species is largely resident, although some short-distance movements have been recorded.



FEMALE NUBIAN WOODPECKER

*Campetherina nubica*

## Nubian Woodpecker



LENGTH	23cm (9in)
WEIGHT	60g (2¹/₈oz)
MIGRATION	Non-migrant

**HABITAT** Dry bushland, grassland, woodland, and savanna

One of nine similar African woodpeckers, which have red caps, olive-green upperparts, and white-speckled underparts, the Nubian Woodpecker is one of the larger members of its genus. It feeds mostly on ants and termites on tree trunks. The most familiar call of the Nubian Woodpecker is a loud, metallic “weee-weee-weee-kweek”, used by pairs to communicate with each other.

*Sphyrapicus ruber*

## Red-breasted Sapsucker

LENGTH	20–22cm (8–8½in)
WEIGHT	60g (2¹/₈oz)
MIGRATION	Partial migrant

**HABITAT** Mixed coniferous and deciduous forests, particularly aspen and ponderosa pine

The least migratory of the four sapsucker species, the Red-breasted Sapsucker is found in a thin coastal belt from Alaska to northern California and western Nevada. The male and female of this medium-sized sapsucker are similar, both with a striking scarlet “helmet”

that extends downwards to the neck and chest and a line of white spots that stretches from the mantle to the rump. The upperparts are black, barred with white. The southern form can be easily identified by its white moustache stripe.

**SOUTHERN FORM**

*Geocolaptes olivaceus*

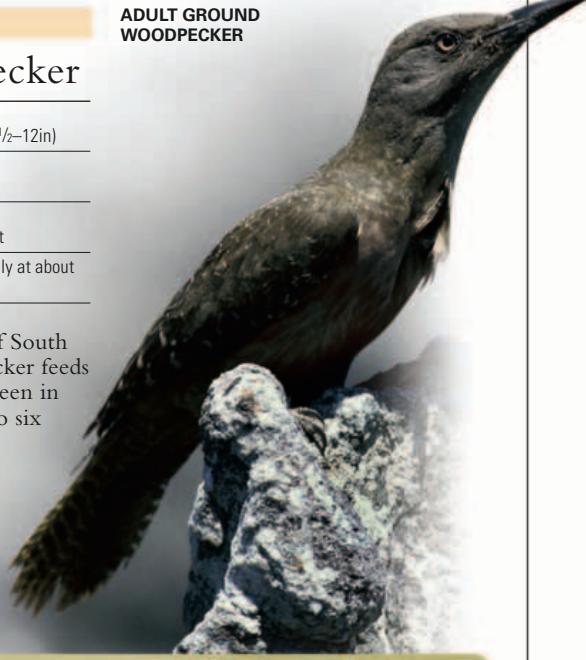
## Ground Woodpecker



LENGTH	22–30cm (8½–12in)
WEIGHT	125g (4oz)
MIGRATION	Non-migrant

**HABITAT** Open rocky upland areas, usually at about 1,200–2,000m (4,000–6,500ft)

Restricted to upland areas of South Africa, the Ground Woodpecker feeds largely on ants. It is usually seen in pairs or small groups of up to six birds. It mainly feeds on the ground, usually moving by hopping, appearing to know the exact location of ant nests within its large territory. When it flies, its red rump is clearly visible.



**GREAT SITE**

### WAKKERSTROOM



Once a sleepy rural backwater, the Wakkerstroom area has become one of South Africa's top bird-watching destinations. One of the best places to observe the Ground Woodpecker, it has many other rare species, such as Rudd's and Botha's Larks, the Yellow-breasted Pipit, and a range of bustards and cranes.

*Dendropicos fuscescens*

## Cardinal Woodpecker



LENGTH	14–16cm (5½–6½in)
WEIGHT	25g (7/8oz)
MIGRATION	Non-migrant

**HABITAT** Woodland and bushland

Found in much of the continent of Africa, south of the Sahara, this bird is Africa's most widespread species of woodpecker. This species has a brown-green back with white barring and pale underparts that are densely streaked with white and brown flecks. The male has a red cap and the female a dark one. The Cardinal Woodpecker often hangs upside-down when foraging for insects and moths in tree crevices. It sometimes calls to contact its mate or family group. Both sexes often drum softly.



MALE CARDINAL WOODPECKER



ADULT WITH TYPICAL WHITE-BARRED BACK

*Dendropicos kizuki*

## Japanese Pygmy Woodpecker



LENGTH	13–15cm (5–6in)
WEIGHT	19g (1/16oz)
MIGRATION	Non-migrant

**HABITAT** Deciduous and coniferous woodland and forest

Also known as the Japanese Spotted Woodpecker, this species occurs throughout Japan and is the most common woodpecker found in Japan. It is also found in smaller numbers in China and Siberia. A small black and white woodpecker, its most distinctive feature is its dusky face, enlivened by a striking small, white highlight just behind the eye.



ADULT MALE

*Picoides villosus*

## Hairy Woodpecker



LENGTH	16–26cm (6½–10in)
WEIGHT	50–80g (1¾–2½oz)
MIGRATION	Non-migrant

**HABITAT** Wide range of forest types, occasionally parks and gardens

This woodpecker is named for its white nasal tufts, although these are difficult to see in the field. However, they are not unique to the species – for instance, the similar Downy Woodpecker (*P. pubescens*) also has these tufts. The Hairy and Downy Woodpeckers are typical pied woodpeckers, but can be told apart from other similar species by their white backs. Distinguishing the two is more difficult – the Hairy Woodpecker is much larger, with a stronger bill and completely white outer tail feathers. Like other black and white woodpeckers, the male displays a small red patch on the back of the head, which is absent in the female and juveniles. Its call is a high-pitched “keek”, sometimes rolled into a series of notes. Both sexes drum on trees.



ADULT MALE

*Picoides tridactylus*

## Eurasian Three-toed Woodpecker

LENGTH	20–24cm (8–9½in)
WEIGHT	60–70g (2¼–2½oz)
MIGRATION	Partial migrant

**HABITAT** Mature northern coniferous forest

An unmistakable black and white woodpecker, this bird has only three toes – hence its name. The male has a distinct yellow crown and both sexes are boldly striped. As well as feeding on insects and larvae, the Eurasian Three-toed Woodpecker also punctures the bark of trees to get at underlying sap, often leaving a pattern of holes on coniferous tree trunks. Males and females frequently drum during the late winter and early spring.

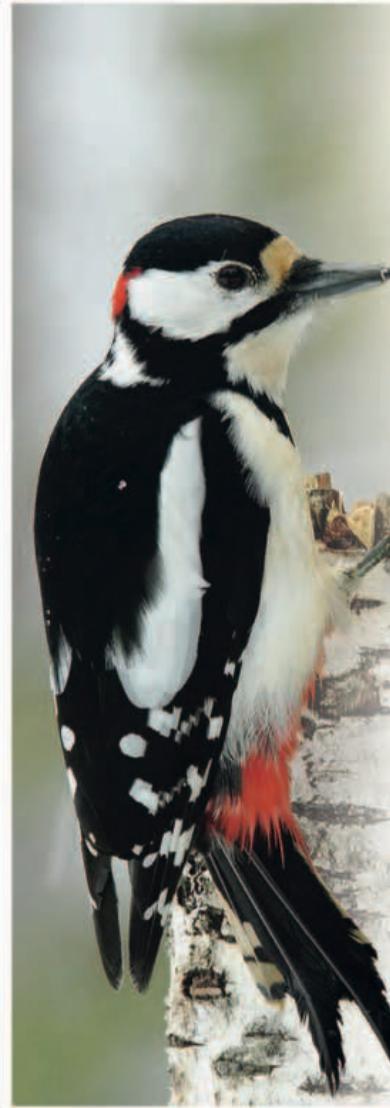
Shy and elusive, this generally northern species is found in coniferous boreal forests in Scandinavia and across northern Russia and Siberia to Japan. It is also found in mountainous areas in central and eastern Europe.

The Eurasian Three-toed Woodpecker also occurs in North

*Dendrocopos major*

## Great Spotted Woodpecker

LENGTH	20–24cm (8–9½in)
WEIGHT	70–80g (2½–2¾oz)
MIGRATION	Partial migrant

**HABITAT** All types of woodland and forest, parks, and gardens

MALE GREAT SPOTTED WOODPECKER



ADULT MALE

America but the American birds are generally smaller, with males displaying less yellow on the head. American birds also apparently feed less on sap (preferring beetle larvae) – probably due to the competition from sapsuckers.

Many populations of the species are sedentary, though some (particularly northern ones) do perform long-distance migrations when conditions dictate.

*Piculus aurulentus*

## Yellow-browed Woodpecker



LENGTH	22cm (8½in)
WEIGHT	75g (2½oz)
MIGRATION	Non-migrant

**HABITAT** Humid montane forest

The Yellow-browed Woodpecker is one of seven closely related South and Central American species belonging to the genus *Piculus*. All are small in size and yellowish green above, barred beneath, and with red head markings that vary in size and number. The Yellow-browed Woodpecker can be distinguished from the others by the two yellow head stripes that give the species

**ADULT MALE**

a masked appearance. It also has a rufous patch on the wing. The male has a bright red forehead and cap that extends to the back of the head. In the female, this red patch is restricted to the back of the head, the front being the same yellowish green as the upperparts.

The species feeds either singly or in pairs, mainly on ants and their larvae. The Yellow-browed Woodpecker is an uncommon, secretive bird that is difficult to observe in its forest habitat.

**ADULT FEMALE***Colaptes auratus*

## Northern Flicker



LENGTH	30–35cm (12–14in)
WEIGHT	125–150g (4–5oz)
MIGRATION	Partial migrant

**HABITAT** Mainly forest edges and other open areas

This large woodpecker has a long, pointed bill, a brown back, wings with dark bars, spotted grey underparts, and a white rump patch. There are two forms of this species, varying mainly in size and head patterns – the Northern Red-shafted Flicker (*C.a.cafer*) and the Northern Yellow-shafted Flicker (*C.a.auratus*), so named for the colour of the feather shafts in the wings. Birds from the southern part of its range are mainly resident, but those from further north migrate south for the winter.

abundant, these woodpeckers will often ignore their usual invertebrate food, switching to a completely vegetarian diet. Despite its large size, the species is very dextrous, easily clinging to thin branches as it strips fruit right down to the stone.

**ADULT MALE***Celeus elegans*

## Chestnut Woodpecker



LENGTH	26–32cm (10–12½in)
WEIGHT	150g (5oz)
MIGRATION	Non-migrant

**HABITAT** Wide variety of forests

As its name suggests, the Chestnut Woodpecker has a beautiful chestnut-coloured plumage with a noticeable brownish yellow crown and crest that contrasts with the rest of the plumage and the bright red cheek patch of the male. It has a striking blue eye-ring, formed by a patch of bare skin as well as a pale ivory-coloured bill.

Although the species lives mainly on ants and termites, it also regularly feeds on fruit. When fruit crops are

*Piculus rubiginosus*

## Golden-olive Woodpecker

LENGTH	18–23cm (7–9in)
WEIGHT	55g (2oz)
MIGRATION	Non-migrant

**HABITAT** Wide range of habitats from humid rainforest to dry deciduous forest

Predominantly olive-green above and barred yellow and black beneath, the Golden-olive Woodpecker has a dark forehead, red nape, and striking white face patch. An adaptable species, it is often found in trees that border coffee plantations and agricultural fields. The Golden-olive Woodpecker has a patchy distribution that ranges from Mexico to Argentina.

*Colaptes campestris*

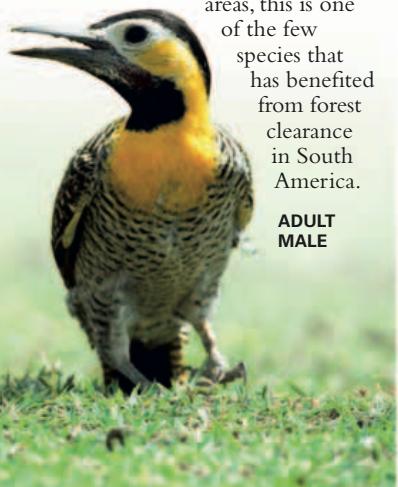
## Campo Flicker



LENGTH	28–31cm (11–12in)
WEIGHT	150g (5oz)
MIGRATION	Non-migrant

**HABITAT** Grassland and farmland

Both male and female Campo Flickers are striking, with distinctive barred plumage that contrasts with their black heads and yellow faces. The Campo Flicker feeds mainly on ants and termites. It is often seen surveying its grassland habitat from a suitable lookout on a tree or fence

**ADULT MALE***Dryocopus lineatus*

## Lineated Woodpecker



LENGTH	30–36cm (12–14in)
WEIGHT	175–200g (6–7oz)
MIGRATION	Non-migrant

**HABITAT** Generally humid open areas such as forest edges

The Lineated Woodpecker is a medium-to-large member of its family, found throughout much of Central and South America. The male is black above except for a bright red crest, crown, and forehead, and a grey patch behind the eye. It also has two separate white stripes: one on the shoulder, and another that curves round from the base of the bill to the neck. Its underparts are off-white in colour, with horizontal black barring. The female is smaller, with a black stripe below the bill and a black forehead.

**MALE LINEATED WOODPECKER**

*Dryocopus martius***Black Woodpecker****LENGTH**

45–55cm (17½–22½in)

**WEIGHT**

325 (12oz)

**MIGRATION**

Partial migrant

**HABITAT** Mature forest

As its name suggests, the Black Woodpecker is mainly black in colour, with the exception of variable bright red markings on the head: the male has a complete red cap, but the female has just a few markings on the back of the head. The largest woodpecker in Europe, this species has a slender neck and a dark-tipped pale bill that is shaped like a dagger. The Black Woodpecker can be detected by its loud calls or its drumming, which is usually loud and lasts for a long time.

The Black Woodpecker feeds mainly on ants, although other insects are also consumed. It is said to be expert at locating ant colonies within its territory – apparently it can even detect nests beneath deep snow. The bird feeds mainly low down on the trunks of trees, or often on dead branches lying on the ground.

**CHISELLING OUT PREY**

Probing deep into tree trunks with its strong bill, the Black Woodpecker (the female is shown here) digs out insects.

**ADULT ON THE WING**

The Black Woodpecker's flight is straight, not dipping like other woodpeckers, and it can be confused with a small crow while flying.

It peels off large fragments of bark with its powerful bill, searching underneath for its favoured food, and uses its tail as a prop when it perches upright. This woodpecker plays an important role in forest ecology as it creates holes in trees that are used for nesting by many other species. Its own nest is in a large oval hole.

The Black Woodpecker is found across most of Europe (except Britain and Ireland) across Russia and Siberia to northern parts of Japan. Most Black Woodpeckers are resident, although northern populations are partially migratory (particularly juveniles). Birds also move during autumn and winter, with distances of up to 1,000km (620 miles) being recorded.

*Picus flavinucha***Greater Yellownape****LENGTH**

34cm (13½in)

**WEIGHT**

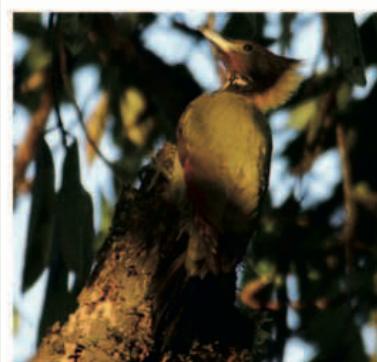
150–200g (5–7oz)

**MIGRATION**

Non-migrant

**HABITAT** Various forest types

An attractive species of woodpecker that occurs in southeast Asia, the Greater Yellownape has an olive-green forehead and crown and a yellow nape that contrasts with its green upperparts and grey underparts. At rest, its green plumage blends into foliage. The tail of the Greater Yellownape is black and the wings are barred in red. The males of some subspecies of this woodpecker have a yellow "moustache" that extends onto the throat, while in the females, this feature is rufous in colour.

**ADULT FEMALE***Picus awokera***Japanese Woodpecker****LENGTH**

30cm (12in)

**WEIGHT**

150g (5oz)

**MIGRATION**

Non-migrant

**HABITAT** Variety of reasonably open forests

The Japanese Woodpecker is only found in Japan and occurs on all the main islands, except Hokkaido, where it is replaced by the similar Grey-headed Woodpecker (*P. canus*). The Japanese Woodpecker differs primarily by the dense black barring that covers its belly. The red cap on male birds also extends right down to the back of the neck whereas on the Grey-headed Woodpecker, this is confined to between the bill and the forehead.

Confusingly, the female Japanese Woodpecker actually has a grey forehead, with a small amount of red on the back of its head and neck. However, both male and female Japanese Woodpeckers have a red "moustache" – a feature that is black in the Grey-headed Woodpeckers. The Japanese Woodpecker also feeds much less frequently on the ground than its close relative and is usually seen clinging to the side of a tree trunk.

*Picus viridis***European Green Woodpecker****LENGTH**

31–33cm (12–13in)

**WEIGHT**

175g (6oz)

**MIGRATION**

Non-migrant

**HABITAT** Semi-open areas such as woodland edges, heaths, and parks

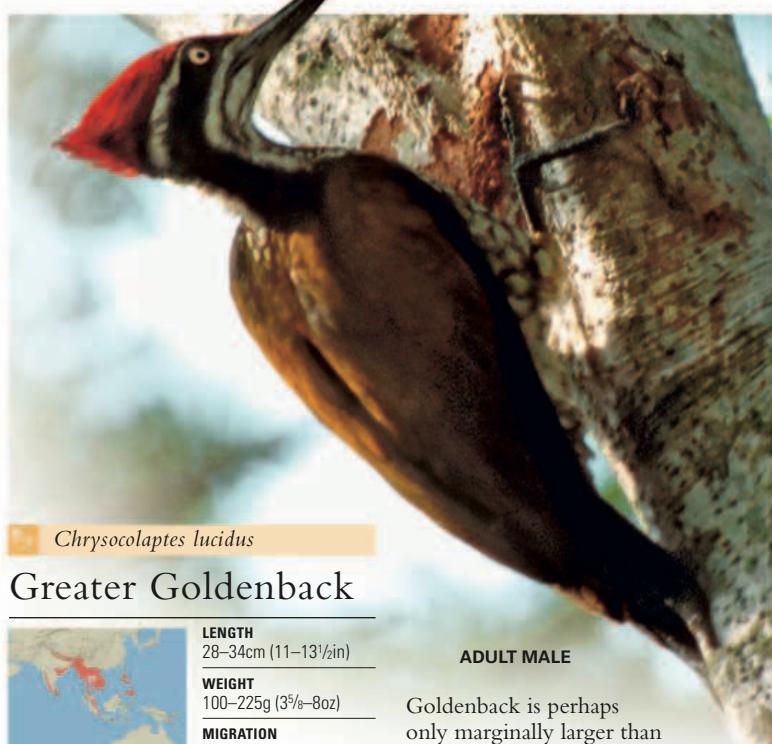
Pale in colour, the European Green Woodpecker has a barrel-shaped body. The male can be distinguished from the female by its red "moustache", which is black in the female, while juveniles are barred and streaked. In many parts of Britain, it is known as the "yaffle", an imitation of its distinctive high-pitched, ringing laugh.

Like other members of its family, it has a tongue that is specially adapted to help it feed. More than double the length of its bill, the tip is covered with a sticky fluid to help trap ants, its favourite prey. It generally feeds on the ground, hopping short distances before undertaking its distinct undulating flight. Levaillant's Woodpecker (*P. vaillantii*), which occurs in North Africa, is considered by some authorities to be a subspecies of the European Green Woodpecker. It is greyer beneath, with a black and white facial pattern.

**FEMALE FEEDING ITS YOUNG**



FEMALE LESSER GOLDENBACK



Chrysocolaptes lucidus

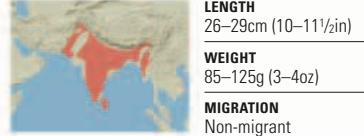
**Greater Goldenback**

**HABITAT** Most types of woodland, including forest and mangroves near rivers

A large golden, red, black, and white woodpecker, the Greater Goldenback has a black band from its eyes to its throat, a black-scalloped golden back, and white underparts. It also has a red patch on the rump and lower back, although this is often hard to see, being partially concealed by the wings. The male has a raised red crest (shown here), while the female has a much darker crown.

There are several similar species of the woodpecker in Asia. However, these birds are not always close relatives. Despite its name, the Greater

Dinopium benghalense

**Lesser Goldenback**

**HABITAT** All types of woodland, including more open areas with trees; avoids arid zones and dense forest

Unlike several subspecies of this woodpecker that have golden-yellow upperparts, the Lesser Goldenback has a deep crimson-red back. Males in all subspecies have a red crown, while females have a black forecrown. The Lesser Goldenback chiefly feeds on ants, which it takes from the bark and leaves of trees, but also eats spiders, caterpillars, fruit, and nectar. Both adults take turns to excavate the nest hole, which is often located low down in a tree. Two or three eggs are laid and are incubated by both parents. Although virtually restricted to the Indian subcontinent, the Lesser Goldenback is one of the commonest woodpeckers within its range.

Reinwardtipicus validus

**Orange-backed Woodpecker**

**HABITAT** Primarily lowland rainforest; also found in coastal vegetation and mature plantations

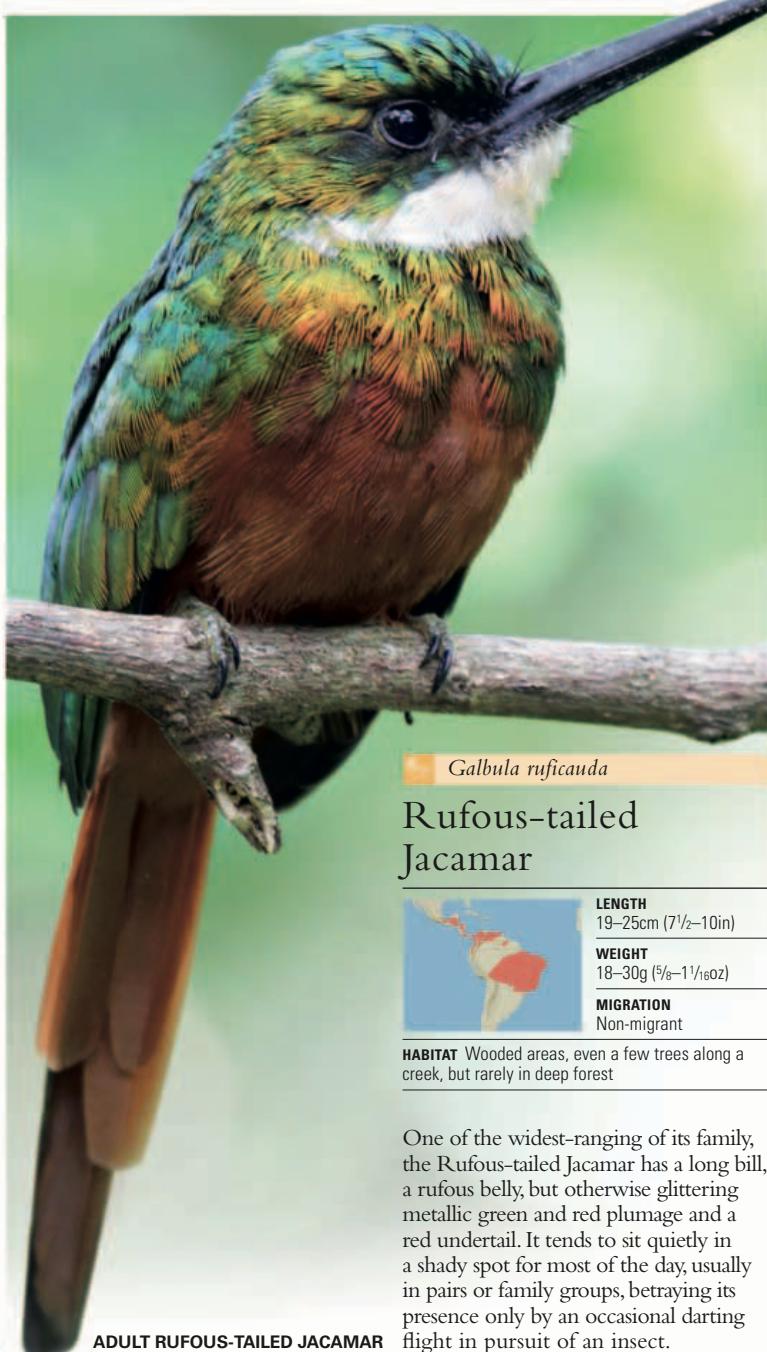
The somewhat uncommon Orange-backed Woodpecker is one of the most attractive Asian members of its family. The crest and underparts in the male are mostly red and it has a white back, with orange-red tipped feathers. It also has very dark wings, with red markings, and a dark tail. The female is similar, but is much browner on the head and underparts. Both sexes have a large and mostly yellow bill.

Mulleripicus pulverulentus

**Great Slaty Woodpecker**

**HABITAT** Tall, semi-open woodland in lowlands and foothills; also swamp-forests and mangroves

Named for its plumage, which is almost entirely slate-grey, the Great Slaty Woodpecker is the largest of the woodpeckers. It has a large, sharp bill, pale buff chin and throat, a very long neck, and a long tail. The male is distinguished by its red cheek-spot. Despite its size, this woodpecker feeds mainly on insects, supplemented with small fruit, and it forages in parties of four to six.



Galbulia ruficauda

**Rufous-tailed Jacamar**

**HABITAT** Wooded areas, even a few trees along a creek, but rarely in deep forest

One of the widest-ranging of its family, the Rufous-tailed Jacamar has a long bill, a rufous belly, but otherwise glittering metallic green and red plumage and a red undertail. It tends to sit quietly in a shady spot for most of the day, usually in pairs or family groups, betraying its presence only by an occasional darting flight in pursuit of an insect.

*Galbulia cyanescens*

## Bluish-fronted Jacamar

LENGTH  
20–23cm (8–9in)WEIGHT  
20–25g (1 1/16–7/8oz)MIGRATION  
Non-migrant**HABITAT** Beside streams or other bodies of water; edges of primary forest or in secondary growth

Among the prominent features of the Bluish-fronted Jacamar is its metallic blue forecrown and bib. The upperparts are green, while the underparts, including the undertail, are rufous. The female is similar, but has ochre underparts. In plumage, this species is similar to several other jacamars, including the Rufous-tailed Jacamar (opposite), but the species have ranges that do not overlap.

Like other jacamars, this species generally feeds on insects caught in flight, although it often perches much higher up than the Rufous-tailed Jacamar, which can often be found close to the ground. Its nesting habits are unknown – in fact, the Bluish-fronted Jacamar is a poorly known bird because it is confined to an inaccessible area in western Amazonia.



MALE BLUISH-FRONTED JACAMAR

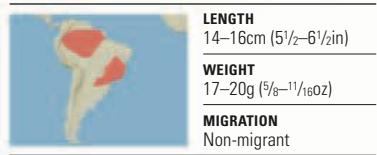
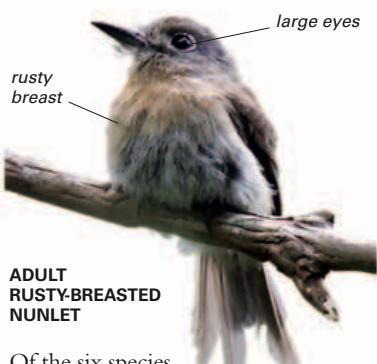
*Nystalus chacuru*LENGTH  
22cm (8 1/2in)WEIGHT  
50–65g (1 3/4–2 3/8oz)MIGRATION  
Non-migrant**HABITAT** Open country and forest edges, including agricultural areas, but prefers native vegetation

Found in the interior of South America, this charismatic bird has a red bill with a dark tip and hook as well as the distinctive white “ears”. In Brazil, its habit of waiting quietly on an open perch for a lizard or other similar prey has led to it being named “João-bobo” (literally “sitting duck”). Surprisingly, for such a common bird, its nesting habits are poorly known, but the nest is made in a hole in a bank or ground, and up to four eggs are laid.

ADULT WHITE-EARED PUFFBIRD

*Nonnula rubecula*

## Rusty-breasted Nunlet

LENGTH  
14–16cm (5 1/2–6 1/2in)WEIGHT  
17–20g (5/8–11/16oz)MIGRATION  
Non-migrant**HABITAT** Midstorey of humid rainforest; occasionally in more open woodland and secondary growth

ADULT RUSTY-BREASTED NUNLET

Of the six species of nunlet (small puffbirds with generally brown and grey plumage), the Rusty-breasted Nunlet is the most widespread and is one of only two species to occur (in its case partially) outside of Amazonia. The Rusty-breasted Nunlet is a generally unobtrusive bird due to its small size, dull plumage, and its habit of hunting quietly. It feeds on beetles, small crabs, and other arthropods, and sometimes follows flocks of other birds. Its nest is a burrow constructed in a tree cavity or a hole in a bank.

*Jacamerops aureus*

## Great Jacamar

LENGTH  
25–30cm (10–12in)WEIGHT  
55–75g (2–2 5/8oz)MIGRATION  
Non-migrant**HABITAT** Primary forest, more occasionally in tall secondary growth, but rarely at borders and edges

The largest and most impressive of the jacamars, the Great Jacamar has a more massive, slightly shorter, and marginally more curved bill than the other jacamars. Its throat is white, its upperparts are predominantly an iridescent green, and its underparts are red. Usually solitary or found in pairs, it is sluggish in its behaviour, perching in one place for long periods of time. It is capable of taking prey up to the size of small lizards.

*Notharchus macrorhynchos*

## White-necked Puffbird

LENGTH  
25cm (10in)WEIGHT  
80–100g (2 1/8–3 5/8oz)MIGRATION  
Non-migrant**HABITAT** Many types of woodland and edge habitats, high treetops

Almost entirely black and white with a relatively massive bill, the White-necked Puffbird has a white neck that is separated from its white underparts by a deep black breast-band. The White-necked Puffbird takes a variety of prey from insects to small vertebrates. It nests in tree cavity or a termite nest, or, more occasionally, a hole in the ground.



ADULT BLACK-FRONTED NUNBIRD

*Monasa nigripons*

## Black-fronted Nunbird

LENGTH  
26–29cm (10–11 1/2in)WEIGHT  
70–100g (2 1/2–3 5/8oz)MIGRATION  
Non-migrant**HABITAT** Forest usually along rivers and woodland that is seasonally flooded

Four species of nunbird (generally black puffbirds with red or yellow bills) are known from Amazonia and its fringes. The Black-fronted Nunbird is one of the two most widespread and common species, and is the only one to have entirely black feathering. Amongst the noisiest of the forest's avian inhabitants, the Black-fronted Nunbird spends most of its time sitting on a prominent perch, looking for arthropods, small lizards, and insects.

*Chelidoptera tenebrosa*

## Swallow-winged Puffbird

LENGTH  
15cm (6in)WEIGHT  
30–40g (1 1/16–1 7/16oz)MIGRATION  
Non-migrant**HABITAT** All types of open wooded areas, with a preference for those on sandy soil

ADULT SWALLOW-WINGED PUFFBIRD

Several subspecies of the Swallow-winged Puffbird have been described and these principally differ in the pattern of the underparts: some have a narrow white band separating the dark throat and red belly; the colour of the plumage also varies in intensity, some subspecies being much paler than others. The Swallow-winged Puffbird is often the most abundant and easy to see of the puffbirds in its wide South American range, due to the fact that this bird habitually perches in the open atop a dead tree or even a telephone wire. It bears a superficial resemblance to a swallow with a short tail.

The Swallow-winged Puffbird catches flying insects, by making short aerial sorties, usually either on a level with, or higher than, its perch. It nests in short tunnels, dug in a bank or in flat ground, and lays at most two eggs, incubated in two weeks. However, like many other puffbirds, little more is known about this bird's nesting behaviour.

# PASSERINES

**ORDER** Passeriformes

**FAMILY** 92

**SPECIES** over 5,200

OVER HALF THE WORLD'S BIRDS belong to this enormous order, commonly known as the perching birds. All share one of nature's most successful innovations – slender and highly specialized four-toed feet. Compared

to other birds, perching birds tend to be small, but are often highly active. Species of this varied order are found in almost every terrestrial habitat, from forests to tundra, but none live at sea.

## ANATOMY

The passerine order takes its name from the Latin word for the House Sparrow (*Passer domesticus*) – a typical example of a perching bird. Like sparrows, most passerines tend to be small; some of the lightest weigh less than 5g (1/5oz).

However, this order also includes some large and heavily built birds, such as oropendolas and crows. Whatever their size, all passerines have four-toed feet with three toes pointing forwards, and one backwards, all four meeting at the same level. Their toes are never webbed. When a perching bird settles on a branch or twig, its toes automatically lock into position, stopping it falling off even when it is asleep. Passerines usually have between nine and ten flight feathers in their wings, and 12 feathers in their tails. However, one of their most significant features is their voicebox, or syrinx. In the majority of passerines, known as oscines or songbirds, the syrinx is highly developed, with complex membranes and muscles. This allows songbirds to create a huge variety of sounds. The remaining passerines, often known as suboscines, have a less elaborate syrinx, but even so, many of them also have intricate songs and calls.



**BALANCING ACT**

Grasping tightly with its toes, this American Yellow Warbler perches on a twig. Passerine toes are very flexible, allowing these birds to hold onto the slenderest of perches, such as grass stems or telephone wires.



**FEMALE SUPERB FAIRYWREN**



**MALE SPLENDID FAIRYWREN**

## PLUMAGE AND COLORATION

Passerines include many species that are small and drab, but also some of the most vividly coloured birds in the world. This is particularly true in the tropics, but even in the temperate world, birds such as cardinals and goldfinches never fail to catch the eye. In many passerines, males and females look identical, but in a number, males and females look so different that they could be mistaken for different species. These differences reach an extreme in birds-of-paradise: the females are relatively dowdy, while the males look almost overloaded by their flamboyant plumage. Plumage differences usually reflect the different roles played by male and female birds. The male's plumage has evolved to attract a mate, while the female's dull coloration camouflages her while she is on the nest. In many species, plumage differences are a year-round feature, but in some the male adopts an "eclipse" plumage much more like the female's after his post-breeding moult.

### DRESSED TO IMPRESS

During the breeding season, male and female fairywrens show a striking difference in plumage. After breeding, the iridescent blue males (such as the Splendid Fairywren, left) develops an "eclipse" plumage, becoming almost identical to the female.

### STICKING TOGETHER

Both sociable and active, Zebra Finches are typical flock-forming passerines. A small body and a high metabolism mean that their lives are dominated by the search for food.

## WINGS AND FLIGHT

The small size of most passerines affects the way they fly. Most have short, broad wings, which allow them to take off in a fraction of a second – something that is often vital for their survival. This wing shape also gives them good manoeuvrability as they swerve through vegetation, and rapid braking when they come in to land on a perch. Although many passerines migrate, they are more often seen flying in short bursts, and very few of them have the gliding or soaring flight seen in large birds. The main exceptions to this rule are aerial insect-eaters, such as swallows and martins, and large birds such as ravens, which often stay in the air for several hours at a time. Up until the relatively recent past, there was in existence a flightless passerine – the Stephens Island Wren of New Zealand. However, this unique bird was wiped out in 1895 by feral cats.

## BILLS AND FEEDING

Most passerines eat compact, energy-rich food – the kind that can be collected quickly and swallowed whole, before predators have a chance to move in. Seeds and insects both meet these requirements, and passerine birds eat them in huge quantities. Seed-eating passerines generally have blunt bills, often with a conical shape. Many of these birds roll seeds between their bill's margins, cracking off the husk before they swallow the kernel. In warm parts of the world, several families of passerines – including sunbirds and honeyeaters – feed on nectar, another high-energy plant-based food. Sunbirds have specialized bills that give them a striking resemblance to hummingbirds, which are unrelated but share a similar way of life.

Insect-eating passerines can be found over most of the globe, although in temperate regions, many of them migrate. Most of them have short, slender bills – the ideal tool for prising insects out of crevices. The order also includes birds that eat earthworms and other invertebrates, as well as some that hunt larger prey. Shrikes use their hooked bills to catch small mammals and reptiles, while crows and ravens scavenge anything they can swallow – often including the eggs and young of other passerine birds.

### NESTING COLONIES

The nests of passerines are usually well hidden, and also well spaced from their neighbours. However, some species, such as martins, oropendolas, and weavers, nest in colonies. Most of them make independent nests, but Social Weavers take colonial life even further, and work together to build a giant shared nest with many compartments.



**OROPENDOLA COLONY**

Montezuma Oropendolas build some of the largest nests of all passerines. Woven from grass and leaves, they can be 1m (3½ft) long.

## NESTING AND PARENTING

Passerines typically nest in trees or bushes, and they often make complex nests to protect their nestlings from the weather and from predators. The “standard” passerine nest is cup-shaped, with a warm lining made from feathers, moss, or mud, but many passerines build covered or suspended nests, which give their young even greater protection. Cliff swallows make flask-shaped nests out of mud, while weavers show extraordinary dexterity in tying and manipulating grass. Tailorbirds, from southeast Asia, turn large leaves into nest-shaped funnels by sewing their edges together, using their bills as needles.

Passerine nestlings hatch while they are still poorly developed. Naked and blind, they are unable to use their legs or wings, and also unable to control their body temperature. However, they grow up at an extraordinary speed, fuelled by a constant supply of food. In some small insect-eaters, such as tits and chickadees, the parents make up to 2,000 food deliveries a day. With this prodigious food supply, some young passerines are ready to fly just 10 days after they hatch.

### ATTENTIVE PARENT

Like all passerines, this Eurasian Reed Warbler will feed its young until they have fledged. Young reed warblers clamber out of their nest before they can fly, making it harder for predators to spot them.

### RAPID TAKEOFF

Seen from below, this Northern Wheatear clearly shows the short, broad wing shape and powerful pectoral muscles, shared by many passerines, which enables them to take off very quickly.



**EURASIAN NUTHATCH**



**RED CROSSBILL**



**MARICO SUNBIRD**

### BILL SHAPES

As with other orders, bill shape in passerines is tailored to diet. Nuthatches have small, straight bills, which they use for pecking open seeds and prising insects from bark. The crossbill's bill is a highly specialized implement, used for extracting seeds from the cones of pines, spruces, and other coniferous trees. The long, decurved bill of a sunbird is ideally suited to extracting nectar from flowers.



**SUSPENDED NEST**

The Eurasian Reed Warbler builds a cup-shaped nest, expertly slung between three or four reed stems.



## SONG AND SINGING

All passerines have their own calls, but sophisticated songs are a characteristic of oscines (songbirds), which make up by far the largest number of species in the passerine order. Not all songbirds are melodious: crows and jays, for example, are well known for their harsh and grating croaks. However, some species – such as the Eurasian Skylark – are legendary not only for the beauty of their singing, but also for their sheer vocal power. Songbirds also include some astoundingly gifted mimics, such as mynas, lyrebirds, and the Marsh Warbler. Songs are often produced by males only, and are used for attracting mates and deterring rivals. The great advantage of this form of communication is that the singer can remain hidden. The Common Nightingale is a good example of this. One of the most renowned European songbirds, it has an extremely loud, fluid song, but is almost impossible to spot inside the thickets where it sings.

Most songbirds hatch with the innate ability to produce a basic song. As a young bird grows up, it refines its performance by listening to adult birds, and often acquires a regional “accent” in the process. As a result, songs are highly species-specific, and even where two species are physically very similar, their songs are often a valuable aid in telling them apart.



### SMALL SIZE, LOUD VOICE

Small songbirds can produce extraordinarily loud songs for their size. In most species, only males sing but female Pied Flycatchers respond to males’ calls (an immature male is shown here).

#### COURTSHIP FEEDING

Having successfully attracted a partner, a male Blue Tit gives the female a gift of food. This behaviour, known as courtship feeding, not only cements the pair bond, but also serves a practical role in helping the female to build up enough reserves to produce a clutch of up to a dozen eggs. Blue Tits raise just one family each breeding season, but some small passerines can raise as many as three successive broods.



## COURTSHIP

For many passerines, song is the trigger that brings male and female together. Males typically sing from within a territory, which contains all the resources needed to raise a family. Drawn by the male’s song, the female inspects the territory, as well as its occupant. If she is satisfied with both, courtship soon gets underway. The division of duties between partners varies enormously in the passerine world. With Blue Tits, the female builds the nest and incubates the eggs, and the male throws all his energy into collecting food for the young. With weavers, the male usually builds the nest entirely on his own – this, rather than a territory, is the main attraction for the female. But with some species, including birds-of-paradise, lyrebirds, and many cotingas, males use their flamboyant plumage to attract partners, but play no part in nest-building or in rearing the young.



#### ROOSTING QUELEAS

Packed tightly together in a clump of bamboo, Red-billed Queleas, a flock-forming African species, settle down to pass the night. With their slender toes locked in position, they can sleep quite comfortably on perches that are almost upright.

## SOCIAL GROUPS

Once most young passerines have left their nest, the bond between them and their parents is soon broken, and the young take up life on their own. With cooperative breeders – such as the White-winged Chough – family life is different; the young stay with the family group, and help to incubate and feed the next generation of young. But for the majority of passerines, social life centres around flocks – groups of birds that often feed and roost together. Some passerines form permanent flocks, but in most, flocking occurs outside the breeding season, when parents are no longer tied to their nests. The largest feeding flocks are formed by seed-eating birds. In North America, Red-winged

Blackbirds gather in huge flocks. Common Starlings are also well known for their flocking behaviour, particularly in winter when they gather in enormous numbers to roost. Flocking helps small passerines to avoid being singled out by predators, and it also improves their chances of finding scattered food.



#### READY FOR DEPARTURE

Every year, many passerines migrate enormous distances to breed. Here, dozens of Barn Swallows prepare to set off on their journey to warmer latitudes.

#### HUMAN IMPACT

### THREATS AND CONSERVATION

About 10 per cent of the world’s passerines are currently listed by the IUCN as endangered or vulnerable. The decline in the numbers of songbirds is largely the result of loss of habitat, often caused by deforestation, the spread of towns and cities, or the intensification of farming.



#### DISAPPEARING SKYLARK

Once common, the Eurasian Skylark has declined rapidly in recent years. Because it nests on the ground, it is at risk from farm machinery. Intensive farming also makes it harder for these birds to find enough food.

# CLASSIFYING PASSERINES

Anatomical and genetic evidence clearly show that passerine birds form a single natural group, having evolved from the same original ancestor at some point in the distant past. Most ornithologists agree that passerines fall into two clear-cut groups. One group contains the “primitive” passerines, also known as suboscines, while the other contains the oscines or songbirds. Of these two groups, the songbirds are by far the largest, comprising about 4,000 species. However, at the family level, the classification of songbirds is in a state of flux, as DNA studies continue to throw new light on the way different species are related. The list of families and their classification on this page reflects much of this new research, and is used throughout the section on passerine bird species that follows.



**SUBOSCINE**

The Eastern Kingbird is a typical suboscine. It belongs to the Tyrant Flycatcher family, a group found from Canada to Patagonia.



**OSCINE**

Like most oscines, the Rufous-tailed Rock Thrush has a flowing musical song. It is found across Europe and northern parts of Asia.

## SUBOSCINES

Also called “primitive” passerines, suboscines make up the suborder Tyranni. Their songs are innate, or “hard-wired” at hatching. The majority live in Central or South America. The New Zealand Wrens show many features not found in other suboscines, and sometimes are put in a suborder of their own.

NEW ZEALAND WRENS	
FAMILY Acanthizidae	SPECIES 3
<b>BROADBILLS</b>	
FAMILY Eurylaimidae	SPECIES 14
<b>ASITIES</b>	
FAMILY Philepittidae	SPECIES 4
<b>PITTAS</b>	
FAMILY Pittidae	SPECIES 30
<b>MANAKINS</b>	
FAMILY Pipridae	SPECIES 48
<b>COTINGAS</b>	
FAMILY Cotingidae	SPECIES 96
<b>TYRANT FLYCATCHERS</b>	
FAMILY Tyrannidae	SPECIES 430
<b>ANTBIRDS</b>	
FAMILY Thamnophilidae	SPECIES 205
<b>GNATEATERS</b>	
FAMILY Conopophagidae	SPECIES 8
<b>TAPACULOS</b>	
FAMILY Rhinocryptidae	SPECIES 55
<b>ANTPITTAS AND ANTTHRUSHES</b>	
FAMILY Formicariidae	SPECIES 60
<b>OVENBIRDS</b>	
FAMILY Furnariidae	SPECIES 236
<b>WOODCREEPERS</b>	
FAMILY Dendrocolaptidae	SPECIES 52

## OSCINES

This worldwide group, known as songbirds, forms the suborder Passeri. These birds have a highly developed syrinx, and can produce elaborate, varied songs. The basic song is developed by learning.

LYREBIRDS	
FAMILY Menuridae	SPECIES 2
<b>BOWERBIRDS</b>	
FAMILY Ptilonorhynchidae	SPECIES 18
<b>SCRUBBIRDS</b>	
FAMILY Atrichornithidae	SPECIES 2

AUSTRALASIAN TREECREEPERS	
FAMILY Climacteridae	SPECIES 7
<b>AUSTRALASIAN WRENS</b>	
FAMILY Maluridae	SPECIES 28
<b>HONEYEATERS</b>	
FAMILY Meliphagidae	SPECIES 174
<b>BRISTLEBIRDS</b>	
FAMILY Dasyornithidae	SPECIES 3
<b>PARDALOTES</b>	
FAMILY Pardalotidae	SPECIES 4
<b>THORNBILLS AND GERYGONES</b>	
FAMILY Acanthizidae	SPECIES 60
<b>AUSTRALASIAN BABBLERS</b>	
FAMILY Pomatostomidae	SPECIES 5
<b>LOGRUNNERS</b>	
FAMILY Orthonychidae	SPECIES 3
<b>SATINBIRDS</b>	
FAMILY Cnemophilidae	SPECIES 3
<b>BERRYPECKERS</b>	
FAMILY Melanocharitidae	SPECIES 12
<b>WATTLED CROWS</b>	
FAMILY Callacatidae	SPECIES 2
<b>WHIPBIRDS AND RELATIVES</b>	
FAMILY Eupetidae	SPECIES 10
<b>QUAIL-THRUSHES</b>	
FAMILY Cinclosomatidae	SPECIES 5
<b>WATTLE-EYES AND BATISES</b>	
FAMILY Platysteiridae	SPECIES 28
<b>HELMETSHRIKES AND PUFFBACKS</b>	
FAMILY Malacopteronidae	SPECIES 52
<b>BOATBILLS</b>	
FAMILY Machaerirhynchidae	SPECIES 2
<b>VANGAS</b>	
FAMILY Vangidae	SPECIES 22
<b>BUTCHERBIRDS</b>	
FAMILY Cracticidae	SPECIES 13
<b>WOODSWALLOWS</b>	
FAMILY Artamidae	SPECIES 10
<b>IORAS</b>	
FAMILY Aegithinidae	SPECIES 4
<b>BRISTLEHEAD</b>	
FAMILY Pityriasiidae	SPECIES 1
<b>CUCKOOSHRIKES</b>	
FAMILY Campephagidae	SPECIES 81
<b>SITELLAS</b>	
FAMILY Neosittidae	SPECIES 3
<b>SHRIKEKITTS</b>	
FAMILY Falcunculidae	SPECIES 4
<b>WHISTLERS</b>	
FAMILY Pachycephalidae	SPECIES 41
<b>SHRIKES</b>	
FAMILY Laniidae	SPECIES 30
<b>VIREOS AND RELATIVES</b>	
FAMILY Vireonidae	SPECIES 52

ORIOLES	
FAMILY Oriolidae	SPECIES 29
<b>SHRIKEETHRUSHES AND RELATIVES</b>	
FAMILY Colluricinclidae	SPECIES 14
<b>DRONGOS</b>	
FAMILY Dicruridae	SPECIES 22
<b>FANTAILS</b>	
FAMILY Rhipiduridae	SPECIES 43
<b>MONARCHS</b>	
FAMILY Monarchidae	SPECIES 87
<b>CROWS AND JAYS</b>	
FAMILY Corvidae	SPECIES 117
<b>MUDNESTERS</b>	
FAMILY Corcoracidae	SPECIES 2
<b>BIRDS-OF-PARADISE</b>	
FAMILY Paradisaeidae	SPECIES 40
<b>AUSTRALASIAN ROBINS</b>	
FAMILY Petroicidae	SPECIES 45
<b>BALD CROWS</b>	
FAMILY Picathartidae	SPECIES 2
<b>WAXWINGS AND RELATIVES</b>	
FAMILY Bombycillidae	SPECIES 8
<b>PALMCHAT</b>	
FAMILY Dulidae	SPECIES 1
<b>TRUE TITS</b>	
FAMILY Paridae	SPECIES 54
<b>PENDULINE TITS</b>	
FAMILY Remizidae	SPECIES 10
<b>LONG-TAILED TITS</b>	
FAMILY Aegithalidae	SPECIES 11
<b>SWALLOWS AND MARTINS</b>	
FAMILY Hirundinidae	SPECIES 84
<b>LARKS</b>	
FAMILY Alaudidae	SPECIES 92
<b>CISTICOLAS</b>	
FAMILY Cisticolidae	SPECIES 110
<b>BULBULS</b>	
FAMILY Pycnonotidae	SPECIES 118
<b>OLD WORLD WARBLERS</b>	
FAMILY Sylviidae	SPECIES 280
<b>BABBLERS AND RELATIVES</b>	
FAMILY Timaliidae	SPECIES 273
<b>WHITE-EYES</b>	
FAMILY Zosteropidae	SPECIES 95
<b>FAIRY-BLUEBIRDS</b>	
FAMILY Irenidae	SPECIES 2
<b>GOLDCRESTS</b>	
FAMILY Regulidae	SPECIES 6
<b>WRENS</b>	
FAMILY Troglodytidae	SPECIES 76
<b>GNATCATCHERS</b>	
FAMILY Polioptilidae	SPECIES 14
<b>NUTHATCHES</b>	
FAMILY Sittidae	SPECIES 25

TREECREEPERS	
FAMILY Certhiidae	SPECIES 8
<b>MOCKINGBIRDS AND THRASHERS</b>	
FAMILY Mimidae	SPECIES 34
<b>PHILIPPINE CREEPERS</b>	
FAMILY Rhabdornithidae	SPECIES 2
<b>STARLINGS</b>	
FAMILY Sturnidae	SPECIES 114
<b>THRUSHES</b>	
FAMILY Turdidae	SPECIES 175
<b>CHATS AND FLYCATCHERS</b>	
FAMILY Muscicapidae	SPECIES 275
<b>DIPPERS</b>	
FAMILY Cinclidae	SPECIES 5
<b>LEAFBIRDS</b>	
FAMILY Chloropseidae	SPECIES 8
<b>FLOWERPECKERS</b>	
FAMILY Dicaeidae	SPECIES 44
<b>SUNBIRDS</b>	
FAMILY Nectariniidae	SPECIES 127
<b>SUGARBIRDS</b>	
FAMILY Promeropidae	SPECIES 2
<b>OLD WORLD SPARROWS &amp; SNOWFINCHES</b>	
FAMILY Passeridae	SPECIES 40
<b>WEAVERS</b>	
FAMILY Ploceidae	SPECIES 108
<b>WAXBILLS AND RELATIVES</b>	
FAMILY Estrildidae	SPECIES 130
<b>WHYDAHS</b>	
FAMILY Viduidae	SPECIES 20
<b>WAGTAILS AND PIPITS</b>	
FAMILY Motacillidae	SPECIES 64
<b>ACCENTORS</b>	
FAMILY Prunellidae	SPECIES 13
<b>FINCHES AND RELATIVES</b>	
FAMILY Fringillidae	SPECIES 168
<b>NEW WORLD WARBLERS</b>	
FAMILY Parulidae	SPECIES 118
<b>NEW WORLD BLACKBIRDS</b>	
FAMILY Icteridae	SPECIES 98
<b>BANANAQUIT</b>	
FAMILY Coerebidae	SPECIES 1
<b>BUNTINGS AND AMERICAN SPARROWS</b>	
FAMILY Emberizidae	SPECIES 308
<b>TANAGERS</b>	
FAMILY Thraupidae	SPECIES 202
<b>CARDINALS AND GROSBEAKS</b>	
FAMILY Cardinalidae	SPECIES 42

# NEW ZEALAND WRENS

**ORDER** Passeriformes  
**FAMILY** Acanthisittidae  
**SPECIES** 3

FOUND ONLY IN New Zealand, these stocky, almost tailless birds are not closely related to any other passerines. They include the New

Zealand Rockwren, which lives on South Island on high mountain slopes, and the Rifleman, which is abundant throughout New Zealand. The Bushwren, used to replace the New Zealand Rockwren in forests at lower altitudes and is probably now extinct.

## BEHAVIOUR

The New Zealand wrens are all very weak fliers, spending much of their time on the ground or creeping around boulders and tree trunks to search for spiders and other invertebrate prey. Combined with their dull, greenish brown upperparts, this can make them difficult to spot. Their ground-living lifestyle may have evolved because New Zealand has no native mammal predators of small birds – in the absence of this threat, the New Zealand wrens lost much of their ability to fly. A fourth species in this family, Stephen's Island Wren, was probably flightless, but it became extinct within a year of its discovery in 1894, when introduced feral cats killed its entire population.

# BROADBILLS

**ORDER** Passeriformes  
**FAMILY** Eurylaimidae  
**SPECIES** 14

BROADBILLS ARE NAMED for the very wide, flattened, hooked bill in many species. Most are plump birds with squat bodies and short, rounded tails. They occur in forests, mangrove

swamps, scrub, and thickets from West Africa eastwards as far as the Philippines, with ten species in Asia and the rest in Africa. The majority live in lowland areas, but a few, including Whitehead's Broadbill of Borneo and the rare Grauer's Broadbill of Central Africa, which was unknown to Western science until 1909, are restricted to humid mountain forests.

**HIDDEN BILL**  
A thick clump of long feathers conceal most of the Green Broadbill's upper mandible, giving it a curiously top-heavy appearance. Its plumage is superbly camouflaged among rainforest foliage.

## ANATOMY

This family's unusual bill-shape is shared with trogons (see p.300) and frogmouths (see p.288). It is a design suited to hunting large insects, which broadbills catch during a mid-air sally from a perch or by scooping them off branches and leaves. The Black-and-red Broadbill also feeds on crabs and fish. In Asia, the three green broadbill species in the genus *Calyptomena* have a very different diet – they eat mainly fruit, especially figs.



*Acanthisitta chloris*

### Rifleman



**LENGTH**  
7–9cm (3–3½in)  
**WEIGHT**  
6–8g (⅓–⅔oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Forest, especially of beech, but also in scrub and pine plantations



Found only in New Zealand, the Rifleman is a beautiful and intriguing bird. The male has an unmarked green back, while the female is brown above with black streaking. This noticeable difference between the male and the female is thought to stem from the slightly different foraging niches the sexes occupy during the nesting season – the male tends to search for food in leaves and moss, while the female is found probing the bark of trunks. Birds of this species constantly flick their wings, but fly only short distances.

Despite its small size, the Rifleman builds a comparatively large domed nest in a cavity in the branch or dead stump of a tree. Both sexes share in the workload of constructing the nest, which has a short entrance tunnel.

The female lays 2–5 eggs. Although this is essentially a monogamous species, some pairs appear to attract “helpers” that help to feed the young, usually with insects. Nests are sometimes preyed upon by weasels. The average lifespan of the species is about two years for males, and almost four months less in females.

MALE RIFLEMAN

*Smithornis capensis*

### African Broadbill



**LENGTH**  
12–14cm (4½–5½in)  
**WEIGHT**  
17–30g (⅔–1½oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Most forest types as well as in plantations; even cultivation and open country around villages

The African Broadbill is the most widespread of the four broadbill species found in Africa. It has largely dark brown plumage, with a dark head and pale underparts with dark streaks. It feeds mainly on insects that are caught in flight. It is an unobtrusive bird, except for the loud display performed by both sexes – a very fast trilling noise produced by vibrating the wing-feathers that stops abruptly. In courtship, this species hangs upside-down from its perch and uses its wings to produce a klaxon-like noise. It constructs a nest shaped like a bag.

AFRICAN BROADBILL AT NEST

#### GREAT SITES

### MKUZI RESERVE

Lying close to the border with Mozambique, the Mkuzi Game Reserve in KwaZulu-Natal is a stronghold of the African Broadbill. Along with several other species that are restricted in range, the African Broadbill is found mainly in sand-forest in the area, such as the Tongaland sand-forest close to the Reserve's main camp. Sand-forest is a habitat unique to this part of South Africa and southern Mozambique.



*Calyptomena viridis*

## Green Broadbill



<b>LENGTH</b>	14–19cm (5½–7½in)
<b>WEIGHT</b>	45–75g (1½–2½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Understorey and lower levels of rainforest; plantations, mainly in lowlands

Both sexes of Green Broadbill have predominantly leaf-green plumage, a strange bump-shaped head, and near-tailless appearance. The male has delicate deep black markings on the head and wings. The female's plumage is relieved by its yellower underparts. It feeds almost entirely on fruit, mainly figs, supplemented with some insects, including winged termites, which are caught in flight. Although essentially sedentary, the Green Broadbill is nomadic in response to fruit availability. The female takes on most of the nesting responsibilities, including constructing the neat gourd-shaped nest and incubating the 1–3 eggs that it lays.

*Psarisomus dalhousiae*

## Long-tailed Broadbill



<b>LENGTH</b>	23–26cm (9–10in)
<b>WEIGHT</b>	50–65g (1¾–2⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forested areas, including pine- and bamboo-dominated woodland

With its long tail and well-marked head pattern, the Long-tailed Broadbill is one of the most striking birds found in Asian forests. It has black plumage on the top and rear of the head with a white collar around the neck. It has green underparts and a dark green back. The Long-tailed Broadbill feeds mainly on invertebrates, especially insects, but occasionally, it will also eat frogs, berries, and fruit. In the non-breeding season, it is typically found in parties of up to 15 birds, and is sociable even in the breeding season. Both the male and female build a bulky, conspicuous nest of roots, creepers, and dead leaves. A typical clutch consists of 4–8 eggs.



ADULT LONG-TAILED BROADBILL

*Serilophus lunatus*

## Silver-breasted Broadbill



<b>LENGTH</b>	16cm (6½in)
<b>WEIGHT</b>	25–35g (7/8–1¼oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Sometimes in gardens, but prefers forests of all types, including those selectively logged

The male and female Silver-breasted Broadbill are essentially alike. The hood is all black, relieved by a yellow eye-ring, narrow white collar, and pale bill. The underparts are pinkish buff, and the upperparts are black, offset with rich yellow markings on the wings and back. There is also a blue patch in the wings. The diet of the Silver-breasted Broadbill consists mainly of insects and fruit, with most prey being gleaned from the foliage while it perches. The species' range has contracted and its numbers have declined due to ongoing deforestation throughout much of its range.

## ASITIES

**ORDER** Passeriformes

**FAMILY** Philepittidae

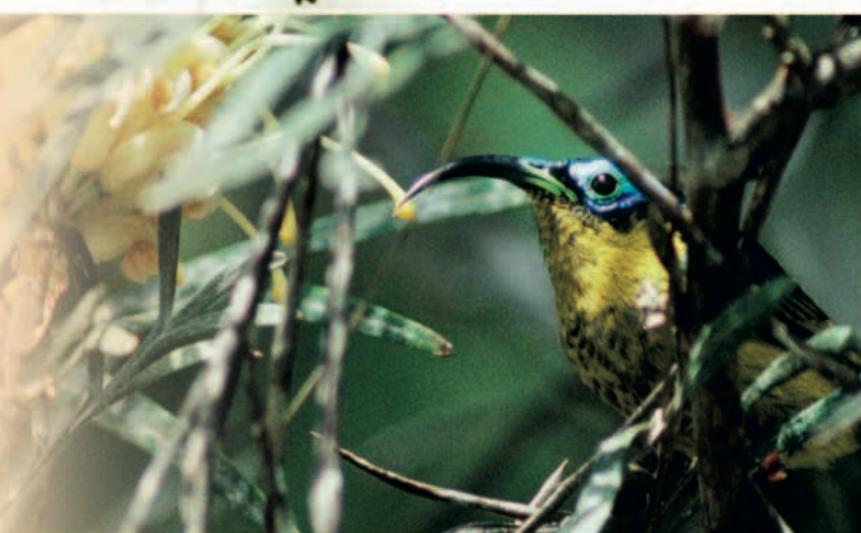
**SPECIES** 4

THIS SMALL FAMILY is restricted to evergreen forests on Madagascar, particularly in the wetter eastern part of the island. They are short, compact-bodied birds, and in the nesting season

the males develop unique fleshy wattles around the eye, unlike those in any other birds. Two species – the Common Sunbird-Asity and Yellow-bellied Sunbird-Asity – have long, decurved bills for feeding on nectar and insects. The other two species – the Velvet Asity and Schlegel's Asity – eat fruit and have shorter bills.

## FLOWER FEEDER

The spectacular bill of the Common Sunbird-Asity enables it to exploit a food out of reach to most Madagascan birds.

*Philepitta castanea*

## Velvet Asity



<b>LENGTH</b>	14–7cm (5½–5¾in)
<b>WEIGHT</b>	25–45g (7/8–1½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rainforest and its edges, often in areas with a relatively open understorey

MALE VELVET ASITY



The Velvet Asity has a short bill and tail. The breeding male has all-black plumage, with a wattle of deep green skin above the eye. In the non-breeding season, the male has yellow tips to the black feathers. The female is mainly brown above and buff with dark brown streaks below and undertakes the bulk of the breeding duties. Fruit forms the main part of this species' diet. Males gather in dispersed leks to display and call and the successful male mates with several females.

*Neodrepanis coruscans*

## Common Sunbird-Asity

<b>LENGTH</b>	9–11cm (1¹/₃₂–3⁹/₆₄in)
<b>WEIGHT</b>	5–7g (³/₁₆–¹/₄oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Canopy and subcanopy of lower montane rainforest

MALE COMMON SUNBIRD-ASITY



Like real sunbirds, the male and female Common Sunbird-Asity differ greatly in appearance. The female has a drab brown and yellow plumage in contrast to the male, who has bright plumage and a sky-blue wattle. Both sexes have a long, strikingly decurved bill. It feeds mainly on nectar, although it also catches flies in flight and joins mixed-species flocks to feed on insects, gleaned from the foliage. The female constructs a nest of moss, leaves, and small twigs, suspended from a branch.

# PITTAS

**ORDER** Passeriformes  
**FAMILY** Pittidae  
**SPECIES** 30

tail, and long legs that give them a distinctive upright stance – an adaptation to living among leaf litter on the forest floor. Their eyes are large and, unusually for passerines, they possess an excellent sense of smell, to help them find invertebrate prey in the dimly lit forest interior. Most pittas are found in southeast Asia, but notable exceptions include the African Pitta and three species from northern Australia. In spite of their brilliant coloration, pittas are rarely seen, due to their shy habits and tendency to “freeze” or quietly slip away into the undergrowth when alarmed.

THE PITTAS HAVE SPECTACULARLY beautiful plumages, often with iridescent areas that shimmer like jewels when seen from certain angles. Birds of this family are round-bodied with a strong bill, very short

## MIGRATORY SPECIES

Despite being reluctant fliers, several pittas are migratory. They include the Indian Pitta (right), one of the strongest migrants in the family. It breeds in the Himalayas and northeastern India and travels to southern India for the winter. Some make the sea crossing to Sri Lanka.



### *Pitta erythrogaster*

#### Red-bellied Pitta



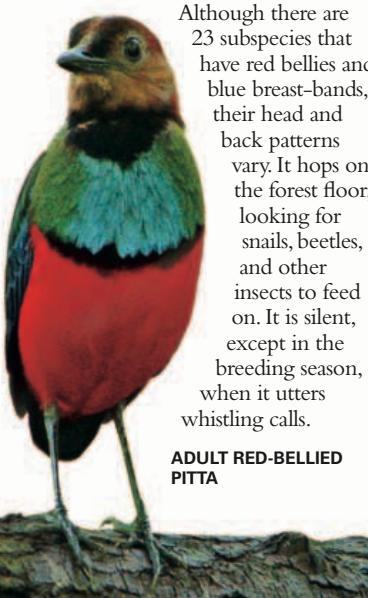
<b>LENGTH</b>	16–18cm (6½–7in)
<b>WEIGHT</b>	45–70g (1⁵/₈–2¹/₂oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Primary forest; also scrub and degraded areas of woodland

With its colourful plumage pattern consisting of a red belly and metallic blue breast-band and wings, the Red-bellied Pitta is a distinctive bird.

Although there are 23 subspecies that have red bellies and blue breast-bands, their head and back patterns vary. It hops on the forest floor, looking for snails, beetles, and other insects to feed on. It is silent, except in the breeding season, when it utters whistling calls.

#### ADULT RED-BELLIED PITTA



#### ADULT BLUE-WINGED PITTA

### *Pitta moluccensis*

#### Blue-winged Pitta



<b>LENGTH</b>	18–20cm (7–8in)
<b>WEIGHT</b>	50–150g (1³/₄–5oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Dry primary forest, mangroves, and scrub; gardens and plantations on migration

Aptly named, the Blue-winged Pitta has striking electric blue wings. It has a black crown, with a black stripe running through the eyes, separated by a brown band. Its throat is white, its back is green, and its buff underparts become crimson around the belly. It has a very short tail. Both the sexes look alike. The diet of this bird is varied and includes insects and their larvae. It also feeds on crustaceans and snails, cracking their shells open with a stone, which it uses as an anvil. It makes a nest on the ground and lays 4–6 eggs.

### *Pitta reichenowi*

#### Green-breasted Pitta



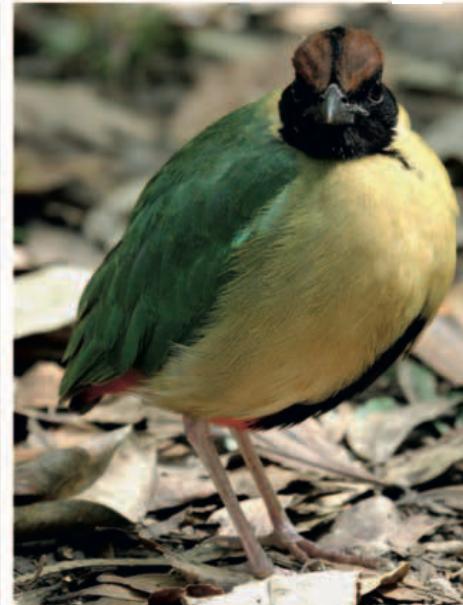
<b>LENGTH</b>	17–19cm (6½–7½in)
<b>WEIGHT</b>	70g (2¹/₂oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest with dense undergrowth and thickets; also tall, secondary woodland



#### ADULT GREEN-BREASTED PITTA

Very shy and rarely seen, the Green-breasted Pitta is a poorly known bird. Its plumage is largely green, but it has buff stripes above the eyes, joining at the back of the head, a white throat, with a small black patch, and chestnut underparts. This pitta feeds on caterpillars, beetles, snails, and worms. Its voice is a bell-like whistle, given at regular short intervals. Little is known about its breeding habits.



### *Pitta versicolor*

#### Noisy Pitta



<b>LENGTH</b>	19–21cm (7½–8½in)
<b>WEIGHT</b>	70–125g (2½–4oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Wet gullies in lowland rainforest with thick undergrowth; also wet eucalyptus forest

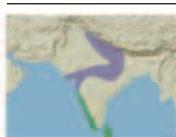
The Noisy Pitta has a black face and a brown crown with a central black streak. Its back is green and its underparts are buff. The Noisy Pitta is no more vocal than many other pittas, but its low-whistled calls and cat-like purrs are distinctive. It forages on the forest floor and eats insects, woodlice, worms, and snails, as well as berries and fruit. Placed on the ground, its nest is a large, domed structure. It is constructed between October and April. The female Noisy Pitta lays 3 or 4 eggs and both the male and female incubate the eggs, which takes just over 14 days. It is one of the three pitta species that breeds only in Australia.

The Indian Pitta is the only bird of the pitta family to be found in the Indian subcontinent. It has a black face, with green upperparts and yellow-buff underparts. The bird arrives at its breeding grounds in May, and starts building its large, oval nest with leaves, roots, grass, and twigs. It lays up to six eggs, which are incubated by both adults. The young are fed on insects, their larvae, and worms.

#### ADULT INDIAN PITTA

### *Pitta brachyura*

#### Indian Pitta



<b>LENGTH</b>	18cm (7in)
<b>WEIGHT</b>	45–65g (1⁵/₈–2³/₄oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Dense undergrowth in lowland, and deciduous and evergreen forest in foothills



# MANAKINS

**ORDER** Passeriformes  
**FAMILY** Pipridae  
**SPECIES** 48

THIS FAMILY OF SMALL forest birds is confined to the American tropics, from southern Mexico southwards to northern

Argentina. The majority of species live in lowland rainforest, and nearly all are year-round residents. Manakins have a large head and a short bill and tail. Males are colourful, with an erectile throat patch or a crest in some species, whereas females are dull green and all look much alike.

## TAIL DEVELOPMENT

The Blue Manakin is one of a few manakins in which mature males develop long central tail feathers, absent in younger males.



**FEMALE PIN-TAILED MANAKIN**

## Pin-tailed Manakin



**LENGTH**  
11–13cm (4½–5in)  
**WEIGHT**  
13–15g (⅓–⅔oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Humid Atlantic forest, in lowland and foothills

Found only in the Brazilian Atlantic forest, the Pin-tailed Manakin is a quiet bird. The male is distinctive, with its red forecrown, black head, and startling yellow eyes. Its underparts are white, with a red rump, black wings, and sharp, pointed central tail-feathers. The males have a lek system, in which each bird displays within the hearing distance of its neighbour.



**MALE BLUE MANAKIN**

## Blue Manakin



**LENGTH**  
15cm (6in)  
**WEIGHT**  
25g (⅔oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Humid forest and second growth in the Atlantic forest, usually in lowland and on slopes

An attractive bird, the male Blue Manakin has a brilliant red crown and black and blue plumage. The male's elongated central tail-feathers are also a distinctive feature. The female is drabber, being entirely clad in olive-green. However, its colouring is an effective camouflage, especially when it is nesting, because it solely tends to the young. One of the most common forest birds of southern Brazil, the Blue Manakin has a whining, almost cat-like call at leks. The male performs an intricate courtship dance before a female.



## TAIL DEVELOPMENT

The Blue Manakin is one of a few manakins in which mature males develop long central tail feathers, absent in younger males.

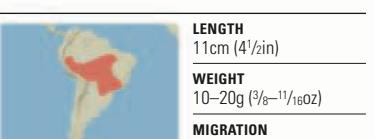
## BEHAVIOUR

Manakins live in the lower levels of the forest and are highly active, flitting among branches to pluck fruit, their main food. They also eat a few insects. Males perform an elaborate courtship display that may include wing-flicking, acrobatic jumps, and butterfly-like flights, depending on the species. These often vigorous displays may in some species be carried out in groups of males, on the ground or lined up on a branch, where each tries to outperform its rivals.



**MALE BAND-TAILED MANAKIN**

## Band-tailed Manakin



**LENGTH**  
11cm (4½in)  
**WEIGHT**  
10–20g (⅓–⅔oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Seasonally flooded lowland forest and gallery forest in savanna

## *Antilophia galeata*

### Helmeted Manakin

	<b>LENGTH</b> 15cm (6in)
	<b>WEIGHT</b> 20–25g (1⅓–7/8oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Woodland along streams or rivers in savanna areas



**MALE HELMETED MANAKIN**

The male Helmeted Manakin is a large, long-tailed manakin, with an all-black plumage, except for a spectacular red crest, which runs across its upper back and ends in bristle-like feathers on the forehead.

The female shares its tufty forecrown feathers and long tail, but is entirely olive-green. Fruit and insects constitute the Helmeted Manakin's diet. Its nest, like those of its relatives, is a shallow, fragile-looking cup of twigs and leaves suspended up to 10m (33ft) above the ground. It lays two eggs, but little else is known about this bird's breeding habits. It has a rollicking, throaty call that is a common sound in its favoured savanna woodland.

# COTINGAS

ORDER Passeriformes  
FAMILY Cotingidae  
SPECIES 96

tits or chickadees. Male cotingas are often brilliantly coloured, and include several of the most spectacular South American birds, such as the two bright orange cock-of-the-rock species. Many are adorned with decorative plumes or crests, and a few have extraordinary fleshy wattles on the forehead or hanging below the bill. In contrast, female cotingas generally have drab plumage.



#### INSECT EATER

Some cotingas, such as this Black-and-white Becard, glean large insects from foliage, or dart from a perch to snatch them in mid-air, like a flycatcher.

THE COTINGAS VARY HUGELY in size, appearance, and the way they breed, making them one of the most diverse bird families of the New World tropics. The largest cotingas – umbrellabirds – are as big as small crows, while the smallest species are the size of

#### FAR-CARRYING CALL

The male Three-wattled Bellbird is remarkable for its strange facial wattles and for its extremely loud call, which reverberates through the treetops.

## BEHAVIOUR

Cotingas live in lowland rainforest and highland cloudforest, particularly in the treetops, but an exception to this rule are the plantcutters, which are found in fields and on dry, shrub-covered slopes in the Andes. Most cotingas feed on fruit, and to help them swallow this food some species, such as the fruiteaters and fruitcrows, have a very wide gape. However, plantcutters eat plant buds, leaves, and seeds, and the becards and tityras are insect-eaters. Many male cotingas have loud courtship or territorial vocalizations. For example, bellbirds utter repetitive calls that can be heard over a kilometre away, while the Capuchinbird has a mooing call and also produces a bizarre droning noise. Males of several species are polygamous and assemble at a lek to attract females. Their displays may be mainly visual, as in cocks-of-the-rock, or can take the form of competitive singing bouts, as in the drab-coloured pihas.



#### *Schiffornis turdina*

## Thrush-like Schiffornis



#### LENGTH

16cm (6 1/2in)

#### WEIGHT

25–35g (7/8–1 1/4oz)

#### MIGRATION

Non-migrant

**HABITAT** Interior of humid forest; more occasionally, tall secondary growth



The Thrush-like Schiffornis is mainly brown, although some of the 13 subspecies currently recognized have grey heads. It can be overlooked in the forest because of its dull plumage, unless the male gives away its presence by its song, an unmistakable whistled phrase. It is a solitary feeder, foraging on fruit and insects.

Its nest is a bulky cup of dead leaves and rootlets, usually set in a hollow, in which the bird lays two eggs and incubates them for three weeks.

The nestlings are notable for their long, copious black down.

**ADULT THRUSH-LIKE SCHIFFORNIS**

#### *Phytotoma rara*

## Rufous-tailed Plantcutter



#### LENGTH

18–20cm (7–8in)

#### WEIGHT

40–45g (1 1/16–1 5/8oz)

#### MIGRATION

Partial migrant

**HABITAT** Thorn scrub, woodland edges, and clearings, as well as farmland and orchards

Of the three species of plantcutters, the Rufous-tailed Plantcutter has, perhaps, the most striking appearance. The male has a rufous crown, “beady” red eyes, and black cheeks with bold white markings. Its bill is short and thick with serrated edges, which it uses to strip off buds, leaves, and fruit. Its underparts are rufous with black wings. In contrast, the female is less distinctive, being mainly brown above and on the head, and buffy below streaked brown, though it shares the bright red eyes of the male.

The bird feeds mainly on grass, buds, shoots, and leaves, taken both on the ground and in the bushes. The adults and the young also occasionally feed on insects. The Rufous-tailed Plantcutter’s nest is a shallow cup-shaped structure made of twigs, placed in a dense thorn shrub, where



#### MALE RUFOUS-TAILED PLANTCUTTER

The bird lays up to four eggs. This bird gathers in groups during the non-breeding season, when the populations in the extreme south of its range move north.

#### *Pipreola arcuata*

## Barred Fruiteater



#### LENGTH

23cm (9in)

#### WEIGHT

100–125g (3 5/8–4oz)

#### MIGRATION

Non-migrant

**HABITAT** Montane forest and its borders



#### MALE BARRED FRUITEATER

The male Barred Fruiteater has a striking appearance, with its red bill and pale eyes. It has a black head, and green and yellow barred underparts. The female shares most of these features, but lacks the black hood. The Barred Fruiteater, as its name suggests, seems to eat only fruit, taken while it is perching. Its song is an extremely high, thin, almost hissing “se-e-e-e-a-a-a”. Its nesting behaviour is almost completely unknown.

*Oxyruncus cristatus*

## Sharpbill



LENGTH	17cm (6½in)
WEIGHT	40g (1⅓oz)
MIGRATION	Non-migrant

**HABITAT** Tropical forest mainly in lowland, but also in lower hills

The Sharpbill has a broad-based sharp bill, with a narrow crest of red feathers on its head. It has mainly green upperparts and yellow or white underparts, spotted and streaked with black. The crest of red feathers is less dense in the female and completely absent in young birds. The bird forages on moss and epiphytes, as well as on rolled dead leaves in

## ADULT SHARPBILL



search of invertebrates and seeds. It also feeds on fruit.

The Sharpbill is much more frequently heard than seen. Its most characteristic song is a descending whistle with the quality of a falling bomb. In the breeding season, several males assemble to take part in lekking. They sing in close proximity, but are not in sight of each other. Over the years, there has been considerable debate over which family the Sharpbill belongs to. DNA tests, however, have indicated that it is a member of the cotinga family.

*Cotinga amabilis*

## Lovely Cotinga



LENGTH	18cm (7in)
WEIGHT	65–75g (2⅔–2½oz)
MIGRATION	Non-migrant

**HABITAT** Mainly the canopy of humid, tropical evergreen forest



MALE LOVELY COTINGA

Aptly named, the male Lovely Cotinga has largely deep turquoise-blue plumage, with a large purple throat patch and an even larger patch on its breast and the belly. Its wings are mainly black. The female, like several of its relatives, has a mainly brown head and upperparts, white-grey underparts with brown streaks and spots, and neat white feather tips on its back. As the bird spends most of its time in the canopy of tall forest, its natural history is not well known. The Lovely Cotinga feeds on fruit taken from the tree while the bird is in flight, as well as on some insects and even small lizards. The Lovely Cotinga

has a strong flight. Its outer wing feathers produce a rattling sound, which also features in the bird's courtship display flights. Only one nest belonging to the Lovely Cotinga has ever been found, and that, too, was impossible to observe closely as it was sited more than 30m (98ft) above the ground.

*Rupicola peruvianus*

## Andean Cock-of-the-rock



LENGTH	30–32cm (12–12½in)
WEIGHT	200–275g (7–10oz)
MIGRATION	Non-migrant

**HABITAT** Montane forest, especially in ravines



## MUD NESTS

The Andean Cock-of-the-rock builds its nest with mud, in the form of a truncated cone that is usually attached to a rock face. The nest's cup is lined with vegetable fibre. Several nests may be sited in close proximity to one another.

## SINGLE PARENT

The female builds the nest, incubates the egg, and feeds the young on her own; the male does not help with raising the young.



## ADULT MALE



MALE THREE-WATTLED BELLBIRD

*Procnias tricarunculatus*

## Three-wattled Bellbird



<b>LENGTH</b>	25–30cm (10–12in)
<b>WEIGHT</b>	150–200g (5–7oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Montane forest, moving lower in the non-breeding season

**RED LIST CATEGORY** Vulnerable

Most of the male Three-wattled Bellbird's plumage is warm chestnut, contrasting markedly with its brilliant white head and neck. Three black wattles hang limply from the base of the bill. The female, in contrast, is mainly olive-green, blending easily with foliage. This species feeds mainly on fruit and berries. While many cotingas move seasonally, primarily following fruit availability, the Three-wattled Bellbird is a pronounced migrant, mainly altitudinally, moving to much lower ground in the non-breeding season but those in northern Costa Rica also move into lowland Nicaragua. Ironically, it is this adaptability which has been the cause of its decline, as destruction of lowland forest in its range is continuing apace.

*Procnias nudicollis*

## Bare-throated Bellbird



<b>LENGTH</b>	27–29cm (10½–11½in)
<b>WEIGHT</b>	150–225g (5–8oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Primary forest in both lowland and foothills

Unlike the other three species of bellbird, the Bare-throated Bellbird lacks wattles. With the exception of the naked green throat skin, the male is almost entirely white, which makes it easy to identify, especially when it is perched above the forest canopy, giving its metallic "bock" calls that sound like an anvil being hit. The female and the juvenile male are mainly olive-green. The species is a rather popular cagebird.

ADULT MALE SINGING

*Cephalopterus penduliger*

## Long-wattled Umbrellabird



<b>LENGTH</b>	36–41cm (14–16in)
<b>WEIGHT</b>	350g (13oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest, but also found in secondary growth and even adjacent farmland

**RED LIST CATEGORY** Vulnerable

The Long-wattled Umbrellabird is among the largest passerines found in South America and the most threatened of the three species of umbrellabird, all of which are characterized by a feathered wattle hanging from the

MALE LONG-WATTLED UMBRELLABIRD



<b>LENGTH</b>	22cm (8½in)
<b>WEIGHT</b>	45–50g (1½–1¾oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Woodland, forest, and open areas, including gardens with trees, from sea level to highland



MALE SWALLOW-TAILED COTINGA

*Carpodectes nitidus*

## Snowy Cotinga



<b>LENGTH</b>	19–21cm (7½–8½in)
<b>WEIGHT</b>	90–125g (3¼–4oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Tall secondary growth and, more especially, the canopy in humid forest

The Snowy Cotinga is one of three mainly white cotingas, which are restricted as a group to southern Central America and extreme northwest South America. The male Snowy Cotinga has a bluish grey cast to the crown and mantle, whereas the female is mainly grey, with a black tail and wings, which have many white fringes to the feathers. The juvenile male has some dark patches on the wings. Its diet is mainly fruit and the species is known to wander widely in search of rich feeding sources.



JUVENILE MALE SNOWY COTINGA

In a family rich in unmistakably plumaged birds, the Swallow-tailed Cotinga still stands out with its black, yellow, and green plumage and its deeply forked tail. The male has a brighter plumage than the female. This species feeds on insects and fruit and its nest is a tiny cup on a branch.



# TYRANT FLYCATCHERS

**ORDER** Passeriformes  
**FAMILY** Tyrannidae  
**SPECIES** 430

Most species live in the tropics, and those that breed in temperate regions, including the 30 species that nest in North America, usually migrate there in winter. Tyrant flycatchers are typically brown, olive-green, pale yellow, or grey in colour, and some are so similar that they can be identified only by their calls or song.



## VARIED BILLS

Bill shape reflects a bird's diet. The Great Kiskadee (above) has a broad, triangular bill, suited to large prey. Bristle-like feathers around the bill guard its face from struggling prey.

THESE SMALL AND MEDIUM-SIZED birds make up the largest bird family in the New World. They occur from the taiga of Alaska and Canada south to Patagonia, in virtually every habitat.

## HOLE-NESTER

Species in the genus *Myiarchus*, such as this Great Crested Flycatcher, are unusual among the tyrant flycatchers due to their hole-nesting habits. This bird has brought an insect back to its nest-hole.

## BEHAVIOUR

This diverse family gets the "tyrant" part of its name from the noisy, aggressively territorial behaviour of a few species, especially kingbirds. Above all, however, it is skill at catching insects and other invertebrates that unites the tyrant flycatchers. They hunt by hawking; they sit patiently on a perch, quickly dart away to snatch a passing insect, then return to the same perch. Every species has its own variation of this technique – some pluck prey off leaves, some drop to the ground or the surface of water, and others chase insects in mid-air. As a result, many different species can share the same habitat, with each exploiting a different food source. The majority of tyrant flycatchers form monogamous breeding pairs, and generally both sexes raise the young. The nest is usually cup-shaped, but can be spherical or a "bag" suspended below a branch.



ADULT YELLOW-BELLIED ELAENIA

*Elaenia flavogaster*

## Yellow-bellied Elaenia



**LENGTH**  
17cm (6½in)

**WEIGHT**  
20–30g (1¹/₁₆–1¹/₁₆oz)

**MIGRATION**  
Non-migrant

**HABITAT** Wooded habitats, including second growth, scrub, savanna, and brush; absent from dense forest

One of the most common in its group, the Yellow-bellied Elaenia is easily identified by its conspicuous crest, and distinctive voice. It has olive-brown upperparts and pale yellow lower underparts. This bird feeds on insects and berries. The nest is cup-shaped and usually placed on a low branch; two eggs are laid and sometimes two broods are attempted.

*Myiarchus islerorum*

## Chapada Suiriri



**LENGTH**  
16cm (6½in)

**WEIGHT**  
20–25g (1¹/₁₆–7/₈oz)

**MIGRATION**  
Non-migrant

**HABITAT** Well-wooded savanna areas

The description of the Chapada Suiriri by scientists, in 2001, was the answer to a long-standing mystery, as anomalous specimens of its close relative, the Suiriri Flycatcher (*S. suiriri*), had baffled ornithologists for almost 75 years. It was possible to identify the Chapada Suiriri by its call (a distinctive male-female duet), only because of modern techniques used to record birds' voices. A classic example of what scientists refer to as a "cryptic" species, which are often very similar in plumage but different in voice and behaviour, the Chapada Suiriri has a small bill and is principally grey above and paler below, with a pale band across the tip of the otherwise dark tail. It is named after a region of Brazil where it is particularly abundant. Details about its lifestyle are yet to be assembled, but it is known to feed mainly on fruit and small arthropods. Aspects of its breeding habits are, however, almost entirely unknown as yet.

ADULT CHAPADA SUIRIRI



*Pseudotriccus ruficeps*

## Rufous-headed Pygmy Tyrant



LENGTH	11cm (4½in)
WEIGHT	11g (⅓oz)
MIGRATION	Non-migrant

**HABITAT** Humid mountain or dense cloud forest, usually at 1,850–3,500m (6,000–11,500ft)

Aptly named for its bright orange-rufous head and throat, the Rufous-headed Pygmy Tyrant is easily identified. The upperparts are dark olive, and the breast and flanks are greyish olive. It has dark chestnut wings and tail with rufous edging and feathering. It has short, rounded wings that are typical of a bird that needs to fly only short distances – from perch to perch.

This species forages on insects close to the ground in the forest understorey, snatching prey from leaves in sudden vertical sallies and making strange snapping noises with its bill as it does so. Common in some parts of its Andean range, but uncommon in others, the Rufous-headed Pygmy Tyrant is found in several protected areas, such as the Machu Picchu Historical Sanctuary in Peru.

*Phylloscartes paulistus*

## Sao Paulo Tyrannulet



LENGTH	11cm (4½in)
WEIGHT	10g (⅓oz)
MIGRATION	Non-migrant

**HABITAT** Humid tropical forest and forest borders, usually below 400m (1,300ft)

The most distinctive feature of the Sao Paulo Tyrannulet's plumage is the broad black crescent on the ear feathers, which contrasts with the pale yellow eyebrow and sides of the nape. The pale wing-bars are usually indistinct, not contrasting

**ADULT SAO PAULO TYRANNULET**



greatly with the olive wings. The San Paulo Tyrannulet darts forward from its perch for insects in the forest. It is usually found singly or in pairs, often with flocks of other species.

This enigmatic species is found in the lowland Atlantic forest, one of the world's most threatened ecosystems. Although the remaining forests continue to be destroyed for agriculture, industrialization, and mining, the Sao Paulo Tyrannulet is common in several protected areas, particularly in Brazil.



## GREY-HOODED FLYCATCHER

*Mionectes rufiventris*

## Grey-hooded Flycatcher



LENGTH	14cm (5½in)
WEIGHT	13g (⅓oz)
MIGRATION	Non-migrant

**HABITAT** Humid forest and secondary growth in understorey, below 1,000m (3,300ft)

Easily recognized by its grey head, the Grey-hooded Flycatcher has a grey chest and olive upperparts. During courtship, males sing in dispersed groups of two or three to attract females. The song, unusual among tyrant flycatchers, starts slowly, accelerates rapidly, and then stops abruptly. When a female enters the "lek" (display area), the male displays by jumping and wing-flicking.

*Myiornis auricularis*

## Eared Pygmy Tyrant



LENGTH	7cm (2¾in)
WEIGHT	5g (⅓oz)
MIGRATION	Non-migrant

**HABITAT** Humid forest and dense shrubby growth along forest edges, up to 1,250m (4,100ft)

One of the smallest of all tyrant flycatchers, the Eared Pygmy Tyrant weighs even less than some hummingbirds. It has a rounded grey head, and the most distinguishable feature of its plumage is the large, crescent-shaped black ear patch, which gives the species its common name. It is found in the forests of Brazil, Paraguay, and Argentina.



ADULT EARED PYGMY TYRANT

*Gubernetes yetapa*

## Streamer-tailed Tyrant



LENGTH	35–42cm (14–16½in)
WEIGHT	70g (2½oz)
MIGRATION	Non-migrant

**HABITAT** Damp grassland and marshes, with nearby shrubland, in lowland areas

wings raised in display



## MALE AND FEMALE IN DUETTING DISPLAY

lowers its head, rhythmically lifts and lowers its long tail, and raises both wings overhead, while whistling "tewear-tee-tear" or warbling "tea-whittle, tea-whittle" in an excited manner.

This bird flies after large insects from the tops of bushes and trees, usually hunting over marshy ground and taking insects in flight.

Mostly pale grey from crown to rump, the Streamer-tailed Tyrant has a highly distinctive plumage. It has a broad chestnut-brown eye-stripe and front collar that contrasts with the white throat and grey underparts. The black wings have rufous bases, which form an obvious panel on the main flight feathers when the bird is flying. The long, graduated, and deeply forked tail is black. The male has a longer tail and brighter plumage than the female.

Pairs of Streamer-tailed Tyrants often perform a spectacular duetting ritual that probably signals territory ownership but may also have a role in courtship or pair-bonding. The pairs sit 10–50cm (4–19½in) apart on a prominent perch, facing each other or in opposite directions. Each bird

*Todirostrum cinereum*

## Common Tody-Flycatcher



<b>LENGTH</b>	10cm (4in)
<b>WEIGHT</b>	6g (1/32oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open and semi-open areas with trees, particularly gardens, and woodland

### ADULT COMMON TODY-FLYCATCHER

A familiar bird in Central and South America, the tiny Common Tody-Flycatcher has a dark grey face, a long bill, bright yellow irises, and yellow underparts.

The bird has a peculiar foraging action: the bird moves sideways along a perch, with its wings drooped and the tail cocked over the head, which it then wags from side to side. It can look quite comical as it flutters and shuffles around the vegetation of its habitat.

common name suggests, this bird has a shovel-shaped bill. As is typical of its genus, the White-throated Spadebill also has large eyes, bristles around its bill, and a short tail. Its contrasting face pattern comprises dark stripes around the bill and ear, black ear feathers, and a pale eye-ring. It has a semi-concealed yellow crown patch (smaller in the female), which is sometimes raised in the shape of a fan when a male is singing animatedly. The song is a high, thin rattling trill, rising slightly and then descending. It forages low in the undergrowth, rapidly darting upwards to glean insects from the undersides of leaves, snapping its bill upon capture. These birds usually occur in pairs and rarely join mixed-species flocks.

### ADULT WHITE-THROATED SPADEBILL

*Platyrinchus mystaceus*

## White-throated Spadebill



<b>LENGTH</b>	10cm (4in)
<b>WEIGHT</b>	10g (3/8oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Understorey of humid and dry forest, sometimes in thickets along forest edges

Despite being widespread, the tiny White-throated Spadebill is easily overlooked in its dark forest habitat. As its



### ADULT WHITE-THROATED SPADEBILL

*Onychorhynchus coronatus*

## Royal Flycatcher



<b>LENGTH</b>	15–18cm (6–7in)
<b>WEIGHT</b>	14g (1/2oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Evergreen and deciduous forest and woodland, especially near shady watercourses

The identifiable feature of the Royal Flycatcher, also known as the Amazonian Royal Flycatcher, is its concealed crest. When revealed – during display or when it behaves aggressively – the crown of this hammer-headed bird resembles the fan of a peacock. Each crest feather is elongated, coloured red in the male and orange in the female, with violet-black tips. The effect is enhanced when the bird sways its head and slowly opens and closes its bill to reveal a bright orange mouth.

*Hirundinea ferruginea*

## Cliff Flycatcher



<b>LENGTH</b>	16–19cm (6 1/2–7 1/2in)
<b>WEIGHT</b>	30g (1 1/16oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Cliffs, rocky outcrops, slopes affected by landslides, and steep banks, bordered by forest

It is in flight that the Cliff Flycatcher reveals the most distinctive feature of its plumage: the broad rufous band on the wings. It is otherwise largely brown, although some subspecies have chestnut on the belly, rump, and uppertail. Unlike its relatives in its choice of habitat, the Cliff Flycatcher habitually breeds on rockfaces after it finds a suitable ledge and constructs

### ADULT CLIFF FLYCATCHER

*Sayornis phoebe*

## Eastern Phoebe



<b>LENGTH</b>	12–16cm (4 1/2–6 1/2in)
<b>WEIGHT</b>	20g (1 1/16oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Forest and forest edges and open deciduous woodland near water; also open areas in winter

Greyish olive on its upperparts, the Eastern Phoebe has a dark crown and chest and white or grey underparts. It has a long, dark tail, which it constantly moves up and down. The male finds and displays potential nest

### ADULT EASTERN PHOEBE



sites to the female, who chooses the site, usually a manmade structure such as a bridge or building, and constructs the nest. This affinity for houses means that the Eastern Phoebe is a familiar bird across much of North America. It has also meant that the species has been able to expand its range and population, despite the clearance of riverside vegetation.

A solitary species, the Eastern Phoebe forages mainly for small flying insects from exposed perches in open areas. Outside the breeding season, it will eat fruit in cold weather. It is a partial migrant – northern populations migrate south to southern USA and Mexico, while southern birds are resident.



**EASTERN PHOEBE**

Named after its song (a hoarse “fee-bee”), the Eastern Phoebe often hunts for insects near water. It typically flicks its tail up and down while perching.



*Contopus sordidulus*

## Western Wood Pewee



<b>LENGTH</b>	14–16cm (5½–6½in)
<b>WEIGHT</b>	13g (½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in semi-open mature woodland; winters in tropical forest and forest edges

The Western Wood Pewee's plumage is mainly dark grey-brown, with two indistinct wing-bars and slightly paler eye-ring, belly, and undertail feathers. This bird makes flycatching sallies from exposed perches, taking insects in the air or gleaning prey from foliage. It is a long-distance migrant. It breeds in western USA and migrates through Central America to wintering grounds, mainly in northwest South America.

The Western Wood Pewee is almost identical to its closely related species, the Eastern Wood Pewee (*C. virens*), which is found mainly in southeastern North America. The two species are reliably distinguishable only by song – the Western Wood Pewee has a soft, nasal whistle – although the Western Wood Pewee is darker and has narrower and duller wing-bars.



ADULT WESTERN WOOD PEWEE

*Empidonax flaviventris*

## Yellow-bellied Flycatcher



<b>LENGTH</b>	12–15cm (4½–6in)
<b>WEIGHT</b>	12g (½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in upland coniferous and mixed forest and swamps; winters in dense vegetation

Dull olive above and yellow beneath, the Yellow-bellied Flycatcher has white wing-bars that contrast with its dark wings. It also has a distinct pale eye-ring. It is distinguished from the Acadian Flycatcher (right), a species of the same genus, by its smaller bill, shorter tail, and yellower underparts and differs from the Pacific-slope Flycatcher (below) by its call and brighter upperparts.

A long-distance migrant, the Yellow-bellied Flycatcher breeds in western Canada and northeastern USA, and winters in Central America. Males have longer wings than females and arrive on breeding grounds about four days earlier; it is probable that males and females winter in different areas.

*Empidonax virescens*

## Acadian Flycatcher



<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	13g (½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in mature forest, often near water; winters in lowland forest or shady plantations

The Acadian Flycatcher has the longest wings of the *Empidonax* tyrant flycatchers and, accordingly, it migrates the furthest south in winter. It also has the longest and broadest bill of the genus. The Acadian Flycatcher differs in plumage from other members of its genus by its brighter green upperparts and whiter underparts.



ADULT ACADIAN FLYCATCHER



ADULT PACIFIC-SLOPE FLYCATCHER

*Pyrocephalus rubinus*

## Vermilion Flycatcher



<b>LENGTH</b>	14cm (5½in)
<b>WEIGHT</b>	14g (½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Variety of open areas, often near water, with scrub, bushes, or trees

With its bright red crown and underparts, contrasting with a dark brown eye mask, ear feathers, and upperparts, the male Vermilion Flycatcher is the most vividly coloured member of a family with largely dull plumage. The female has very different plumage from the male, being pale grey above and white below. This pattern is offset by a dark eye mask, streaked chest, and pink belly and vent.

Widespread from southern North America to northern Patagonia, the Vermilion Flycatcher is a familiar inhabitant of open areas. The male is visible at long range and often attracts attention with its impressive courtship display: its bushy crest raised and chest puffed out, it flutters upwards to about 20m (66ft), singing all the time, before descending.

As might be expected for a species with such a large range, there is considerable variation among its 12 subspecies, two of which are endemic to the Galapagos Islands and are sometimes treated as separate species. Both are considerably smaller than mainland birds, and the females differ considerably in plumage.



MALE VERMILION FLYCATCHER

*Muscisaxicola albifrons*

## White-fronted Ground Tyrant

**LENGTH**

21cm (8½in)

**WEIGHT**

35g (1¼oz)

**MIGRATION**

Non-migrant

**HABITAT** Montane grassland, barren rocky or grassy slopes, and bogs at 4,000–5,600m (13,000–18,400ft)

The largest member of its genus, the White-fronted Ground Tyrant has long wings that – at rest – extend a long way down its tail. In a largely

### ADULT WHITE-FRONTED GROUND TYRANT

homogeneous genus comprising species that look almost identical, the White-fronted Ground Tyrant is relatively distinctive. It has a conspicuous white forehead merging into white eyebrows. The upperparts are grey and the wings silvery, while the underparts are grey, becoming white on the belly and vent. The central tail feathers are dark, and the outer ones are white.

This ground tyrant occurs at perhaps the highest altitude of any member of its family. It is terrestrial, running after prey or chasing it in short flights. Perhaps because of its restricted and inaccessible distribution, this species is not well known.

*Xolmis velatus*

## White-rumped Monjita

**LENGTH**

20cm (8in)

**WEIGHT**

30g (1½oz)

**MIGRATION**

Non-migrant

**HABITAT** Savanna and semi-open areas with bushes or trees, often near water or buildings or both

Named for its broad white rump, the White-rumped Monjita has a white tail base that contrasts with the black uppertail and the brownish grey back. In flight, a prominent white wing stripe is visible across the base of the flight feathers. The underparts are white, as is most of the head.

The White-rumped Monjita is typical of the monjitas in that it inhabits open grassland areas with scattered bushes or trees. A tame species, it allows observers a close approach as it perches conspicuously on a bush, branch, wire, or fence-post. From these vantage points, the White-rumped Monjita drops to the ground or hovers in search of its insect prey.

While the species is mainly silent, it has a surprisingly intense dawn song, sometimes heard at night, consisting of a whistled “jew” delivered at 1–5 second intervals. Little is known about the breeding habits of the White-rumped Monjita, although in the Brazilian “cerrado” (savanna), the species may use holes in termite mounds that have been excavated by other species, such as Campo Flickers (see p.326) or Orange-fronted Parakeets (*Aratinga canicularis*).

**ADULT WHITE-RUMPED MONJITA****ADULT MASKED WATER TYRANT***Fluvicola nengeta*

## Masked Water Tyrant

**LENGTH**

15cm (6in)

**WEIGHT**

20g (1¼oz)

**MIGRATION**

Non-migrant

**HABITAT** Semi-open lowland near bodies of fresh water

The Masked Water Tyrant is conspicuous for its bold plumage, which is white in colour, except for the contrasting black eye-stripe, wings, and tail, which has a broad white tip.

The Masked Water Tyrant has an impressive courtship display. Pairs of these birds face each other with their tails spread out and also raised, bobbing up and down continuously. Sometimes the male fans its tail and spreads its wings horizontally to reveal the black underside.

Unusually for most tyrant flycatchers, the Masked Water Tyrant is rarely seen away from water and is even happy standing in it. These birds feed singly or in pairs, on open scrubby ground, marshes, usually along the edges of watercourses, and even on floating vegetation. They hunt aquatic insects typically by darting forward and striking at their prey. A usually tame species, Masked Water Tyrants are found in Brazil, Ecuador, and Peru.

*Megarynchus pitangua*

## Boat-billed Flycatcher

**LENGTH**

21–24cm (8½–9½in)

**WEIGHT**

70g (2½oz)

**MIGRATION**

Partial migrant

**HABITAT** Various wooded and forest habitats, and semi-open areas with tall trees

Almost identical to the common and widespread Great Kiskadee (see p.348), although the two are not closely related, the Boat-billed Flycatcher has a black crown with a concealed orange patch, white eyebrow, black eye-stripe, white throat, brownish olive upperparts, and yellow underparts. However, it differs from the Great Kiskadee in being larger with greener upperparts and browner wings and tail; most noticeably, it also has a curved bill that is stouter and broader than that of the Great Kiskadee. The Boat-billed Flycatcher has the biggest bill of all the tyrant flycatchers and uses it to catch large insects and even small reptiles and amphibians, which are bashed against a perch before being consumed.

The Boat-billed Flycatcher nods its head as it calls: the most distinctive sound is a nasal, repeated “nay-nay” – when a pair calls together, the duet is poorly synchronized. It also has a distinctive dawn song.

*Colonia colonus***Long-tailed Tyrant**

<b>LENGTH</b>	18–28cm (7–11in)
<b>WEIGHT</b>	18g (½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Edges and clearings in humid tropical forest, secondary woodland

Aptly named for its most peculiar feature – the elongated, blade-shaped central tail feathers – the Long-tailed Tyrant is distinctive. These feathers are flicked up and down when the bird calls and appear to be ornamental in function. The male is predominantly black with a white forehead, crown, and rump, while the female is greyer, with shorter tail streamers.

Found in Brazil, the Long-tailed Tyrant spends much of its time in the forest canopy, mostly on an exposed branch or on dead tree stumps



ADULT MALE

with holes or cavities that it can use for nesting. From a high perch, it undertakes flycatching sallies of up to 10m (33ft) in length, specializing in catching stingless sweatbees.

*Pitangus sulphuratus***Great Kiskadee**

<b>LENGTH</b>	20–23cm (8–9in)
<b>WEIGHT</b>	65g (2³/₈oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Wide variety of habitats from urban areas to open grassland and forest edges

The call of the Great Kiskadee is one of the most familiar sounds of South America: the loud, shrill “kiss-ka-dee” gives the species its common name. The Great Kiskadee is a large, boldly patterned, and colourful tyrant flycatcher. Its black crown (with a semi-concealed yellow crown patch) and broad black eye mask contrast with the striking white eyebrow and throat. The upperparts are olive-brown, with rufous edges to the tail.

ADULT GREAT KISKADEE



ADULT CATTLE TYRANT

*Machetornis rixosa***Cattle Tyrant**

<b>LENGTH</b>	19cm (7 ½ in)
<b>WEIGHT</b>	30g (1 ¼ oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Semi-open and open areas, including agricultural land and city parks

With mainly dull olive-brown upperparts and a darker eye-stripe, the Cattle Tyrant has pale yellow underparts. Like several other tyrant flycatchers, it has a concealed red or orange crest. As its name suggests, the Cattle Tyrant is best known for its affinity with cattle, feeding on

insects they disturb and even using them as look-out perches. However, the Cattle Tyrant predares the arrival of livestock in the South American continent, so its association with animals must have started with native mammals, such as the Capybara. The Cattle Tyrant is a bird of open areas, often seen running after insects in urban green spaces.

In plumage, it resembles the *Tyrannus* kingbirds, such as the Tropical Kingbird (below). However, unlike the arboreal kingbirds, it is a terrestrial species. Its physical characteristics – short, rounded wings and long legs – also differ. Moreover, research shows that there is no particular genetic affinity between the two species.

*Tyrannus melancholicus***Tropical Kingbird**

<b>LENGTH</b>	18–24cm (7–9 ½ in)
<b>WEIGHT</b>	35g (1 ¾ oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Almost any form of open or semi-open area with trees, often near water

The Tropical Kingbird is the largest and most common kingbird, with an estimated population of 200 million occurring over a very large range. This kingbird has a grey crown and nape, with a darker eye mask that contrasts with its white throat. In common with many tyrant flycatchers, it also has a concealed reddish orange crown patch. The mantle and wings are grey-green, the underparts bright yellow, and the notched tail is brown.

The species' tendency to act aggressively with larger birds – even up to the size of a vulture – has given rise to both its genus name (like a tyrant) and its common name (the king of birds). Almost exclusively insectivorous, it catches its prey in the air, with its sallies starting almost always from a high perch, usually above 25–30m (80–100ft). It often perches near flowers and muddy areas to target the butterflies that congregate at such sites.



ADULT TROPICAL KINGBIRD

*Tyrannus forficatus***Scissor-tailed Flycatcher**

**HABITAT** Open and semi-open grassland and savanna with scattered bushes and trees

**LENGTH**  
19–38cm (7½–15in)

**WEIGHT**  
40g (1⅓oz)

**MIGRATION**  
Migrant

A spectacular species, the Scissor-tailed Flycatcher is a common sight in open areas of North and Central America. The highly elongated outer tail feathers, from which the species derives its name,

occur in just four tyrant flycatchers. The purpose of this adaptation, as with swallows, appears to be to aid manoeuvrability in the air. The deeply forked tail helps the bird twist for flying insects during its hawking sallies from an exposed perch. But such an impressive appendage also serves in the male's zigzag courtship display: sexual selection may favour longer tails. The male's plumage is as distinguishable as its tail length: the very pale grey head and back are offset by dark upperwings and salmon-pink underwings and vent.

The Scissor-tailed Flycatcher occurs singly or in pairs during the breeding season, but large flocks form during migration and in winter.

**MALE SCISSOR-TAILED FLYCATCHER***Tyrannus tyrannus***Eastern Kingbird**

**HABITAT** Forested and open terrain, ranging from humid forest edges to gardens

**LENGTH**  
19–23cm (7½–9in)

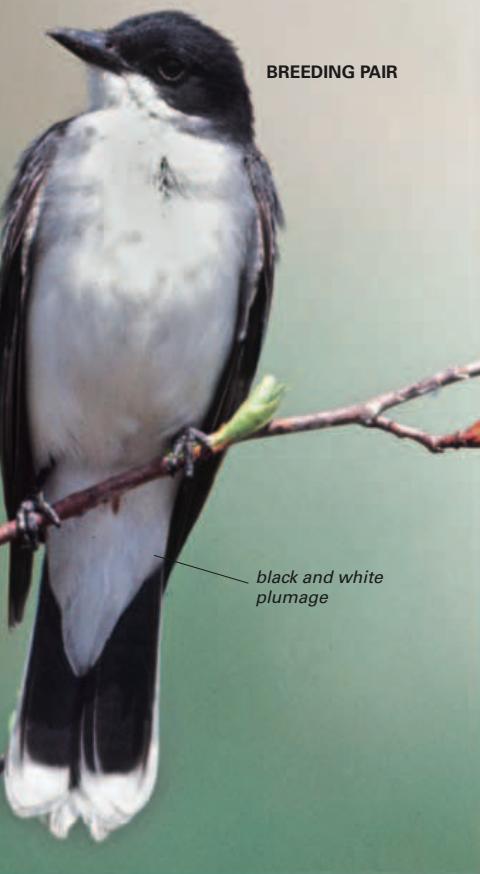
**WEIGHT**  
40g (1⅓oz)

**MIGRATION**  
Migrant

A familiar bird across the Americas, with perhaps 13 million breeding throughout North America and wintering in South America, the Eastern Kingbird differs in plumage from most

kingbirds. While other kingbirds are mostly grey and yellow, the Eastern Kingbird is essentially black and white. It has black ear feathers and a black crown, dark grey mantle and wings, and a white-tipped black tail. The underparts are mainly white, although the breast is grey. The wings are relatively short and narrow, creating a distinctive shape in flight. The attenuated primary feathers probably cause the wing whirrs that can often be heard.

While solitary or forming pairs on breeding grounds, the Eastern Kingbird is gregarious on wintering grounds. Huge flocks of thousands of birds may gather at fruiting trees, particularly in the west Amazonian area where the largest numbers winter. On breeding grounds, the Eastern Kingbird hawks for insects from any available perch. On migration and wintering grounds, however, it eats fruit and seeds.

*Myiarchus crinitus***Great Crested Flycatcher**

**HABITAT** Open deciduous woodland and edges of clearings; also in humid tropical forest in winter

**LENGTH**  
21cm (8½in)

**WEIGHT**  
30g (1⅓oz)

**MIGRATION**  
Migrant

One of the largest and most richly patterned of the relatively homogeneous group of *Myiarchus* flycatchers, the Great Crested Flycatcher has the same basic plumage pattern as other species in this group. It is olive-green above, with its grey head and chest sharply demarcated from a yellow belly and undertail feathers. It has rufous wings, pale wing-bars, and a rufous tail, which together with its contrasting underparts help distinguish it from the closely related Brown-crested Flycatcher (*M. tyrannulus*). As is typical of *Myiarchus* flycatchers, the rear of its crown is peaked, creating a crested appearance.

**ADULT GREAT CRESTED FLYCATCHER**

# ANTBIRDS

**ORDER** Passeriformes  
**FAMILY** Thamnophilidae  
**SPECIES** 205

ANTBIRDS ARE SO NAMED because some species follow swarms of army ants to eat the insects and other small animals flushed out by the ants. They are found in Central America and in the northern

half of South America, with the greatest diversity of species in the Amazon Basin. Some authorities place them in the same family as antpittas and antthrushes (see p.354). They are also closely related to gnatcatchers (see p.352). Most antbirds live in dense forest, but some species occur in forest clearings, thickets, gardens, and savanna.

## ANATOMY

There are several distinct groups of antbird, which differ in both size and structure. The antwrens and antvireos are small birds with a slender, warbler-like bill that they use to pick insects off leaves in lower and middle levels of the forest. Antshrikes are larger, longer-tailed birds with a strong, hooked bill, like that of true shrikes (see p.382). They live in open habitats as well as forest, and often drop to the ground to catch prey. Most antbirds are grey, black, or brown, but some antshrikes have bold patterns of bars and stripes.

### IDENTIFICATION CHALLENGE

The Unicolored Antwren is one of several dozen similar species that can be very hard to separate in the field.



**PLUMAGE DIFFERENCES**  
In many species of antbird the male and female look strikingly different. This is a female Giant Antshrike; the male of this species is black-and-white barred above and grey below.



## BEHAVIOUR

Antbirds live in monogamous breeding pairs and usually mate for life, sharing nest-building and the feeding of the two or three young. They defend a nesting territory, but often join mixed-species flocks to travel through the forest in search of food. These flocks are largest in the early morning and late afternoon and may contain hundreds of individuals, including representatives of numerous other species of antbird, as well as other forest birds. Some antbirds are known as “professional ant-followers”, because they feed almost entirely by following columns of army ants across the forest floor.



### CUP-SHAPED NEST

A female Slaty Antwren brings food for her chicks. All antbirds make an open nest in the fork of a branch, often low down or among the undergrowth.

### *Myrmotherula gularis*

## Star-throated Antwren



**LENGTH**  
8.5–9.5cm (3½–3¾in)  
**WEIGHT**  
10–12g (⅓–⅔oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Understorey of evergreen forest

Distinguishable by its black and white speckled throat, the Star-throated Antwren has a dark eye and grey face, brown upperparts with a distinct white-lined black patch on the wing, and grey underparts. Like other antwrens it has a short-tailed, round-bodied appearance. Confined to the Atlantic forest of Brazil, the species is uncommon, although not considered to be globally threatened.



ADULT STAR-THROATED ANTWREN

### *Biatas nigropectus*

## White-bearded Antshrike



**LENGTH**  
18cm (7in)  
**WEIGHT**  
25–35g (⅔–1¼oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Understorey of bamboo-rich, evergreen forest, in the understorey and edges of thickets

**RED LIST CATEGORY** Vulnerable

A rare bird, the White-bearded Antshrike is found only in the Atlantic forest of southeast Brazil and northeast Argentina. Its entire global population is estimated at fewer than 10,000 individuals and this number is thought to be decreasing due to the rapid destruction of the species' habitat, which has been converted to agricultural use, mining, and urban expansion.

The male has a striking black cap and triangular black breast patch, separated by a broad white band under the bill. The rest of its plumage is largely brown. The female lacks any black, and has a chestnut cap and a plain white throat that contrasts with its buff underparts. The diet of this species consists mainly of spiders, as well as ants and other insects.



MALE WHITE-BEARDED ANTSHRIKE

### *Taraba major*

## Great Antshrike

**LENGTH**  
20cm (8in)  
**WEIGHT**  
50–70g (1¾–2½oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Understorey of dense thickets

One of the most widely distributed members of its family, the Great Antshrike is found from Mexico to Argentina. The male is a striking bird, jet-black above and white below, with a bright red eye and three prominent white wing-bars. The female is different, being chestnut above and pale buff below. This antshrike is an opportunistic feeder, eating a varied diet that includes snails, slugs, and even small rodents and fish.



**ADULT FEMALE**

With black and white barring on the sides of the head and the neck only, the female is plainer than the male.

**ADULT MALE**

In contrast to the female, the male has a black crown and striking horizontal black and white bars all over its body.

***Thamnophilus doliatus*****Barred Antshrike**

**LENGTH**  
16cm (6½in)

**WEIGHT**  
25–30g (7/8–1⅓oz)

**MIGRATION**  
Non-migrant

**HABITAT** Understorey and mid-levels of mainly deciduous forest

Like most antbirds, the male and female Barred Antshrikes have very different plumage. The male Barred Antshrike has the barred black and white plumage implied by its name. The female, however, has a much plainer plumage with chestnut brown upperparts and slightly paler orange-buff underparts. Both sexes sing, the female often echoing the male.

The Barred Antshrike is usually found in pairs, hopping about in vegetation or searching for food in foliage. It can often be seen on a perch, scanning for beetles or other insects before deftly swooping to pick one up. It also eats fruit and seeds. This bird nests in shrubs. The female lays two eggs, which are incubated by both parents. The Barred Antshrike is a common bird throughout most of its large range, which stretches from Mexico to northern Argentina.



**MALE SQUAMATE ANTBIRD**

***Myrmeciza squamosa*****Squamate Antbird**

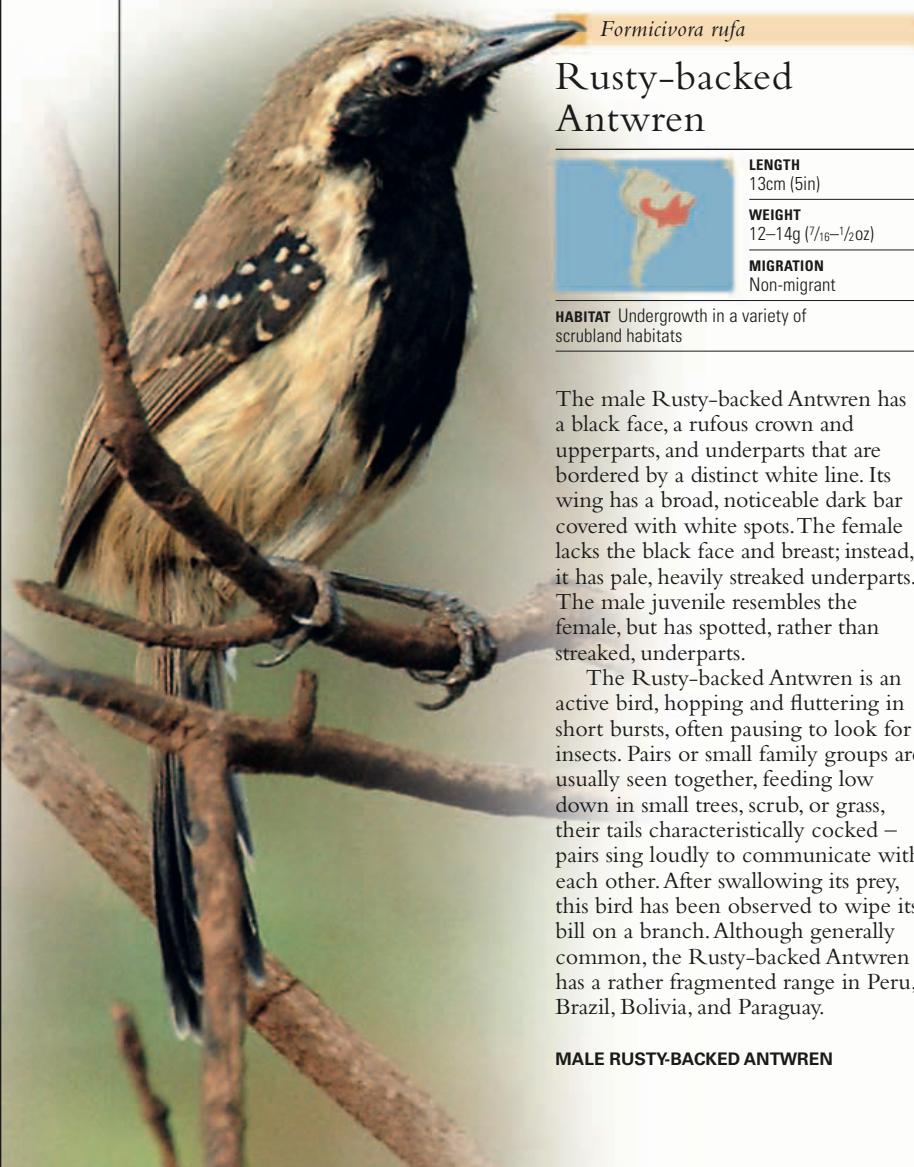
**LENGTH**  
15cm (6in)

**WEIGHT**  
16–20g (9/16–11/16oz)

**MIGRATION**  
Non-migrant

**HABITAT** Forest floor in a variety of woodland types

An attractive species, the male Squamate Antbird is rufous-brown above with a black face and throat. Its breast is also black and flecked with crescent-shaped white markings. The female has a black patch around the eye and a white throat and breast with scalloped markings. The species is confined to the Atlantic forest of southeast Brazil.

***Formicivora rufa*****Rusty-backed Antwren**

**LENGTH**  
13cm (5in)

**WEIGHT**  
12–14g (7/16–1/2oz)

**MIGRATION**  
Non-migrant

**HABITAT** Undergrowth in a variety of scrubland habitats

The male Rusty-backed Antwren has a black face, a rufous crown and upperparts, and underparts that are bordered by a distinct white line. Its wing has a broad, noticeable dark bar covered with white spots. The female lacks the black face and breast; instead, it has pale, heavily streaked underparts. The male juvenile resembles the female, but has spotted, rather than streaked, underparts.

The Rusty-backed Antwren is an active bird, hopping and fluttering in short bursts, often pausing to look for insects. Pairs or small family groups are usually seen together, feeding low down in small trees, scrub, or grass, their tails characteristically cocked – pairs sing loudly to communicate with each other. After swallowing its prey, this bird has been observed to wipe its bill on a branch. Although generally common, the Rusty-backed Antwren has a rather fragmented range in Peru, Brazil, Bolivia, and Paraguay.

**MALE RUSTY-BACKED ANTWREN**

***Drymophila ferruginea*****Ferruginous Antbird**

**LENGTH**  
13cm (5in)

**WEIGHT**  
10g (3/8oz)

**MIGRATION**  
Non-migrant

**HABITAT** Bamboo thickets in evergreen forest

The Ferruginous Antbird is common throughout most of its range in southeast Brazil. It has a striped black and white head, rufous-orange underparts, black wings with a distinct white bar, and a black tail. The female is slightly paler and more streaked than the male, though this is not always easy to see. The Ferruginous Antbird is very similar to Bertoni's Antbird (*D. rubricollis*), also found in southeast Brazil and parts of Paraguay and Argentina. However, the Ferruginous Antbird has black markings on its back



**ADULT FERRUGINOUS ANTBIRD**

and a darker tail. It is usually found in pairs or small family groups, as well as in mixed-species flocks. It is a very active forager, moving around in short hops, before pausing to scan for prey. It usually feeds a few metres off the ground, on various kinds of insects. Like many of its close relatives, the Ferruginous Antbird is found exclusively in bamboo thickets.

***Pithys albifrons*****White-plumed Antbird**

**LENGTH**  
11–13cm (4½–5in)

**WEIGHT**  
18–25g (5/8–7/8oz)

**MIGRATION**  
Non-migrant

**HABITAT** Understorey of humid evergreen forest

With magnificent white facial plumes on its black face, the White-plumed Antbird is one of the most unusual members of its family. It has grey upperparts and orange-brown underparts. It feeds on insects and is dependent on army ants to obtain its food, waiting for huge swarms to flush out small creatures in their path. The bird then darts out to snatch up its food, quickly retreating to cover. This species nests in trees, laying 2 or 3 eggs, which are incubated by both parents.

*Gymnopithys leucaspis*

## Bicoloured Antbird



<b>LENGTH</b>	14–15cm (5½–6in)
<b>WEIGHT</b>	30–35g (1⅓–1⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Understorey of humid forest and old secondary growth

Both the male and female Bicolored Antbird have white throats and underparts, but there is geographical variation in the darkness of the flanks and sides and the colour of the area around the eyes. This bird follows army-ants, feeding on insects, spiders, and even small frogs and lizards disturbed by the ants.



ADULT BICOLOURED ANTBIRD

*Hylophylax naevioides*

## Spotted Antbird



<b>LENGTH</b>	11–12cm (4½–5in)
<b>WEIGHT</b>	15–18g (⁹/₁₆–⁵/₈oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Understorey of humid forest and tall secondary growth in lowland and foothills

The male Spotted Antbird has a dark grey head, chestnut back and wing-bars, and white underparts that are spotted black. The female is similar, but has a paler spotting and a brown head. The species follows ant swarms in pairs or family groups, darting through the low foliage above and around the ants, looking for insects and arthropods fleeing from the path of the swarm. Being a small antbird, it is subordinate to the larger ant-following species.

*Phaenostictus mcleannani*

## Ocellated Antbird



<b>LENGTH</b>	19–20cm (7½–8in)
<b>WEIGHT</b>	50–55g (1¾–2oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Understorey of humid forest; tall second growth in lowlands; occasionally in shaded plantations

underparts. The Ocellated Antbird is an ant swarm follower and dominates many smaller antbirds, although it is subordinate to some other species that periodically attend the ants to find easy prey. This species shows complex social behaviour – up to eight, often young, birds congregate around a pair which tolerates their presence for unknown reasons. Both sexes incubate the eggs, and the young attend swarms just 2 or 3 weeks after hatching.



ADULT OCCELLATED ANTBIRD



ADULT BLACK-SPOTTED BARE-EYE

*Phlegopsis nigromaculata*

## Black-spotted Bare-eye



<b>LENGTH</b>	17–18cm (6½–7in)
<b>WEIGHT</b>	40–50g (1⅓–1⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Understorey of humid lowland forest; occasionally in seasonally flooded areas

The loud, harsh calls of the Black-spotted Bare-eye signal the presence of an ant swarm, which it follows, feeding on the insects that it disturbs. Up to 20 birds may attend a single swarm, where it is one of the most dominant antbird species, because of its large size, but there is a “pecking order” within the species, too. Both male and female have a patch of red skin around the eyes and the same combination of deep black on the head and breast, and brown on the back and wings.

## GNATEATERS

**ORDER** Passeriformes

**FAMILY** Conopophagidae

**SPECIES** 8



DUE TO THEIR extremely short tails and their shy, ground-living lifestyle in the dense forests of tropical South America, the gnateaters are rather like small antpittas (see p.354), with which they used to be grouped. These birds are insect-eaters and feed in the leaf litter. The male has a simple, sweet-sounding song, and forms a stable breeding pair with the female. The birds remain in the same area of forest all year.

**SHORT TAIL**

A stumpy tail helps gnateaters, such as this male Black-cheeked Gnateater, to creep and flutter through tangled rainforest undergrowth.

*Conopophaga lineata*

## Rufous Gnateater



<b>LENGTH</b>	11–14cm (4½–5½in)
<b>WEIGHT</b>	16–25g (⁹/₁₆–⁷/₈oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest and well-developed secondary growth; often found in or close to bamboo

This robin-like bird is rufous-chestnut on the front and underparts, with an earth-brown back and wings, and a short, stubby tail. The male has well-developed grey eyebrows. The female lays two eggs and incubates them at night and for part of the day, with the male sitting on the nest for the rest of the day. The young hatch after 14 days and fledge in two weeks, although juveniles may remain with their parents for another one and a half months.

MALE RUFOUS GNATEATER



# TAPACULOS

**ORDER** Passeriformes  
**FAMILY** Rhinocryptidae  
**SPECIES** 55

in the south. Some tapaculos resemble wrens, but others are fatter-bodied. They live on or near the ground, scraping around with their feet, like gamebirds, to find seeds and invertebrates. These weak fliers often hold their tail vertical. One of the most distinctive features of tapaculos, not visible from a distance, is a movable flap of loose skin covering each nostril.

UNIQUE TO SOUTH AMERICA, tapaculos are found mostly in the continent's cooler, temperate regions, especially on forested slopes in the Andes and in woodland and scrub



## HUMID HABITAT

The Ocellated Tapaculo lives in impenetrable bamboo thickets and damp, mossy forests on the slopes of the western Andes.

### Rhinocrypta lanceolata

#### Crested Gallito



<b>LENGTH</b>	21cm (8½in)
<b>WEIGHT</b>	51–64g (1¾–2³/₈oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open thorn brush and undergrowth in Chaco woodland

The Crested Gallito has a finely spotted, white-streaked head, a spiked crest, grey breast, and slightly rufous belly and flanks. The upperparts and long tail are brown. It lives mainly on the ground hopping or running through the undergrowth, but sings from a low perch. The nest is a spherical structure of grass, weeds, and bark, in which two eggs are laid. Being large in size, it is one of the few tapaculos to be a target for brood parasitism by the Shiny Cowbird.



MALE SLATY BRISTLEFRONT

## GREAT SITES

#### ITATIAIA NATIONAL PARK

Situated between Rio de Janeiro and São Paulo, but in most part untouched by humankind, this national park is one of the oldest in Brazil and a haven for the rich birdlife of the Atlantic forest region. The Slaty Bristlefront is just one of several tapaculos found here.



### Merulaxis ater

#### Slaty Bristlefront



<b>LENGTH</b>	19cm (7½in)
<b>WEIGHT</b>	35–40g (1¼–1⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Understorey of humid forest and tall secondary growth in lowland and mountains

The Slaty Bristlefront is an unusual tapaculo, the male and female being different in plumage. The male is virtually all grey with brown on the rear, and the female is mainly brown with warmer-coloured underparts. Unlike other tapaculos, it has a tuft of bristles above the base of the bill and a long and broad tail. Pairs keep close together, in continuous vocal contact. The bird's song is considered one of the most lovely of the Brazilian Atlantic Forest.

### Scytalopus unicolor

#### Unicolored Tapaculo



<b>LENGTH</b>	11cm (4½in)
<b>WEIGHT</b>	17–19g (⁵/₈–¹¹/₁₆oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Dense shrubbery within montane forest

The life history of this bird is almost completely unknown, despite having been described more than 110 years ago. Most of the small tapaculos in the genus *Scytalopus* are known for their lack of plumage features, but the Unicolored Tapaculo is perhaps the most nondescript. It is darker grey above and paler grey below; the juvenile is browner above, with barring on the tail. Although confined to a tiny area in the Andes, it is fairly common and not threatened.

### Liosceles thoracicus

#### Rusty-belted Tapaculo



<b>LENGTH</b>	20cm (8in)
<b>WEIGHT</b>	40–45g (1⅓–1⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Ground-level in rainforest, mainly in dry areas, and often around treefalls



ADULT RUSTY-BELTED TAPACULO

# ANTPITTAS AND ANTHRUSHES

**ORDER** Passeriformes  
**FAMILY** Formicariidae  
**SPECIES** 60

in South and Central America, particularly in the rainforests of the Amazon region and in the cloudforests of the Andes mountains. They are related to antbirds (see p.350), and some ornithologists group them in a single family. Unlike antbirds, however, most antpittas and antthrushes do not seek out swarms of army ants. Their loud, far-carrying calls, which are often melancholy whistles, can be the only way to locate well-hidden birds.

SELDOM SEEN, these secretive birds live on the forest floor and among thick undergrowth



**AN ELUSIVE FAMILY**  
 Antpittas and antthrushes, such as this Yellow-breasted Antpitta, are among the hardest South American birds to see.

## Formicarius analis

### Black-faced Antthrush



**LENGTH**  
17cm (6½in)  
**WEIGHT**  
45–70g (1½–2½oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Humid mature forest and secondary growth, and lowlands

Largely grey below and brown above, the Black-faced Antthrush has a small black patch on its face, with occasional rufous colouring on its cheeks, blue skin around the eye, and a rufous patch under the tail. The male and female are alike in plumage. These birds have short, cocked tails, their heads and tails bobbing up and down as they feed on ants and insects on the ground and walk on leaf litter. The call is a whistle, with a descending “wu-wu-wu-wu”. There are geographical variations in the plumage and song of this species.

## Pittasoma rufopileatum

### Rufous-crowned Antpitta



**LENGTH**  
16–18cm (6½–7in)  
**WEIGHT**  
95g (3½oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Lowland and foothills, in wet forest and secondary growth

Unlike other pittas, which have brown or grey plumage, most subspecies of the Rufous-crowned Antpitta have an entirely rufous head, with a long black eyebrow, except for birds in Ecuador, which have only a rufous crown. The upperparts are dark brown, streaked with black, and the underparts are either white or buff, barred with black, or are pale and unmarked. The female usually has white spots on the black eyebrow. The species mainly feeds by following columns of army ants, taking the insects flushed out by them.

## Grallaria allenii

### Moustached Antpitta



**LENGTH**  
17cm (6½in)  
**WEIGHT**  
65–80g (2¾–2½oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Ravines and steep slopes of wet, moss-laden primary growth in mountains

**RED LIST CATEGORY** Endangered

Named for its bold white moustache, the Moustached Antpitta has a bluish grey crown and nape, white feathering on the lower throat, and warm buff-coloured underparts. Its call is a series of deep whistles, sounding like “hu-u hu-u”, as it increases in volume before trailing off. Until 1990, this antpitta was known only from two specimens, but it was rediscovered in Ecuador and subsequently the species has been found in national parks and other protected areas in Ecuador and Colombia.



ADULT MOUSTACHED ANTPITTA

# OVENBIRDS

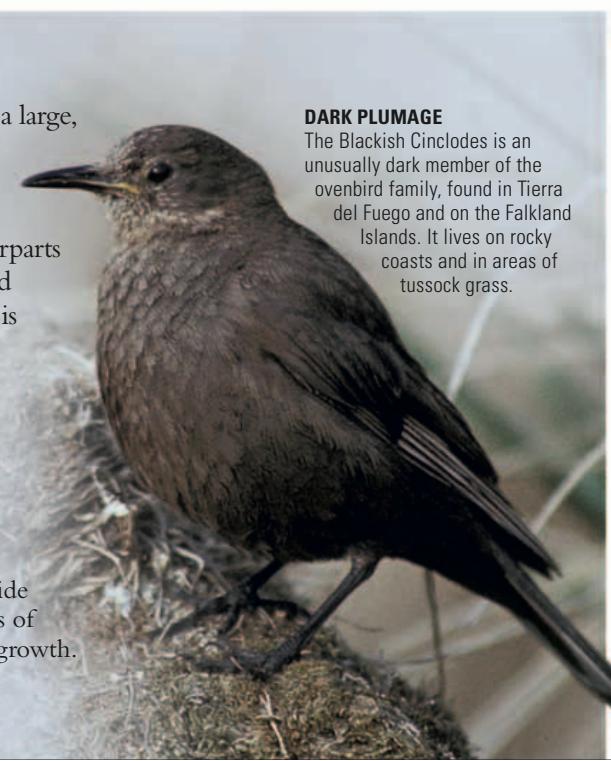
**ORDER** Passeriformes  
**FAMILY** Furnariidae  
**SPECIES** 236

THE OVENBIRDS are a large, diverse group of rather drably coloured insect-eaters, most of which have plain brown upperparts

and pale underparts. They live throughout South and Central America, in virtually all habitats. The family is named for the domed mud nests, which resemble traditional bread ovens, made by true ovenbirds.

## BEHAVIOUR

Many ovenbirds, including the horneros, miners, and cachalotes, are found in dry, open country such as savanna or scrub. A few species are reluctant fliers that prefer to run across the ground. The cinclodes live beside fresh water or along the seashore. Most other members of the family live in forest, in the canopy or in the undergrowth.



### DARK PLUMAGE

The Blackish Cinclodes is an unusually dark member of the ovenbird family, found in Tierra del Fuego and on the Falkland Islands. It lives on rocky coasts and in areas of tussock grass.

## Geositta cunicularia

### Common Miner

**LENGTH**  
14–17cm (5½–6½in)  
**WEIGHT**  
20–35g (1⅓–1⅓oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Grassland and scrub from coasts to the high Andes, usually in areas with sandy soil and rocks

Like many ground-dwelling birds, Common Miners can be quite variable in their coloration. However, all subspecies have a slender, slightly decurved bill, a white eyebrow, some rufous colouring in the wings, and dark markings on the breast. The call of this bird is a rapid trill. It feeds on insects and seeds gleaned from the ground. The species nests in holes excavated in earth banks, and may raise two broods of 2–3 young in each. It is generally common to abundant over most of its range.

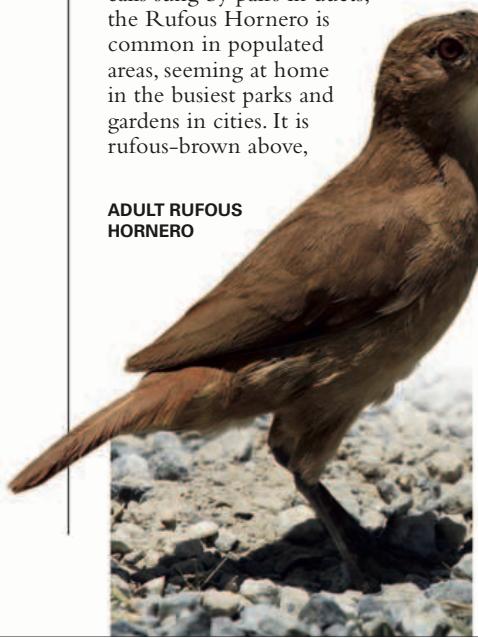
**Pseudoseisura unirufa****Grey-crested Cachalote****LENGTH**  
20cm (8in)**WEIGHT**  
40–55g (1 $\frac{1}{16}$ –2oz)**MIGRATION**  
Non-migrant**HABITAT** Gallery forest and seasonally flooded savanna, often near water and habitation

Despite its small range at the junction of the borders of Brazil, Bolivia, and Paraguay, the Grey-crested Cachalote is not rare. It does not shun contact with humans and often constructs its oblong stick nests in trees around human dwellings. Its presence is often made known by its song, which is audible at some distance. The plumage is unremarkable – it is entirely deep rufous-brown, relieved only by the prominent grey crest and bright yellow eyes. The Grey-crested Cachalote feeds mainly on arthropods dug from the ground, as well as fruit and seeds.

Most aspects of the species' behaviour are not very well known, largely because the Grey-crested Cachalote has only recently been recognized as a species. It was formerly considered to belong to the same species as *P. cristata*, found in northeast Brazil, which, however, lacks the grey crest and has a different song. The two species may also differ in their breeding systems – unlike the Grey-crested Cachalote, *P. cristata* is a cooperative breeder.

**ADULT GREY-CRESTED CACHALOTE****Furnarius rufus****Rufous Hornero****LENGTH**  
16–23cm (6 $\frac{1}{2}$ –9in)**WEIGHT**  
30–65g (1 $\frac{1}{16}$ –2 $\frac{3}{8}$ oz)**MIGRATION**  
Non-migrant**HABITAT** Open habitats, from city parks to agricultural areas and scrub, mainly in lowlands

With its jaunty gait and vociferous calls sung by pairs in duets, the Rufous Hornero is common in populated areas, seeming at home in the busiest parks and gardens in cities. It is rufous-brown above,

**ADULT RUFOUS HORNERO**

with a faint white eyebrow, dull white chin, a red-rufous tail, and pale underparts. Like other horneros, it has long, strong, and slightly curved bill, which it uses to dig out invertebrates, seeds, insect larvae, and arthropods on the ground, often foraging in pairs. It flies up into trees when disturbed. Its nest may be sited on high branches.

**MUD NESTS**

Dome-shaped like a charcoal oven called a "horno" in South America, the mud and clay nest of the Rufous Hornero may have one or two openings. Often sited on top of a fence or post, it may remain there for several years, though it is used only once.

**SPIKY TAIL AND RUFOUS EYEBROW****Aphrastura spinicauda****Thorn-tailed Rayadito****LENGTH**  
14cm (5 $\frac{1}{2}$ in)**WEIGHT**  
10–13g (3 $\frac{1}{16}$ –7 $\frac{1}{16}$ oz)**MIGRATION**  
Non-migrant**HABITAT** Southern beech forest in lowland and foothills, but also less-vegetated areas

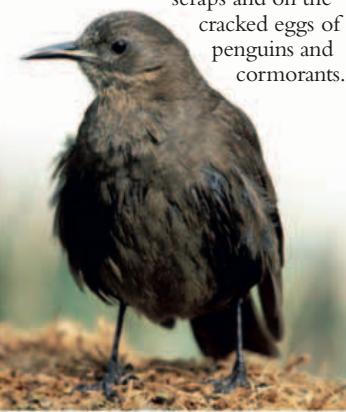
This diminutive bird can be recognized by its broad rufous-buff eyebrow, jagged wing pattern, and spiky rufous tail. The Thorn-tailed Rayadito frequently forms flocks in the non-breeding season. In constant movement as it gleans the foliage and bark of trees, it often acts as a nucleus for other species of birds to join into foraging groups. It nests in tree-holes or behind bark.

**Cinclodes antarcticus****Blackish Cinclodes**

<b>LENGTH</b>	19–23cm (7 $\frac{1}{2}$ –9in)
<b>WEIGHT</b>	45g (1 $\frac{5}{8}$ oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Coastal beaches, usually with rocks, and especially near seabird or seal colonies

True to its name, the Blackish Cinclodes is readily identified by its dark plumage. One of the southernmost breeding passerines in the world, it makes its living along shorelines, where it feeds on marine invertebrates and their larvae, pecking through holes in kelp debris with its long, decurved bill. In some areas, it also feeds on fish scraps and on the cracked eggs of penguins and cormorants.

**ADULT BLACKISH CINCLODES****Asthenes pudibunda****Canyon Canastero**

<b>LENGTH</b>	15–17cm (6–6 $\frac{1}{2}$ in)
<b>WEIGHT</b>	13–17g (7 $\frac{1}{16}$ –5 $\frac{1}{8}$ oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Arid montane scrub and *Polylepis* woodland in the high Andes; favours ravines

Mainly brown above, with a pale eyebrow behind the eye and greyish buff underparts, the Canyon Canastero has rufous wings and a long rufous-brown tail. The sexes do not differ in plumage. It is a poorly known bird – for example, almost nothing is known of its breeding habits. It forages for arthropods either alone or in pairs, searching the ground or low vegetation methodically. Although not considered globally threatened, it has a highly restricted range in the Peruvian Andes, just reaching north Chile.

**ADULT CANYON CANASTERO**

*Synallaxis spixi*

## Spix's Spinetail



LENGTH

16cm (6½in)

WEIGHT

13g (⅓oz)

MIGRATION

Non-migrant

**HABITAT** Secondary growth, scrub, cerrado, and woodland edges, often near water

A typical member of its genus of spinetails, Spix's Spinetail (also known as the Chicli Spinetail) has a dark throat patch and a contrasting rufous crown and wings. The tail structure is also typical of the genus, being long and steeply graduated, with sharply pointed individual feathers, the central pair thinning towards the tip. The nest is cylindrical in shape, with a long lateral entrance tube. It is made from thorny sticks, has a dense roof to provide protection from rain, and is lined with leaves, moss, and hair.

## ADULT SPIX'S SPINETAIL

*Automolus leucophthalmus*

## White-eyed Foliage-gleaner



LENGTH

20cm (8in)

WEIGHT

35g (1¼oz)

MIGRATION

Non-migrant

**HABITAT** Tropical evergreen forest and tall secondary growth in lowlands and mid-altitudes

leaves and debris on the ground, searching for nocturnal arthropods that take daytime shelter there. The nest is a shallow cup sited at the end of a 60-cm (23½-in) long tunnel.



## ADULT WHITE-EYED FOLIAGE-GLEANER

A large, chunky ovenbird, the White-eyed Foliage-gleaner is distinguished from its near relatives by its striking white throat and white iris, which gives rise to its common name. Its upperparts are warm brown, its tail rufous, and its underparts are warm buff. It specializes in foraging in dead

*Anumbius annumbi*

## Firewood-gatherer



LENGTH

19cm (7½in)

WEIGHT

40g (1⅓oz)

MIGRATION

Non-migrant

**HABITAT** Agricultural land, second-growth scrub, seasonally inundated grassland, and pastures

Frequently seen carrying sticks to its nest, the Firewood-gatherer is aptly named. It interweaves thorny twigs to build a conspicuous nest that can be 2m (6½ft) tall.

The nest is placed low in a tree or a telegraph pole and the entrance hole is decorated with artificial objects such as glass and threads. This species breeds twice per year. The young from the first nest are usually ejected from the territory, but sometimes stay to help their parents raise the second brood.

The Firewood-gatherer is an unusual ovenbird, with its striped mantle and long, graduated tail. It has a conspicuous white eyebrow and white throat patch with a dark-spotted border.

## ADULT FIREWOOD-GATHERER

*Philydor lichtensteini*

## Ochre-breasted Foliage-gleaner



LENGTH

16cm (6½in)

WEIGHT

20g (⅓oz)

MIGRATION

Non-migrant

**HABITAT** Tropical evergreen forest and secondary forest in lowlands

Foraging in the mid-storey and canopy, the Ochre-breasted, or Lichtenstein's, Foliage-gleaner often forms part of mixed flocks. It is

rufous-brown above and ochre below, with a broad buff eyebrow that contrasts with the grey-brown crown and forehead. It uses its bill – the shortest of its genus – to glean arthropods from leaves.

## ADULT BIRD

*Xenops minutus*

## Plain Xenops



LENGTH

11cm (4½in)

WEIGHT

11g (⅔oz)

MIGRATION

Non-migrant

**HABITAT** Tropical lowland, flooded evergreen forest, and tropical deciduous forest

The short, wedge-shaped bill of the Plain Xenops is formed by a sharp, upturned lower mandible. The bill is also compressed laterally and the shape helps the bird with its foraging technique; hammering twigs to get at its invertebrate prey. As its common name suggests, this bird lacks any prominent streaking, although it has a white cheek stripe.



## ADULT PLAIN XENOPS

## WOODCREEPERS

ORDER Passeriformes

FAMILY Dendrocolaptidae

SPECIES 52

in North America and Eurasia. In common with treecreepers and also with woodpeckers, their tails have long, stiff feathers that act as a prop against the trunk when climbing, and their claws are long and strong for gripping bark. Most woodcreepers are brown or olive in colour. Species differ mainly in the amount of pale spots and streaks on the head, back, and underparts, and in the length and shape of their bill, which varies from straight or slightly decurved to very long and scythe-shaped.

AS THEIR NAME SUGGESTS, these forest birds from Central and South America climb up tree trunks and creep along branches to find food, much as treecreepers (see p.427) do

**UPWARDLY MOBILE**  
Woodcreepers, such as this White-throated Woodcreeper, methodically search trees for food, using their long bills to prise insects from under the bark.

*Dendrocincla fuliginosa*

## Plain-brown Woodcreeper



LENGTH

19–23cm (7½–9in)

WEIGHT

40g (1⅓oz)

MIGRATION

Non-migrant

**HABITAT** Forest in lowland and foothills

As indicated by its name, this medium-sized woodcreeper has a nondescript plumage pattern, without any streaking. Like the slightly larger Planalto Woodcreeper (opposite), it follows ant swarms, waiting for ants passing through its territory to force fleeing insects into the open for it to eat.

*Lepidocolaptes falcinellus*

## Scalloped Woodcreeper

LENGTH  
17–20cm (6½–8in)WEIGHT  
30g (1⅓oz)MIGRATION  
Non-migrant**HABITAT** Atlantic rainforest, montane evergreen and semi-deciduous forests, and Araucaria forest

A medium-sized woodcreeper, the Scalloped Woodcreeper has a long, decurved bill. Its white throat contrasts with its buff crown and ear feathers,

and its upperparts are rufous-brown. The underparts of this species are olive, with bold and broad buff stripes, each stripe edged with brown, producing a “scaly” pattern.

The classification of woodcreepers is in a constant state of flux and the Scalloped Woodcreeper is no exception. Until recently, it was considered the same species as the Scaled Woodcreeper (*L. squamatus*), but has been differentiated by its measurements, upperpart coloration, and crown pattern – the plumage of the Scalloped Woodcreeper has a smaller number of streaks and spots than the Scaled Woodcreeper.

## ADULT SCALLOPED WOODCREEPER

*Sittasomus griseicapillus*

## Olivaceous Woodcreeper

LENGTH  
13–20cm (5–8in)WEIGHT  
10–18g (⅓–⅔oz)MIGRATION  
Non-migrant**HABITAT** Various wooded habitats from lowland evergreen rainforest to cerrado and mangroves

The Olivaceous Woodcreeper is a small and slim bird, with stiff tips to its tail feathers, an adaptation that helps it to climb trees. It has a short, thin bill, and its plumage varies from grey-olive to ochre, but its wings, lower back, and tail are rufous in colour. It forages on tree trunks, usually alone, and feeds on insects and spiders. The only species in its genus, it is taxonomically complex and some scientists believe that it should be split into three or four separate species according to the differences in size, weight, vocalizations, and plumage.

## ADULT OLIVACEOUS WOODCREEPER

*Dendrocolaptes platyrostris*

## Planalto Woodcreeper

LENGTH  
26cm (10in)WEIGHT  
60g (2⅓oz)MIGRATION  
Non-migrant**HABITAT** Lowland and montane forest, semi-deciduous woodland, and palm swamps

A slender woodcreeper with a long tail and straight bill, the Planalto Woodcreeper has a white-streaked dark brown head and a white eyebrow that contrasts with its black forehead. Its upperparts and underparts are brown. This species follows ant swarms, waiting to swoop on any invertebrate that the ants flush from cover, the female appearing more dominant than the male while capturing prey.

## ADULT PLANALTO WOODCREEPER

*Campylorhamphus trochilirostris*

## Red-billed Scythebill

LENGTH  
22–28cm (8½–11in)WEIGHT  
40g (1⅓oz)MIGRATION  
Non-migrant**HABITAT** Wooded habitats, including gallery forest, forest islands, cerrado, chaco forest, and scrub

Possibly the most impressive member of a spectacular genus, the Red-billed Scythebill is renowned for its very long, slim, deeply decurved red bill. This adaptation aids foraging and feeding strategies such as gleaning prey from leaves or probing for food on tree trunks. The Red-billed Scythebill mainly feeds on arthropods, especially spiders, but also takes vertebrates, such as small frogs. It often smashes larger prey against tree trunks before eating. Like other woodcreepers, it has stiffened shafts on its tail feathers that help it to climb trees and strong feet and sharp claws that enable it to maintain its grip on tree trunks.

The plumage of the Red-billed Scythebill is similar to that of other woodcreepers, being olive- to rufous-brown, with rufous wings. The head and underparts are streaked in buff or white, the boldness of the streaks varying across the 12 subspecies. This woodcreeper is solitary or is found in pairs, sometimes feeding in mixed flocks. It builds its nest in a tree hole and lays 2 or 3 eggs, both parents incubating the eggs and feeding their young. It has a wide range, occurring in Panama, Venezuela, Colombia, Ecuador, Peru, Bolivia, Brazil, Paraguay, and northern Argentina.



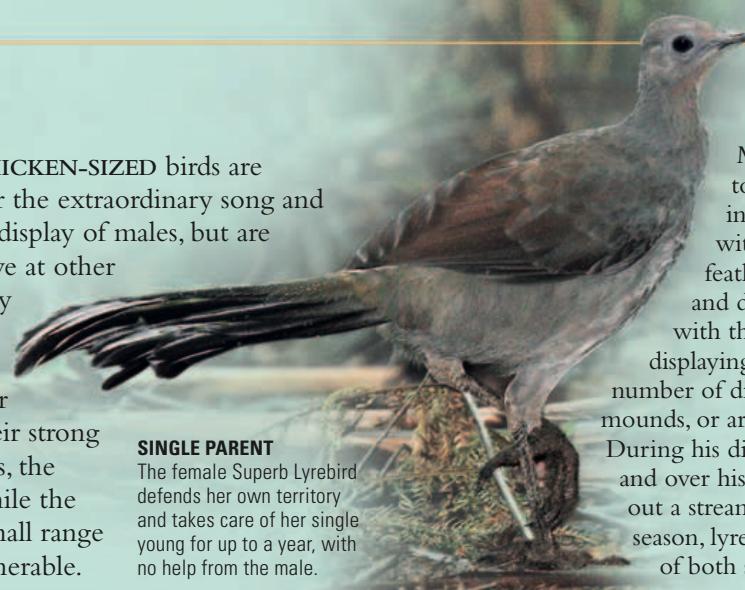
# LYREBIRDS

**ORDER** Passeriformes  
**FAMILY** Menuridae  
**SPECIES** 2

live in eastern Australia in subtropical and temperate rainforest, woodlands, gorges, and dense scrub, and forage for invertebrates on the ground, using their strong feet to dig for prey. Of the two species, the Superb Lyrebird is fairly common, while the more rufous Albert's Lyrebird has a small range in mountain forest and is listed as vulnerable.

THESE CHICKEN-SIZED birds are famous for the extraordinary song and courtship display of males, but are unobtrusive at other times. They

**SINGLE PARENT**  
The female Superb Lyrebird defends her own territory and takes care of her single young for up to a year, with no help from the male.



## *Menura novaehollandiae*

### Superb Lyrebird



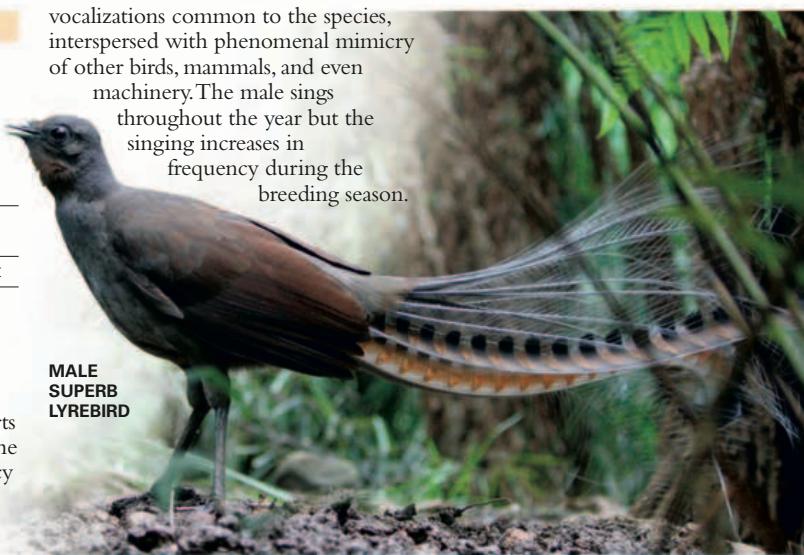
**LENGTH**  
0.7–1m (2½–3½ft)  
**WEIGHT**  
0.9–1.1kg (2–2½lb)  
**MIGRATION**  
Non-migrant

**HABITAT** Cool temperate and subtropical rainforest

At first glance, the Superb Lyrebird, with its large size and long tail, could be mistaken for a pheasant but it is actually one of the world's largest songbirds. It has dark brown upperparts with a coppery tinge on the wings. The adult male has a distinctive train of lacy tail plumes with two long outer feathers. The Superb Lyrebird utters loud alarm whistles and other

vocalizations common to the species, interspersed with phenomenal mimicry of other birds, mammals, and even machinery. The male sings throughout the year but the singing increases in frequency during the breeding season.

MALE  
SUPERB  
LYREBIRD



## BEHAVIOUR

Male lyrebirds take up to eight years to acquire their full adult plumage, including a spectacularly long tail with a central pair of lyre-shaped feathers. Mature males are polygamous and defend large territories that overlap with those of several females. They start displaying in winter, and rotate between a number of different 1–2m (3–5ft) wide display mounds, or arenas, raked up on the forest floor. During his display, the male throws his tail up and over his back, quivering it while pouring out a stream of song. Outside the breeding season, lyrebirds form small feeding parties of both sexes, together with young birds.

## COURTSHIP DISPLAY

The male Superb Lyrebird tries to attract and mate with as many females as possible. It first prepares a dancing arena, which it uses to stage its display. It sings loudly and thrusts its tail horizontally over the head and back while side-stepping and jumping.



# BOWERBIRDS

**ORDER** Passeriformes  
**FAMILY** Ptilonorhynchidae  
**SPECIES** 18

BOWERBIRDS OCCUR throughout New Guinea, and in Australia (excluding the south). Most species live in forests. They are stout-billed and eat mainly fruit, and smaller quantities of nectar, flowers, seeds, and invertebrates. The three species of catbird form monogamous breeding pairs, but in all other bowerbirds, males are polygamous. To attract mates, males of these species build complex bowers in a variety of styles. They decorate their bower with objects such as berries, flowers, shells, or discarded litter. Having inspected the bower and mated, the female builds her nest elsewhere.

### BIRD ARCHITECT

A male Great Bowerbird, his pink crest raised, attracts a female to inspect his avenue-shaped bower, decorated with snail shells.

## *Ailuroedus crassirostris*

### Green Catbird

**LENGTH**  
26–30cm (10–12in)  
**WEIGHT**  
175g (6oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Rainforest, usually in upland areas

A robust, emerald green bird with a red eye, the Green Catbird has a pale bill, a dark head with small buff spots, black cheeks, and well-spotted olive-green underparts. It is not a typical bowerbird as it does not construct a display ground like the other members of the family and is in fact monogamous. The male indulges in true territorial singing while perched close to the ground. Typical calls include a cat-like wailing vocalization, from which the species gets its common name. The breeding season is from September to January. The male Green Catbird is not involved in nest construction, incubation, and brooding, but does provide food for the female and young.

ADULT GREEN CATBIRD



*Prionodura newtoniana*

## Golden Bowerbird



LENGTH	23cm (9in)
WEIGHT	75–85g (2½–3oz)
MIGRATION	Non-migrant

**HABITAT** Tropical upland rainforest

The glossy plumage of the male Golden Bowerbird glitters when it catches the sunlight. The male has golden-olive upperparts broken by a bright yellow rear crown and nape and golden yellow underparts. The female is drab, being olive-brown above and grey below. The impressive bower built by the male is the largest constructed by any Australian bowerbird. When

displaying, the male hovers vertically in the vicinity of the bower and adopts a variety of elaborate postures on the central perch.

**MALE GOLDEN BOWERBIRD**

### THE MAYPOLE BOWER

The bower of the Golden Bowerbird is a U-shaped construction consisting of two columns of sticks up to 3m (10ft) high. These are built up around vertical saplings that are about 1m (3ft) apart and join at the base. The horizontal display-perch between the two columns, is adorned with lichens and orchids.

*Chlamydera nuchalis*

## Great Bowerbird



LENGTH	34–38cm (13½–15in)
WEIGHT	175–225g (6–8oz)
MIGRATION	Non-migrant

**HABITAT** Dry eucalyptus woodland, scrub, and thickets, close to water

A large bird, the Great Bowerbird has a strong bill, unmarked fawn underparts, and fawn and brown upperparts that have white tips, giving it a heavily spotted appearance. It has a lilac

**ADULT GREAT BOWERBIRD**

### MALE AT WORK

The male spends hours decorating the interior of the bower with a paste of green leaves, wood pulp, or charcoal.

*Chlamydera maculata*

## Spotted Bowerbird



LENGTH	25–30cm (10–12in)
WEIGHT	150g (5oz)
MIGRATION	Non-migrant

**HABITAT** Inland scrub and dry, open woodland

The Spotted Bowerbird is a robust dry-country bowerbird. The male is largely brown with bold rufous spots on the upperparts and a pink crest on the nape that is usually seen only in display. The female is similar but usually has a smaller crest. Males build an “avenue” bower decorated with shiny red and white objects. Bowers near human habitation often include a treasure trove of nails, spoons, and coins.

**ADULT BIRD***Ptilonorhynchus violaceus*

## Satin Bowerbird



LENGTH	28–32cm (11–12½in)
WEIGHT	200–225g (7–8oz)
MIGRATION	Non-migrant

**HABITAT** Rainforest and wet eucalyptus and other woodland

Entirely glossy blue-black, the male Satin Bowerbird has striking blue eyes, a stout yellow bill with a black base, and greenish yellow legs. The female and young male are blue-grey to olive-green above, with brown wings and tails, and pale, scaly underparts. The bower is the typical “avenue” construction of bowerbirds. The walls are decorated with macerated plants and other material and the display area

**PRACTICE MAKES PERFECT**

A young male practises the skills required to build the complex bower. It attains adult plumage when it is seven years old.

crest on the nape, which is spread like a fan during territorial and threat displays, but is usually only visible as just a small patch. The female is smaller, less spotted, and lacks the lilac crest.

The male Great Bowerbird builds a large “avenue” bower under the cover of a shrub or low branch. The bower consists of a platform of twigs on which two arched walls sit, forming an avenue up to 1.2m (4ft) long and 15cm (6in) wide. At each end of the platform, extensive display grounds contain huge numbers of bones, shells, and other items such as broken glass.



# SCRUBBIRDS

**ORDER** Passeriformes  
**FAMILY** Atrichornithidae  
**SPECIES** 2

DUE TO THEIR subdued brown coloration, their small, inconspicuous wings held against the body, and their habit of scuttling across the ground, scrubbirds can seem more like rodents than birds. They are capable of only weak, fluttering flight, and this has made them vulnerable to wildfires. The two species have a curious distribution, at opposite ends of Australia: one lives in mountain forests on the east coast; and the other in coastal scrub in the far southwest. Both are rare and localized.

# AUSTRALASIAN TREECREEPERS

**ORDER** Passeriformes  
**FAMILY** Climacteridae  
**SPECIES** 7

THIS SMALL FAMILY is represented in all of Australia's wooded habitats; one species, the Papuan Treecreeper, is confined to New Guinea. There are no woodpeckers in Australasia, and so these birds have evolved to fill a similar role. They climb trees to find ants and other insects, helped by their strong feet and toes. Some species breed co-operatively – the offspring remain to help their parents raise the next brood.

#### CAVITY NESTER

Like all treecreepers, the White-throated Treecreeper, shown here feeding an insect to its young, nests inside small tree-holes.

# AUSTRALASIAN WRENS

**ORDER** Passeriformes  
**FAMILY** Maluridae  
**SPECIES** 28

upright position. One group of species, known as fairywrens, have colourful males, often with areas of brilliant iridescent blue, black, red, or purple in their plumage, and dull brown females. They are insect-eaters, and live in a wide variety of habitats. Another group, the grasswrens, are seed-eaters of arid country, including desert. Their plumage is mainly brown and streaked, and the sexes look alike. Most members of this family build domed grass nests, and several form extended family groups.

#### MUTUAL PREENING

This male Red-backed Fairywren is preening a female to cement their pair bond. Fairywrens usually live in small groups, but only one of the adult females will breed.

*Atrichornis rufescens*

## Rufous Scrubbird

	<b>LENGTH</b> 17–19cm (6½–7½in)
	<b>WEIGHT</b> 25g (⅞oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Wet gullies, ridges, and escarpments in subtropical and temperate forest

A highly terrestrial bird, the Rufous Scrubbird has dark rufous brown, barred plumage, which serves as an effective camouflage on the forest

floor. Both sexes have a pale off-white throat, but only the male, which is also slightly larger, has a black triangle of feathers on the breast and belly. The wings of the Rufous Scrubbird are short, the legs and feet sturdy, and the tail is comparatively long.

The Rufous Scrubbird searches for invertebrates by scurrying in a mouse-like manner through leaf litter on the ground and lifts the debris with its stout bill, using its head like a shovel. Its nest is a dome of dead grasses placed near the ground in sedges or tree ferns and built solely by the female, who also incubates the two eggs that are laid.

*Climacteris picumnus*

## Brown Treecreeper

	<b>LENGTH</b> 16–18cm (6½–7in)
	<b>WEIGHT</b> 25–35g (7/8–1¼oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Dry forest and woodland, especially areas with much fallen timber

Despite its name, the Brown Treecreeper is equally at home foraging on the ground as it is on trees, feeding in pairs or small groups. Two main plumage types occur: brown-backed forms in the south of the range and black-backed forms in the north, which differ only in the overall darkness of the head, upperparts, and tail. The sexes differ only slightly; the male has a patch of dark streaks on the lower throat, which are rufous in the female. This treecreeper nests in a grass-lined hollow and lays 2 or 3 eggs, which the female incubates.

MALE BROWN TREECREEPER



*Clytomyias insignis*

## Orange-crowned Fairywren

	<b>LENGTH</b> 14cm (5½in)
	<b>WEIGHT</b> 10–14g (⅓–⅔oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Montane rainforest, usually in thickets of vine and bamboo, and in small clearings

Endemic to New Guinea, this bird is lesser known among the fairywrens. It has an orange crown, olive-brown upperparts, and buff-orange underparts; its wings, and graduated tail are olive-brown. It rarely flies and walks in small groups through dense foliage with its tail half cocked. The Orange-crowned Fairywren does not join mixed-species foraging flocks, preferring to remain in groups of its own species, gleaned the underside of leaves for invertebrates. Its breeding biology is not known. Although not endangered, deforestation poses a potential threat to its survival.

*Malurus lamberti*

## Variegated Fairywren



LENGTH	15cm (6in)
WEIGHT	8–9g (5/16–11/32oz)
MIGRATION	Non-migrant

**HABITAT** Shrubby thickets

The most widespread of the fairy wrens, the Variegated Fairywren is divided into five subspecies, consisting of two groups: those with grey-brown females and variable males, some with lavender on the flanks; and the rock-inhabiting forms, in which the female has white or chestnut eyepatches and is more blue-grey on the upperparts. All female Variegated Fairywrens have pale underparts, but the intensity of the blue on the head varies in males, being brightest in the northern birds and darkest in the southeastern ones. This species moves in small groups consisting of a dominant male and its mate, less brightly coloured subordinate males, and often plainer juveniles. It constructs a nest of grass and bark on dead branches or in bushes and lays 3 or 4 eggs.

**ADULT MALE****ADULT MALE AND FEMALE***Malurus cyaneus*

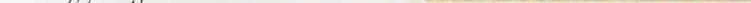
## Superb Fairywren



LENGTH	14cm (5 1/2in)
WEIGHT	9–11g (11/32–3/8oz)
MIGRATION	Non-migrant

**HABITAT** Patchy undergrowth in forest and woodland, but open spaces for feeding

This species is the only fairywren found in Tasmania. The male has a black bill, blue and black throat and upperparts, and a grey-white belly. The female has a dull orange-red eyepatch and a brown bill and upperparts. Like its relatives, these fairywrens live in small groups. It was recently discovered that these groups did not consist of males with a harem of females, but just one female mated to the dominant male, the rest being young males, who remain in drab plumage (like the dominant male in the non-breeding season); young females are driven from the territory to disperse widely.

**ADULT MALE**

## GREAT SITES

### BOTANIC GARDENS, CANBERRA

With its many native plants and range of habitats, the Australian National Botanic Gardens, Canberra, is home to a rich variety of birds, providing them with food and protection. A common sight among the shrubs and low-growing bushes are the Superb Fairywrens; hundreds inhabit the grassy woodland area of the Gardens, where they feed on small insects.

*Malurus splendens*

## Splendid Fairywren



LENGTH	14cm (5 1/2in)
WEIGHT	9–11g (11/32–3/8oz)
MIGRATION	Non-migrant

**HABITAT** Undergrowth of eucalyptus forest, as well as in mallee scrub**ADULT MALE WITH BLUE BACK**

As with other fairywrens, several subspecies of the Splendid Fairywren are recognized. The differences are most easily spotted when the male is in breeding plumage – divided into those with turquoise or blue throats and blue or black backs. Males in eclipse plumage in the non-breeding season have pale underparts like the females, only retaining some blue in the wings and tail. Females have rufous coloration around the eyes and only have blue on the tail. Like other fairywrens, the Splendid Fairywrens also live in groups and build untidy, but well-concealed, domed nests of grass, laying 2–4 eggs.

*Amytornis striatus*

## Striated Grasswren



LENGTH	15–18cm (6–7in)
WEIGHT	20g (1 1/16oz)
MIGRATION	Non-migrant

**HABITAT** Spinifex scrub in mallee and on undulating sandhills or rocky slopes, always in arid areas

Well named for its plumage, with prominent white, black, or rufous streaks, the Striated Grasswren varies in appearance. As with other Australian grasswrens, several subspecies occur, differing in the coloration of the upperparts (brown or rufous), while some species have warmer brown bellies or shorter tails. All subspecies show a black moustache stripe. These wrens are furtive and difficult to see, but in the breeding season, the male sings its trilling warbles from an exposed perch. The species feeds mainly on insects, beetles, and seeds taken on the ground.

**ADULT STRIATED GRASSWREN**

# HONEYEATERS

**ORDER** Passeriformes  
**FAMILY** Meliphagidae  
**SPECIES** 174

THIS FAMILY IS UNIQUE to the southwest Pacific, being principally confined to Australia, where its members have radiated to occupy most niches and habitats, from mangroves and tropical forests to subalpine woodland and semi-arid areas provided there are trees. Such diversification has enabled the family to become among the most numerous avian inhabitants. In certain areas of Australia, sometimes up to ten species occur in a single hectare. The social behaviour of honeyeaters is also varied, ranging from living in monogamous pairs to complex groups.

## ANATOMY

Most honeyeaters are slender, streamlined birds, with long, pointed wings. All species possess a rather long, protrusible tongue, a feature that is unusual among perching birds. The tip of the tongue has a brush-like tip, which is used to extract nectar from flowers. Bill shape varies with the species' chosen diet. Most honeyeaters are clad in dull green, grey, or brown feathers, but some have more striking black, white, or yellow markings, and almost all known species are further adorned by patches of bare, coloured skin on the gape, eye-ring, or face patch. There are relatively few species in which plumage differs between the sexes, although in many species, males are larger.



### SHORT BILL

The Noisy Miner has a short and stubby bill well-suited to its diet that consists largely of fruit and insects.

### LONG BILL

The Eastern Spinebill is a good example of a fine-billed species. This shape of bill is ideal for extracting nectar from flowers, on which this bird feeds.



### YELLOW EDGES

Many honeyeaters show yellow edges to the wing and tail feathers, but in six species, including the New Holland Honeyeater pictured here, this feature is unusually prominent.



### SWEET TOOTH

Many honeyeaters, such as this Bridled Honeyeater, eat a large proportion of fruit with their diet.

## BEHAVIOUR

Honeyeaters do not eat honey, but they principally rely on nectar-bearing plants for their energy requirements, as well as other sugary substances found on certain invertebrates and on eucalyptus trees. A few species consume significant quantities of fruit. In order to follow flowering and fruiting seasons, many honeyeaters, in common with a large number of Australian birds, are to some extent nomadic or migratory. Unusually among passerines, honeyeaters have undulating flight patterns. Most honeyeaters are rather vocal and it is surprisingly often the smallest species that utter the most musical songs, while some of the larger species, such as the wattled honeyeaters, have much less attractive vocalizations, including hawk-like and other raucous notes, which these group-living species use to maintain contact between the flock members.

## BREEDING

Shredded bark, grasses, twigs, spiderwebs, and plant down are typical materials used to construct the cup-shaped nest, which is sited in a tree fork and usually lined with some softer materials. Their nests are often untidy or flimsy-looking. However, a few species construct a bulky, domed nest with an entrance at the top, and at least one species, the Blue-faced Honeyeater, frequently uses the old nest of another bird in which to lay its eggs, although it is capable of building its own. Among the group-living species, as many as ten birds may attend a single nest. On an average,

honeyeaters lay two eggs, but the number in any given clutch varies between one and five; eggs are typically white, pinkish or buff, often with reddish brown spots. The eggs are incubated for up to 17 days, and the young remain in the nest from anything between one and a half to four weeks.



### FEEDING THE YOUNG

The Bell Miner is a co-operative breeder in that non-breeding adults may help look after the young. Here, an adult, who may not be a parent, feeds the young with an insect.

*Notiomystis cincta*

## Stitchbird



LENGTH	18cm (7in)
WEIGHT	30–40g (1½–1⅓oz)
MIGRATION	Non-migrant

HABITAT Restricted to predator-free islands

RED LIST CATEGORY Vulnerable



## MALE STITCHBIRD

Once widespread across New Zealand's North Island, the Stitchbird has a single surviving natural population numbering 500 to 2,000 individuals on Little Barrier Island. Captive breeding programmes have established populations on three other predator-free islands. The plumage of the male Stitchbird is a mix of black above and pale below, with a yellow band across the chest, while the female is mainly brown.

*Lichenostomus chrysops*

## Yellow-faced Honeyeater



LENGTH	16–18cm (6½–7in)
WEIGHT	17g (½oz)
MIGRATION	Partial migrant

HABITAT Mainly forest, woodland, and scrub

A small, delicate bird, the Yellow-faced Honeyeater has a predominantly brown plumage. However, it has a distinct facial pattern: a yellow patch sandwiched between two black lines, with a small yellow mark just below the eye. Its ringing calls often combine to form a brisk song. A number of species are rather similar, particularly the Eungella and Bridled Honeyeaters (*L. hindwoodi* and *L. frenatus*), which are larger and have restricted ranges. However, the likeliest confusion in



## ADULT YELLOW-FACED HONEYEATER

identification is with the brighter-plumaged Singing Honeyeater (*L. virescens*), which has a black stripe through, rather than below, its eye.

*Manorina melancephala*

## Noisy Miner



LENGTH	24–27cm (9½–10½in)
WEIGHT	55–65g (2–2⅓oz)
MIGRATION	Non-migrant

HABITAT Open forest, heaths, camp grounds, parks, and gardens

This is a common honeyeater from eastern Australia, found in open forests and, increasingly, suburban areas. It is told from the similar looking Yellow-throated Miner (below) by its white forehead, black crown, and grey rump. The bill and the areas around and behind its eyes are yellow. The species nests in groups or colonies of 4–12. It aggressively defends its area, harassing and chasing away larger invaders such as magpies, currawongs, or crows. It eats mostly nectar, fruit, and insects.

*Meliphaga analoga*

## Mimic Honeyeater



LENGTH	16–19cm (6½–7½in)
WEIGHT	20–25g (1⅓–7oz)
MIGRATION	Non-migrant

HABITAT Rainforest, secondary forest, coffee plantations, and gardens

Found throughout New Guinea, the Mimic Honeyeater is also known as the Mimetic Honeyeater. A yellow streak runs from its slender bill to just below its eye. It has olive upperparts with greenish yellow markings on the wing and tail, grey underparts, and a pale yellow ear-spot. The male and female are similar in plumage, although the male is larger. The species is most frequently seen in singles, pairs, or small parties.

*Manorina flavigula*

## Yellow-throated Miner



LENGTH	25–28cm (10–11in)
WEIGHT	50–65g (1¾–2⅓oz)
MIGRATION	Non-migrant

HABITAT Drier woodland, dry mallee scrub, heath, and grassland



## ADULT YELLOW-THROATED MINER

A common bird throughout most of arid Australia, the Yellow-throated Miner is absent only from Tasmania and wetter areas of the east coast. It has a black smudge behind the eye, and its bill, eye skin, side of the throat, legs, and feet are yellow. In flight, it displays a pale rump, which distinguishes it from the similar Noisy Miner (above).

The Yellow-throated Miner is a sociable species that lives in tight-knit groups, forming colonies of 12 to 50 birds. These groups mostly forage together in small bands, flying noisily from one tree to another. Unlike most honeyeaters, their diet consists mainly of insects. They breed communally and breeding pairs are often assisted by other members of the same group.



## ADULT LEWIN'S HONEYEATER

LENGTH	19–21.5cm (7½–8½in)
WEIGHT	30–40g (1–1⅓oz)
MIGRATION	Partial migrant

HABITAT Rainforest, dense woodland, coastal scrub, orchards, and gardens

This medium-sized, dark-plumaged honeyeater is named after John Lewin, an English settler who painted the birds of Australia in the early 1800s.

It is mostly olive-grey, with a stout black bill, a cream streak running from its bill to below its eye, and a pale yellow ear patch.

The species is one of the most common, frequently heard birds of Australia's eastern rainforests, and its long, rattling song is often likened to a machine-gun.

It eats mainly fruit and nectar and regularly raids orchards.



## ADULT BLUE-FACED HONEYEATER

 *Entomyzon cyanotis*

## Blue-faced Honeyeater



**LENGTH**  
30–32cm (12–12½in)

**WEIGHT**  
95–125g (3⅓–4oz)

**MIGRATION**  
Partial migrant

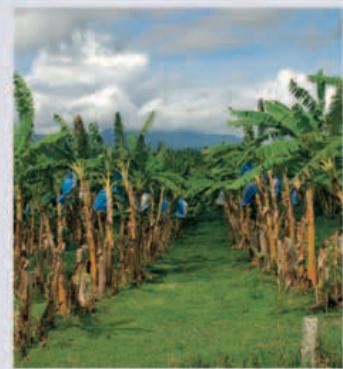
**HABITAT** Woodland, gardens, parks, plantations, orchards, and farmland

This large honeyeater is commonly found in the north and east of Australia, although it is generally absent from drier outback areas. The species is uncommon in the south of its range and absent from Tasmania; outside Australia, it also occurs in southern New Guinea. The adult Blue-faced Honeyeater has an unmistakable facial pattern – a two-toned area of bare blue skin surrounding prominent white eyes. The rest of its head is mostly black, except for a white band around the nape and a white

## HUMAN IMPACT

## PLANTATION PEST

In tropical areas where the banana tree grows, the Blue-faced Honeyeater is also known as the “banana bird” – a name that reflects the species’ penchant for the fruit. It is a pest on banana plantations, where small groups forage not only on the ripe fruit, but also on the flowers of the tree, extracting their nectar.



moustache stripe. It has a large black bib, which stands out from the rest of the pure white breast. The back, wings, and tail are olive-green in colour. The juvenile, unlike the adult, has yellow facial skin. Blue-faced Honeyeaters in the Northern Territory range also have a large white patch on the underwing that is prominent in flight.

These aggressive, gregarious birds are frequently found in small flocks. They are commonly seen in gardens or campsites, searching for any available food. Their diet usually consists of insects, but nectar, pollen, and fruit such as bananas and grapes also prove a great attraction. The species is noisy and flocks can often be located by their loud, raucous whistles.

 *Melithreptus lunatus*

## White-naped Honeyeater



**LENGTH**  
13–15cm (5–6in)

**WEIGHT**  
13–15g (⅔–⅓oz)

**MIGRATION**  
Partial migrant

**HABITAT** Eucalyptus forest and woodland

The White-naped Honeyeater is a small, neat species usually found feeding in pairs or

flocks in the canopy, where it searches for nectar and insects, as well as sugar-rich honeydew secretions. The species is olive-green above and white below, with a black cap and short white band across the back of the neck. Different subspecies can be distinguished by the colour of bare skin around the eye; this is red in the abundant subspecies that is found

on the eastern coast (*M.l. lunatus*) and white in the western subspecies (*M.l. chlorosis*).

**ADULT (EASTERN SUBSPECIES)**



*Anthonis melanura*

## New Zealand Bellbird



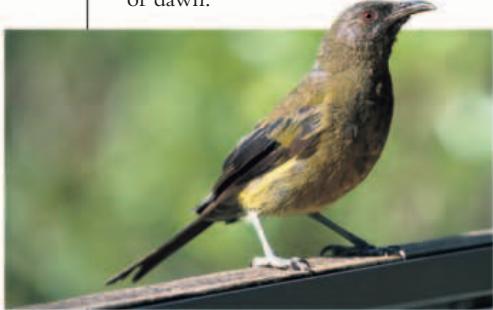
**LENGTH**  
20cm (8in)

**WEIGHT**  
25–35g (7/8–1 1/4oz)

**MIGRATION**  
Non-migrant

**HABITAT** Forest, orchards, parks, gardens, and scrub

Mostly green in colour, the New Zealand Bellbird has a short decurved bill. The male is slightly brighter in its plumage with red eyes and a darker head, wings, and tail, and in particular, a dark throat. The female has brown eyes and shows a faint white moustache stripe. The species is found only in New Zealand (on both the main islands), but unlike many of the country's native birds is not threatened. Its ringing notes are particularly impressive when a group of birds calls in unison – a melodious chorus that can be heard at dusk or dawn.



FEMALE NEW ZEALAND BELLBIRD



ADULT TUI

*Prosthemadera novaeseelandiae*

## Tui



**LENGTH**  
30cm (12in)

**WEIGHT**  
90–150g (3 1/4–5oz)

**MIGRATION**  
Non-migrant

**HABITAT** Forest and scrub, as well as parks and gardens (particularly outside breeding season)

The Tui is endemic to New Zealand, where it occurs on both the main islands, as well as the Chatham, Kermadec, and Auckland Islands. The

species was once known as the Parson Bird; at a distance it appears all black except for a small white bib on its throat, which resembles a parson's collar. The Tui's plumage is more elaborate than plain black, however, with a green and purple sheen to its feathers. Its song melds a variety of extraordinary croaks, coughs, and clicks with rich, melodious notes.

Although much of New Zealand's native forest has disappeared, the Tui has adapted well to changes caused by human impact and has taken advantage of the abundance of flowering plants around human habitations as a new source of food.

*Philemon corniculatus*

## Noisy Friarbird



**LENGTH**  
31–35cm (12–14in)

**WEIGHT**  
100g (3 5/8oz)

**MIGRATION**  
Partial migrant

**HABITAT** Forest, scrub, parks, and gardens

With its featherless black head, the Noisy Friarbird has a most unusual appearance, almost like that of a tiny vulture, earning it the alternate name of "leatherhead". It is a large honeyeater with a grey-brown plumage and a powerful bill, which is adorned with a prominent triangular casque (bump) on the upper mandible. The adult also has a red eye and silvery white plumes on the neck and breast. The juvenile is duller and lacks the casque. As its name

suggests, the species is noisy, uttering a variety of harsh-sounding calls. It is aggressive and social, often seen in small parties or flocks.

The Noisy Friarbird is found along Australia's east coast (as well as New Guinea), with birds in the southern part of its range being breeding migrants. Farther north, the Noisy Friarbird is nomadic, moving to places with flowering trees in order to feed on their nectar. It also eats fruit, insects, and, occasionally, the eggs or chicks of other birds. The female builds the nest and incubates the eggs, but both parents feed the young, up to three weeks after fledging.

Three similar species occur in Australia: the Little Friarbird (*P. citreogularis*); the Silver-crowned Friarbird (*P. argenteiceps*) found in tropical Queensland and the Northern Territories; and the Helmeted Friarbird (*P. buceroides*).



ADULT NOISY FRIARBIRD

*Acanthagenys rufogularis*

## Spiny-cheeked Honeyeater



**LENGTH**  
22–26cm (8 1/2–10in)

**WEIGHT**  
50g (1 3/4oz)

**MIGRATION**  
Non-migrant

**HABITAT** Arid woodland and scrub



ADULT SPINY-CHEEKED HONEYEATER

Named for the spiny bristles on its cheek, this common bird of Australia's arid interior has a black-tipped pink bill, an apricot breast, streaked sides to neck and flanks, and a noticeable white rump in flight. It is a noisy species, with a variety of mellow whistles. Like many of Australia's desert-dwelling birds, this species is nomadic, moving around in search of food and water.

*Anthochaera carunculata*

## Red Wattlebird



**LENGTH**  
33–36cm (13–14in)

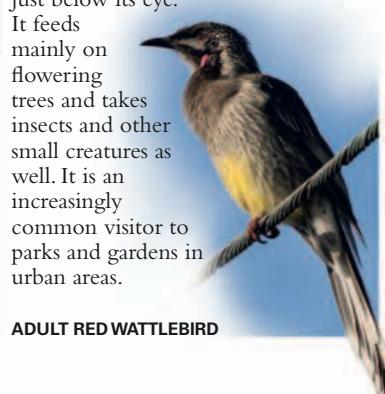
**WEIGHT**  
100–125g (3 5/8–4oz)

**MIGRATION**  
Partial migrant

**HABITAT** Woodland, forest, scrub, heath, orchards, parks, and gardens

One of the largest of Australia's honeyeaters, the Red Wattlebird is found in a band across the southern coast of the continent, except for Tasmania, where it is replaced by the Yellow Wattlebird (*A. paradoxa*). It is generally a brown species with prominent white streaks, a yellow belly, and a fleshy red wattle hanging just below its eye.

It feeds mainly on flowering trees and takes insects and other small creatures as well. It is an increasingly common visitor to parks and gardens in urban areas.



ADULT RED WATTLEBIRD

*Acanthorhynchus tenuirostris*

## Eastern Spinebill



**LENGTH**  
14–16cm (5 1/2–6 1/2in)

**WEIGHT**  
9–12g (5/16–7/16oz)

**MIGRATION**  
Partial migrant

**HABITAT** Forest, woodland, heath, parks, and gardens

The Eastern Spinebill is a brightly coloured honeyeater, which is often only seen briefly as it darts after insects or hovers around flowers. Its most noticeable feature is its



delicate, decurved bill. This, combined with its fleeting flight is reminiscent of a hummingbird. The Eastern Spinebill is a beautifully plumaged bird, with its red eyes and contrasting striped breast, dark upperparts, and rufous underparts. Although the male and female are similar, the male has a brighter plumage and more distinct markings. The species is found in the coastal belt (including Tasmania) from just north of Adelaide in South Australia to northern Queensland. In the southwest tip of Western Australia, it is replaced by the closely related Western Spinebill (*A. superciliosus*), in which the male is even more brightly coloured.

MALE EASTERN SPINEBILL

*Phylidonyris novaehollandiae*

## New Holland Honeyeater



<b>LENGTH</b>	18cm (7in)
<b>WEIGHT</b>	20g (1½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Woodland, scrub, parks, gardens, and heaths

The New Holland Honeyeater has white eyes set in a black face, with white eyebrows extending from behind the eyes to the back of the head, white ear-tufts, whiskers, and a long black bill. Its upperparts are mostly black, except for a large golden yellow wing patch and a yellow-edged,



ADULT MALE

*Epthianura tricolor*

## Crimson Chat



<b>LENGTH</b>	10–12cm (4–4½in)
<b>WEIGHT</b>	11g (½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Scrubland, grassland, dry open woodland, edges of salt lakes, and roadsides

This species is most commonly seen foraging on the ground for insects and seeds, or perched low on bushes. The Crimson Chat has a brush-tipped tongue, which allows it to feed on nectar when outback flowers are in bloom. The male can be identified by its bright crimson crown, breast, and rump; its contrasting pale eyes and white throat; and its dark mask, wings, and back. The female is different in its plumage, being brown above with small areas of pink on the forehead, breast, and rump. The juvenile does not have pink tones on its plumage and is plain in appearance.

The Crimson Chat is one of the few small species of Australian birds that walk and run rather than hop across the ground. A nomadic inhabitant of Australia's arid interior, it sometimes appears in very large numbers in areas where it has recently rained.



MALE CRIMSON CHAT

white-tipped tail. In flight, its wings and tail appear yellow. The juvenile is duller, with brown upperparts and less conspicuous eyes. One of the most common and often-encountered honeyeaters in southeast Australia and the southwestern tip of Western Australia, this honeyeater is unafraid of people, and consequently, common in towns and cities within its range. It is a noisy species, giving out a variety of piercing and whistling calls.

*Certhionyx pectoralis*

## Banded Honeyeater



<b>LENGTH</b>	12–14cm (4½–5½in)
<b>WEIGHT</b>	10g (⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Grassy woodland, coastal scrub, mangroves, and watercourse vegetation

The Banded Honeyeater has a striking pied appearance. It has black upperparts, white underparts, and a black band across the breast. Its bill appears heavy compared to many other small honeyeaters. Male and

female are similar. The juvenile is a dull imitation of the adult: brown above with a faint brown band across the breast and a buff-yellow face. In flight, both the male and female of the species display a noticeable white rump.

The Banded Honeyeater is found only in Australia and is common throughout the tropical north of the continent – wherever there are flowering paperbark or eucalyptus trees. It is a nomadic species that constantly undertakes journeys in search of food, the only exception being when it is nesting. Large gatherings of birds can occur when suitable trees are heavily in flower.

*Myzomela sanguinolenta*

## Scarlet Myzomela



<b>LENGTH</b>	10cm (4in)
<b>WEIGHT</b>	9g (⅓oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Rainforest, woodland, heathland, scrub, parks, and gardens

This species is also known as the Scarlet Honeyeater. The male has a blood-red head and breast contrasting with its white belly and black wings and tail. In flight, it shows off the white-edged feathers of its black wings and a scarlet rump. The thin black band between its bill and eye gives it a masked appearance. The female is a plain tawny-brown colour, with just a faint

pink tint to the chin. The juvenile is similar, although young males gradually acquire their bright plumage, developing areas of red first on the head and back, and finally on the breast. The Scarlet Myzomela is seen alone or in flocks, hovering to feed at flowers with fast beating wings.



MALE SCARLET MYZOMELA

*Ashbyia lovensis*

## Gibberbird



<b>LENGTH</b>	13cm (5in)
<b>WEIGHT</b>	17g (⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Sparsely vegetated rocky desert plains

The Gibberbird is so named not because it chatters incessantly but after "gibber", an Australian term for the type of flat, rocky desert it favours. Also called the Desert Chat, the Gibberbird is pale and plain in appearance and blends effortlessly into its dusty, desert surroundings. Mottled grey-brown above, it has pale yellow eyes, a brighter yellow face and underparts, and a white-tipped dark tail. The female is only slightly duller than the male, making it difficult to distinguish the sexes. The Gibberbird is a nomadic species that dwells almost entirely on the ground, although it will occasionally fly to catch an airborne insect. It is often seen in pairs or small groups, running short distances before pausing to stand upright, flicking its tail.

**ADULT IN A TYPICAL UPRIGHT STANCE**



# BRISTLEBIRDS

**ORDER** Passeriformes  
**FAMILY** Dasyornithidae  
**SPECIES** 3

BRISTLEBIRDS ARE shy residents of heathland, thickets, and scrub in the coastal strip of southern and eastern Australia, usually close to the sea or a short distance inland. They are named for a group of stiff, bristle-like feathers at the base of the bill. They have a subdued, brownish grey plumage and a long, rounded tail. The three different species are restricted to small ranges located far apart from each other, which suggests that at one time they were more widespread. Two species – the Western and Rufous Bristlebirds – are endangered, due to extensive urban development on the coast. The relationship of bristlebirds to pardalotes (see below) and to thornbills and gerygones (see p.368) is much debated, and sometimes all these closely related birds are placed together in the same family,

## BEHAVIOUR

Bristlebirds feed mainly on invertebrates and spend most of their time walking or hopping through grass tussocks and other low vegetation, moving quickly and often breaking into a short run. They seldom fly for more than about 20m (60ft), soon dropping back down into cover. Due to this secretive lifestyle, the birds' penetrating, melodious song and harsh contact calls are often the sole indication of their presence. The breeding behaviour of bristlebirds is poorly known. They build a domed or globular nest from grasses and sticks, among grass or low down in a shrub, and the female lays two eggs.

# PARDALOTES

**ORDER** Passeriformes  
**FAMILY** Pardalotidae  
**SPECIES** 4

body and a strikingly short, stubby bill – both features similar to flowerpeckers (see p.449). Three of the species are common and widespread, but the rare Forty-spotted Pardalote is confined to southeastern Tasmania. Some authorities group pardalotes with the thornbills and gerygones (see p.368).

## BEHAVIOUR

Pardalotes are highly active birds that move through woodland in pairs or small parties, often high up in the tree canopy. Their diet includes small insects plucked off foliage and a sugary solution collected from the surface of eucalypt leaves. They breed in pairs or co-operatively – with extra birds assisting the main pair. Both sexes help to build the nest and raise the young.

### NESTING TUNNEL

Like other pardalotes, the Striated Pardalote digs a nesting chamber in an earth bank, often beside a creek or in a road cutting. Holes in walls and tree trunks are also used.

### Dasyornis broadbenti

#### Rufous Bristlebird

	<b>LENGTH</b> 24–27cm (9½–10½in)
	<b>WEIGHT</b> 70g (2½oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Coastal scrub and heath

Commonest of the three members of its family, the swift-running Rufous Bristlebird is usually shy, although some individuals are rather tame and can be seen at sites frequented by people. It has a rich rufous cap and wings, pale grey scalloped underparts, and a broad paddle-shaped tail. The *D. b. litoralis* race of the species was formerly found in southwestern Western Australia, but now appears to be extinct.



ADULT RUFOUS BRISTLEBIRD

### Dasyornis brachypterus

#### Eastern Bristlebird

	<b>LENGTH</b> 20–22cm (8–8½in)
	<b>WEIGHT</b> 40g (1⅓oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Dense coastal scrub, woodland, and heaths

**RED LIST CATEGORY** Endangered

A medium-sized bird, the Eastern Bristlebird is mainly grey-brown in colour, with faint eyebrows and dark cinnamon-brown upperparts. Its underparts are pale, with a greyer wash. Its long tail is usually held horizontally, but is sometimes raised when the bird is excited. With its small, rounded wings, it is capable of flying only for very short distances.

The Eastern Bristlebird is a shy, ground-dwelling species that moves quickly and quietly along the floor of its dense heath habitat. It is more likely to be heard than seen – its voice consists of repeated ringing calls or a loud and melodious series of high-pitched whistles, which often end with a whip-like crack. The Eastern Bristlebird is found in just a few small, fragmented populations on Australia's east coast, and its total population is estimated to be around 1,500 individuals.



ADULT STRIATED PARDALOTE

### Pardalotus striatus

#### Striated Pardalote

	<b>LENGTH</b> 9–12cm (3½–4½in)
	<b>WEIGHT</b> 12g (⅔oz)
	<b>MIGRATION</b> Partial migrant

**HABITAT** Woodland, forest, scrub, parks, and gardens

Found throughout most of Australia, the Striated Pardalote is a small, brightly coloured bird with attractive patterns on its plumage. It has a black crown (in some subspecies streaked white) and thick white eyebrows that

# THORNBILLS AND GERYGONES

**ORDER** Passeriformes  
**FAMILY** Acanthizidae  
**SPECIES** 60

MANY OF THE COMMONEST small Australian birds belong to this large and diverse family. Its members can be roughly divided into two main groups. One group is formed by the thornbills, gerygones,

whitefaces, and Weebill, all of which are under 13cm (5in) in length. They have fine, pointed bills and most feed by searching for insects among foliage; some hover frequently while feeding. The second group consists of the scrubwrens, Pilotbird, and a few other species. These birds are somewhat larger and longer-tailed, and many feed on the ground among leaf litter. Cooperative breeding is common among all species in this family.



## CONCEALED NEST

A Southern Whiteface brings food for its chicks, hidden in its nest inside a hollow tree stump. This species is known as the "squeaker" due to the twittering calls given constantly by birds on the move.

### *Pycnoptilus floccosus*

#### Pilotbird



<b>LENGTH</b>	16–18cm (6½–7in)
<b>WEIGHT</b>	30g (1⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wet forest and drier coastal woodland

Predominantly brown in colour, with a rufous-brown forehead and breast, the Pilotbird has deeper brown underparts, which are lightly scalloped. Its eyes are red and it has a long tail.

A large scrubwren, which feeds mostly on the ground, the Pilotbird forages for invertebrates in leaf litter. It gets its unusual name from its habit (in certain areas) of following the Superb Lyrebird (see p.361) as it forages in the forest, similar to a pilotfish alongside a shark, and picking out insects and earthworms that the larger bird disturbs. It has a characteristic sweet, far-carrying song, sounding like "guinea-a-week". The Pilotbird is generally a secretive species that favours damp gullies and eucalyptus forest in the southeast of Australia (Victoria and New South Wales).



### *Oreoscopus gutturalis*

#### Fernwren



<b>LENGTH</b>	13–15cm (5–6in)
<b>WEIGHT</b>	20g (1⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rainforest above 600m (2,000ft)

The Fernwren is mainly rich dark brown in colour and has a thin white line above the eye, a noticeable white throat, and a black breast patch. As a result, the bird has a "masked"

appearance. The female is less clearly marked than the male, while the juvenile is a very uniform brown, lacking any distinct markings on the breast and throat, with just a thin, pale line above the eye.

Difficult to spot, the Fernwren skulks and hops through the ferns and dense undergrowth of the rainforest, feeding in damp leaf litter as it flicks its tail and bows its head. The species is usually located by its high-pitched, penetrating whistles and buzzing sounds. It is found only in the Atherton Tablelands of northeast Queensland.

#### JUVENILE FERNWREN



### *Sericornis frontalis*

#### White-browed Scrubwren



<b>LENGTH</b>	11–13cm (4½–5in)
<b>WEIGHT</b>	12–16g (7/16–9/16oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Undergrowth of woodland and scrub, as well as mangroves, heath, and gardens

In appearance, the male White-browed Scrubwren has a distinct pale eye and a dark facial mask between two white stripes. It is dark brown on its back and wings and a paler buff below (though birds of the Western Australian subspecies are streaked from

#### ADULT WHITE-BROWED SCRUBWREN

throat to breast). It also has a small but distinct white mark on the edge of the wing. The female and juvenile are duller than the male.

Although it feeds low down in its dense scrubby habitat, the White-browed Scrubwren is often heard, being noisy and uttering a variety of buzzing calls. It feeds on insects and seeds, usually in pairs. Breeding takes place in July to January each year. The cup-shaped nest is lined with feathers and has a side entrance tunnel. It is usually located on or near the ground in thick vegetation, but may be in a tree fork a few metres high. One of the most common and widespread members of its family, the White-browed Scrubwren is found in a wide coastal belt in Australia.

*Smicromys brevirostris***Weebill**

LENGTH	8cm (3½in)
WEIGHT	5g (⅓oz)
MIGRATION	Non-migrant

**HABITAT** Dry woodland and scrub

Australia's smallest bird, the Weebill gets its name from its short, stubby bill. This tiny bird is olive-green above and pale buff to lemon below. It has a noticeably pale eye and a dark band and white tip to the end of its tail. Birds from the southeast of the country are paler and less yellow in their overall plumage tone.

The Weebill is often found feeding in mixed flocks alongside other species, and its presence is usually announced by a distinctive loud whistle. It is an active bird, preferring to forage in the outer edges of the tops of trees, where it feeds predominantly on insects. Although the species is generally sedentary, it does undertake nomadic local movements from time to time.

**ADULT WEEBILL****HOODED NEST**

During its long breeding season, from July to February, the Weebill makes a neat, tightly woven dome-shaped nest from grasses, plant down, and leaves. It has a narrow entrance, rather like a spout, situated at the top of the structure. Inside, it is cushioned with feathers and other soft material, and

2 or 3 pale, brown-flecked eggs are laid.

**ADULT WHITE-THROATED GERYGONE***Gerygone olivacea***White-throated Gerygone**

LENGTH	10–12cm (4–4½in)
WEIGHT	7g (⅔oz)
MIGRATION	Partial migrant

**HABITAT** Woodland, scrub, and trees along rivers

A slender bird, the White-throated Gerygone has a white throat, greyish brown upperparts, and yellow underparts. It is perhaps best known for its lilting, cascading song, the word "gerygone" meaning "born of sound". The White-throated Gerygone is found along the north coast of Australia, from the Kimberley region in Western Australia, right along the east coast to Adelaide in South Australia.

*Acanthiza pusilla***Brown Thornbill**

LENGTH	10cm (4in)
WEIGHT	7–9g (⅓–1⅓oz)
MIGRATION	Non-migrant

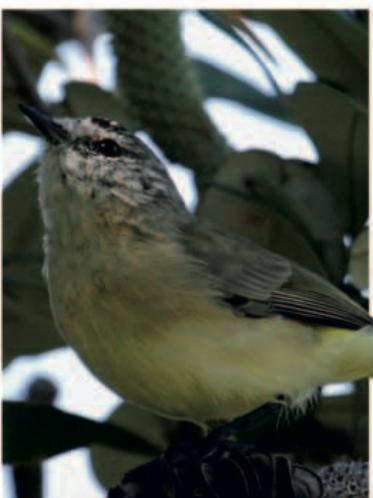
**HABITAT** Rainforest, eucalyptus woodland, scrub, mangroves, parks, and gardens

Pale brown above and finely streaked on its forehead and breast, the Brown Thornbill has a noticeable dark red eye, an off-white unstreaked belly, a dull cinnamon rump, and a pale tip to its grey-brown tail.

A common species in most wooded habitats along the Australian east coast, the Brown Thornbill

**ADULT BROWN THORNBILL**

frequents undergrowth – rarely in the canopy. It forages on its own, or in pairs, feeding mainly on insects, but also taking seeds, nectar, and fruit. It can be confused with the very similar Inland Thornbill (*A. ewingii*) found in the west of Australia, which is slightly greyer and holds its tail angled more upwards.

*Acanthiza chrysorrhoa***Yellow-rumped Thornbill**

LENGTH	11–13cm (4½–5in)
WEIGHT	9–11g (1⅓–3⅓oz)
MIGRATION	Non-migrant

**HABITAT** Grassy woodland edges, scrub, farmland, golf courses, parks, and gardens

Although a small bird, the Yellow-rumped Thornbill is the largest species of thornbill. It has a distinctive facial pattern, with a white-streaked dark crown and white eyebrow. It is olive-grey above with

pale greyish white underparts. However, its most obvious feature, and the one after which it is named, is its yellow rump. This is visible when the bird is in flight – it flies short distances with a low, bouncing movement when flushed. The bright rump is also highlighted due to the contrast with the bird's white-tipped black tail.

A sociable species, this thornbill is usually found hopping on the ground in pairs or small flocks, preferring short grass; in recent years, it has become a familiar sight on golf courses. It has a tinkling song and a two-syllable "check-check" flight call. Its nest, made of grass and bark, is dome-shaped, with a hidden entrance and a decoy cup-shaped structure on top to protect it from predators.

**ADULT SOUTHERN WHITEFACE**

# AUSTRALASIAN BABBLERS

**ORDER** Passeriformes

**FAMILY** Pomatostomidae

**SPECIES** 5

FOUND ONLY IN Australia and New Guinea, this family of birds is unrelated to the Asian babblers in the family Timaliidae (see p.418).

Like them, however, they are

highly social and extremely vocal. They are named for their strident calls and their loud, chattering, warbling, or miaowing songs. Pairs of these birds may sing duets, and often several members of a group join in.

Australasian babblers live in forest and scrub in groups of up to 15 birds, and always feed and roost together. They breed cooperatively, building several domed stick-nests. One is used to raise young, and the others for roosting.

#### SHARED NESTS

A Grey-crowned Babbler adds sticks to one of the communal nests belonging to its group.



*Pomatostomus temporalis*

## Grey-crowned Babbler



**LENGTH**  
29cm (11½in)

**WEIGHT**  
75g (2½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Open woodland, farmland, and scrub

The Grey-crowned Babbler is a very sociable species, usually encountered in large family parties consisting of a primary breeding pair along with several non-breeding birds. These groups are noisy and energetic as they forage high in trees or on the ground. There are two subspecies of Grey-crowned Babbler, which differ considerably in appearance. The eastern Australian subspecies has grey upperparts and a greyish brown lower breast.

It has a distinct white stripe above the eye, a dark grey mask across the face, a white throat and breast, and a long, rounded tail with a white band around the entire tip. The pale yellow eyes stand out from the middle of the dark mask. This subspecies also has a long, heavy, decurved bill. The subspecies that predominates in Western Australia and the Northern Territories is much



**WESTERN ADULT**

warmer-looking than its eastern counterpart: it differs in its rufous breast and brown upperparts. Both subspecies are vocal with a large selection of nasal calls, one of which is often described as sounding like "yahoo", giving rise to an alternative name sometimes used for the species.

# LOGRUNNERS

**ORDER** Passeriformes

**FAMILY** Orthonychidae

**SPECIES** 3

THESE GROUND-LIVING birds have beautifully camouflaged plumage that helps them to blend in with the leaf litter of their rainforest home.

They are weak fliers, so their cryptic plumage and secretive behaviour are their chief protection against predators. Logrunners feed on invertebrates, using their strong legs and bills to rake around vigorously for hidden prey, such as spiders and worms. While digging, they often lean on their stiff, spiny-tipped tail feathers as a prop. Two species of logrunner are found in eastern Australia, and the third occurs in New Guinea.

#### MOTTLED JUVENILE

This downy Northern Logrunner, or Chowchilla, chick is moulting into its juvenile plumage. Logrunners usually nest on the ground and produce broods of one or two young.

This downy Northern Logrunner, or Chowchilla, chick is moulting into its juvenile plumage. Logrunners usually nest on the ground and produce broods of one or two young.

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This downy Northern Logrunner, or Chowchilla, chick is moulting into its juvenile plumage. Logrunners usually nest on the ground and produce broods of one or two young.



**ADULT MALE**

*Orthonyx temminckii*

## Australian Logrunner



**LENGTH**  
18–20cm (7–8in)

**WEIGHT**  
55–60g (2–2½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Leafy subtropical rainforest floors

The Australian Logrunner is a small, stocky bird. It is attractively plumaged with intricately patterned markings that can often be difficult to discern among the shadows of the rainforest floor. The male has a mottled black and rufous back, as well as a rufous rump and flanks. It has a grey face,

with a thick black line that extends downwards along the side of the throat and breast. The throat itself is white. The black wings have grey wingbars and it has a broad, dark tail, with short spines at the tip. The female is similar to the male except that it has an orange throat. Immature birds are similar in structure, but browner and densely scalloped on the face and underparts.

The Australian Logrunner lives mainly on the forest floor, where it scratches noisily among the leaf litter with its large, strong feet, leaving a tell-tale trail of small, leafless circles – flinging debris aside with first one foot, then the other. It can be a noisy species, particularly at dawn, when its rapid piping song can often be heard.

# SATINBIRDS

**ORDER** Passeriformes  
**FAMILY** Cnemophilidae  
**SPECIES** 3



THE SATINBIRDS are a group of three species formerly thought to be part of the birds-of-paradise family (see p.396), but they were given their own family when differences in their DNA came to light. Unlike birds-of-paradise, they build domed nests, have weak legs and feet, and eat nothing but fruit at all ages, even when young chicks. Two species, the Silken and Antenna Satinbirds, have brilliantly coloured males, while the male Velvet Satinbird is glossy black. Females are dull and inconspicuous. All three satinbird species live in the mountain forests of New Guinea.

#### SINGLE PARENT

Here, a female Antenna Satinbird builds her globular nest on her own. She will also care for her single chick alone, as is the norm in satinbirds.

# BERRYPECKERS

**ORDER** Passeriformes  
**FAMILY** Melanocharitidae  
**SPECIES** 12

a lowland range. Apart from two unusually colourful species, these birds have rather dull plumages, typically in shades of brown, grey, olive, pale yellow, or black and white.

## BEHAVIOUR

Eight of the species in this family have short, fairly heavy bills, and look like drab members of the honeyeater family (see p.362). They occur at all levels of the forest, from ferns and shrubs near the ground up to the treetops, and are usually seen alone or in pairs. Most of their diet consists of fruit, which is supplemented with a few insects. The remaining four species, called longbills, are quite different. Their very long, decurved bills are similar to those of sunbirds (see p.450), and are suited to their insect-based diet.

#### BRIGHTLY PATTERNED

The Tit Berrypecker is one of only two colourful species in its diverse but poorly known family.



#### *Cnemophilus macgregorii*

## Antenna Satinbird

<b>LENGTH</b>	25cm (10in)
<b>WEIGHT</b>	100g (3½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Mountain rainforest and forest edge

The Antenna Satinbird is also known as the Crested Cnemophilus or the Sickle-crested Bird-of-Paradise. Males of this species are striking birds. They have orange-yellow or golden plumage on the top of the head and upperparts, which contrasts with their jet-black underparts. They also have a short orange crest. Females are olive coloured all over. Although it is thought to be fairly common in its limited range, little is known about the species, since it inhabits relatively inaccessible upland areas and is surprisingly inconspicuous in its rainforest home.

ADULT MALE



#### *Toxorhamphus poliopterus*

## Slaty-headed Longbill

<b>LENGTH</b>	12.5cm (4¾in)
<b>WEIGHT</b>	10–12g (⅓–⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Upland rainforest

The Slaty-headed Longbill is found only in the uplands of central and eastern New Guinea. It is a swift, darting species that is often difficult to observe, as it tends to feed in the mid to upper canopy. The male has a grey

ADULT SLATY-HEADED LONGBILL



#### *Melanocharis versteri*

## Fan-tailed Berrypecker

<b>LENGTH</b>	14–15cm (5½–6in)
<b>WEIGHT</b>	12–18g (⅗–⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Upland rainforest and dense secondary forest growth

The male Fan-tailed Berrypecker has glossy blue-black upperparts that contrast with its off-white underparts. It has a long, rounded tail. Females are similar in shape but are a dull olive green above. The white markings on the outer tail feathers are conspicuous, especially in flight. As well as feeding on berries as its name suggests, the Fan-tailed Berrypecker also takes insects, sometimes by hovering. The species builds an impressive large, cup-shaped nest mainly out of ferns. It is decorated on the outside with lichen.

# WATTLED CROWS

ORDER Passeriformes

FAMILY Callaeatidae

SPECIES 2

THESE RARE NEW ZEALAND birds, also known as wattlebirds, are named for the prominent fleshy wattles that hang from the face, either side of the bill. These are orange in the Saddleback and blue in the Kokako; the Kokako's South Island subspecies had orange wattles, but this population probably died out in the late 1960s. A third species of wattled crow, the Huia, was last seen in 1907 and is now considered extinct. It was remarkable for being the world's only bird in which each sex had a differently shaped bill – thin and decurved in females, or straight and pointed in males.

## BEHAVIOUR

Wattled crows live in thick forest and feed at all levels of this habitat, particularly on and near to the ground. Their varied diet includes berries, nectar, leaf buds, and insects, with a greater proportion of fruit in summer. They make short gliding flights, but tend to prefer to bound along on their strong legs. Both the Saddleback and the Kokako form monogamous breeding pairs. The male and female share the task of feeding their nestlings, and stay with their young for up to a year after they fledge.

### DEVELOPMENT OF YOUNG

The disc-shaped wattles are already clearly visible in these Kokako nestlings. The young stay in the nest for 30–45 days.



ADULT KOKAKO

Callaeas cinereus

## Kokako

LENGTH  
38cm (15in)WEIGHT  
225g (8oz)MIGRATION  
Non-migrant

HABITAT Native lowland hardwood and podocarp (subtropical) forest

RED LIST CATEGORY Endangered

A large blue-grey bird with a short, stubby black bill and a black face, the Kokako has remarkable blue facial wattles. Structurally, it is an unusual species with long legs, short rounded wings, and a long tail. The bird, therefore, tends to climb the top of trees, only taking very short flights. Its call is a series of melodious piping notes, similar to the sounds of an organ, sometimes sung in a duet.

The numbers of this species have increased slightly in recent years, due to intensive conservation action, though the Kokako is still classified as endangered.

Philesturnus carunculatus

## Saddleback

LENGTH  
25cm (10in)WEIGHT  
70–80g (2½–2¾oz)MIGRATION  
Non-migrant

HABITAT Forest and scrub floor on offshore islands

The Saddleback is an attractive, glossy black bird with a very strong bill. Its back, rump, and the undertail are a bright chestnut colour. The adult Saddleback has orange red wattles that hang from just below the base of its bill. The juvenile is brown rather than black, and does not have the wattles. The Saddleback is usually found feeding on the ground, or bounding (rather than flying) between low branches. The bird takes fruit, insects,

and nectar. It builds its nest in epiphytes, on the tops of tree ferns, and holes in the tree trunks. The nest is made from twigs and leaves and is lined with fibrous material such as fern scales or bark fibre. The bird lays between 1–4 eggs. The species became extinct on the New Zealand mainland in the early 1900s, but many healthy populations exist on offshore islands.

### ADULT SADDLEBACK



# WHIPBIRDS AND RELATIVES

ORDER Passeriformes

FAMILY Eupetidae

SPECIES 10

THIS SMALL BUT DIVERSE family of insectivorous, ground-dwelling birds includes whipbirds, wedgebills, jewel-babblers, and the Malaysian Rail-babbler. They are confined to Australia and New Guinea, except for the latter species, which is secretive and seldom-seen, and which ranges from Thailand south to Sumatra and Borneo. Most species live in dense forest, but wedgebills inhabit open, arid country.

## BEHAVIOUR

The members of this family display a wide variety of behaviour, but are usually feeble or reluctant fliers that prefer to hop briskly or run when foraging. Wedgebills fly more readily than their relatives, gliding between bushes with their tail spread. They form loose flocks, whereas other species are typically more solitary and territorial. Most species have loud, distinctive calls.



### HIGHLY VOCAL

The Chirruping Wedgebill from Australia is named for its frequent chattering. Small parties often set up a noisy chorus while perched on bushes.

# QUAIL-THRUSHES

ORDER Passeriformes

FAMILY Cinclosomatidae

SPECIES 5

THE QUAIL-THRUSHES are retiring, medium-sized birds that spend all their life on the ground. There are four Australian species, found in heathland, scrub, stony terrain, and dry, open woodland, and a single New Guinean species, which occurs only in rainforest. The birds' camouflaged upperparts match the ground colour of their habitat. In all species, males have black throat patches, while females are grey-throated.

## BEHAVIOUR

Quail-thrushes are insect-eaters, and forage in pairs or small groups, probing the earth, stones, or fallen leaves with their bill. In inland Australia, they also eat the seeds of spinifex plants. Like quails, they crouch low and freeze when disturbed, then burst into the air in a flurry of wingbeats and fly fast and low to cover. Quail-thrushes are normally silent, and so tend to pass unnoticed, but males have a far-carrying song. The nest is a simple cup in the ground, and in open areas is often placed in the shade of a shrub or rock.

*Psophodes olivaceus*

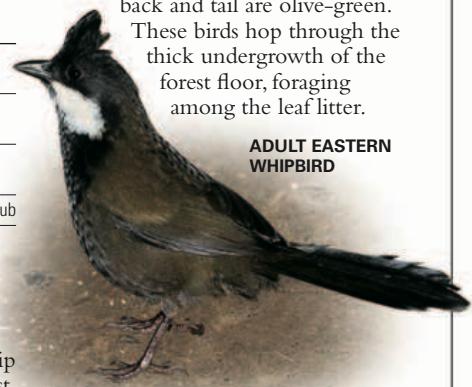
### Eastern Whipbird

LENGTH  
25–30cm (10–12in)WEIGHT  
60–70g (2 1/8–2 1/2oz)MIGRATION  
Non-migrant

HABITAT Rainforest, wet eucalyptus forest, and scrub

are also black, with a variable amount of white streaking on its belly, and its back and tail are olive-green. These birds hop through the thick undergrowth of the forest floor, foraging among the leaf litter.

ADULT EASTERN WHIPBIRD

*Ptilorrhoa castanonota*

### Chestnut-backed Jewel-babbler

LENGTH  
23cm (9in)WEIGHT  
70g (2 1/2oz)MIGRATION  
Non-migrant

HABITAT Hill forest

A shy but attractive bird, the Chestnut-backed Jewel-babbler is a long-legged bird with a rich blue-grey plumage, chestnut crown and back, black wing feathering, and a long tail. It forages on the floor, tossing aside fallen leaves to uncover insects. More likely to be heard than seen, the bird's calls include a series of loud, ringing down-slurring notes, whip-cracks, and rapid machine gun-like whistles.

ADULT CHESTNUT-BACKED JEWEL-BABBLER

*Cinclosoma punctatum*

### Spotted Quail-thrush

LENGTH  
25–28cm (10–11in)WEIGHT  
100–125g (3 5/8–4oz)MIGRATION  
Non-migrant

HABITAT Dry forest and woodland with plentiful leaf and twig litter

The Spotted Quail-thrush is a distinctively patterned species. The male has a black face and throat, with a large white patch below and a white stripe above the eyes. Its neck and breast are blue-grey and it has a sandy-coloured back, flecked with black streaking. The female lacks the male's facial pattern.

ADULT SPOTTED QUAIL-THRUSH



# WATTLE-EYES AND BATISES

**ORDER** Passeriformes  
**FAMILY** Platysteiridae  
**SPECIES** 28

THESE SMALL birds from sub-Saharan Africa are also called puffback flycatchers, and used to be placed in the chats and

flycatchers family, Muscicapidae (see p.440). The wattle-eyes are named for the fleshy growths around their eyes, which can be bright red, pink, blue, or violet, depending on the species. Most of them are black above and white below, but some species have yellow underparts, and females may be brown. Batises are also pied, with a black breast-band, and some have rufous or grey areas.

## NEAT NEST

DNA studies have confirmed the Black-throated Wattle-eye (right) as a member of this family. Like other species within this family, it makes a tiny nest cup, tightly woven with spider's silk.



## BEHAVIOUR

Wattle-eyes and batises are insect-eaters of all kinds of open wooded country, including savanna, bush, gardens, and forest clearings, although some live in dense forest. They are restless, active birds, which normally catch insects in mid-air, during an aerobatic sally from an exposed perch, but sometimes they snatch their prey off leaves or drop to the ground. Usually, they are seen in pairs or small groups. The male and female form a monogamous breeding pair, with both sexes helping to build the cup-shaped nest, incubate the 2 or 3 eggs, and feed the young.

### Batis capensis

#### Cape Batis



**LENGTH**  
12cm (4½in)

**WEIGHT**  
11–12g (¾–7/16oz)

**MIGRATION**  
Partial migrant

**HABITAT** Mainly evergreen forest



#### ADULT MALE CAPE BATIS

This small, active bird is found in a fragmented range from southeast Tanzania to southwest South Africa. The Cape Batis is an intricately patterned species, and has a grey head, black face-mask, red eyes, and greyish brown upperparts. The female is slightly different, with rufous tinges on its throat and a rufous, rather than black, breast-band. The juvenile is similar to the female, but duller. There are many similar species of the *Batis* genus, but most do not overlap with the Cape Batis and have subtle plumage differences as well as easily distinguishable calls.

### Platysteira cyanea

#### Brown-throated Wattle-eye



**LENGTH**  
12–14cm (4½–5½in)

**WEIGHT**  
15g (⁹/₁₆oz)

**MIGRATION**  
Non-migrant

**HABITAT** Forest clearings and open woodland areas

A small black-and-white bird, the Brown-throated Wattle-eye has a distinctive fleshy red wattle above the eye. The male has a black head and a contrasting white throat and upperparts, which are separated by a thick black breast-band. It also has a long white bar that extends along the length of the wing. The female has a dark chestnut-brown throat and breast and grey upperparts. The juvenile is duller and greyer, with off-white underparts and no red wattle.

The Brown-throated Wattle-eye is a widespread species south of the Sahara, and is found in a band extending from Senegal in the west to Kenya in the east.

**FEMALE BROWN-THROATED WATTLE-EYE**



# HELMETSHRIKES AND PUFFBACKS

**ORDER** Passeriformes  
**FAMILY** Malaconotidae  
**SPECIES** 52

in both sexes. Helmetshrikes are black and white, with a large crest and fleshy wattles around the eyes. Despite their bold plumage, these birds can be hard to see, because they often stay hidden in scrub or forest – their calls are the best way to locate them. As well as helmetshrikes and puffbacks, the family includes boubous, gonoleks, bushshrikes, and tchagrás. All of them eat invertebrates, but larger species also catch small vertebrates. Helmetshrikes breed co-operatively.

THIS FAMILY contains some of Africa's most colourful birds. Many are bright yellow, orange, red, or green, generally

**WET-SEASON BREEDER**  
A male Black-backed Puffback tends to its nest. It usually breeds after the onset of the rainy season when food is plentiful, like many other members of this family.

## *Prionops plumatus*

### White-crested Helmetshrike



**LENGTH**  
19–25cm (7½–10in)  
**WEIGHT**  
30–35g (1⅓–1¼oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Mainly open woodland

The White-crested Helmetshrike is a medium-large member of the *Prionops* genus, which is widespread in open woodland throughout much of sub-Saharan Africa. The adult has a white crest, head, and neck, black neck collar, a yellow eye-ring and a black crescent behind the eye, white underparts, and black wings and tail with white outer-tail feathers. The

juvenile has dark eyes and brown upperparts. There are at least nine subspecies, differing in plumage as well as size: for instance, birds found in Ethiopia and Sudan lack the white wing-bar common in other subspecies, whereas some southerly birds have a grey head without a crest. The White-crested Helmetshrike has a complex and variable set of different calls.

#### ADULT BIRD



## *Chlorophoneus dohertyi*

### Doherty's Bushshrike



**LENGTH**  
19cm (7½in)  
**WEIGHT**  
30–40g (1⅓–1⅔oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Thick scrub and undergrowth, generally in upland areas

A shy species that inhabits thick scrub and undergrowth and limited to a tiny range, Doherty's Bushshrike is not often seen. The adult is striking, with its crimson face and forehead sandwiched by a black face-mask and breast-band. These features contrast with its green upperparts and yellow underparts. Very rarely, some adults have a yellow throat and forehead. The juvenile is a plain olive-green above, and a paler yellow below.



ADULT DOHERTY'S BUSHSHRIKE

## *Telophorus zeylonus*

### Bokmakierie



**LENGTH**  
23cm (9in)  
**WEIGHT**  
60–65g (2⅓–2⅔oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Mainly open habitat such as scrub, thickets, grassland, parks, and gardens

A large species of bushshrike, the Bokmakierie is found in southern Africa. The adult has a grey head and neck and yellow eyebrows, throat, and underparts, with a black eyebrow extending down into a breast-band. The upperparts and



ADULT BOKMAKIERIE

wings are olive-green. In flight, its yellow tail-tips can be clearly seen. It is most frequently seen on the ground, on its own or in pairs. It is a shy bird, but will perch on exposed sites such as rocks and shrubs when giving its ringing calls.

## *Tchagra senegalus*

### Black-crowned Tchagra



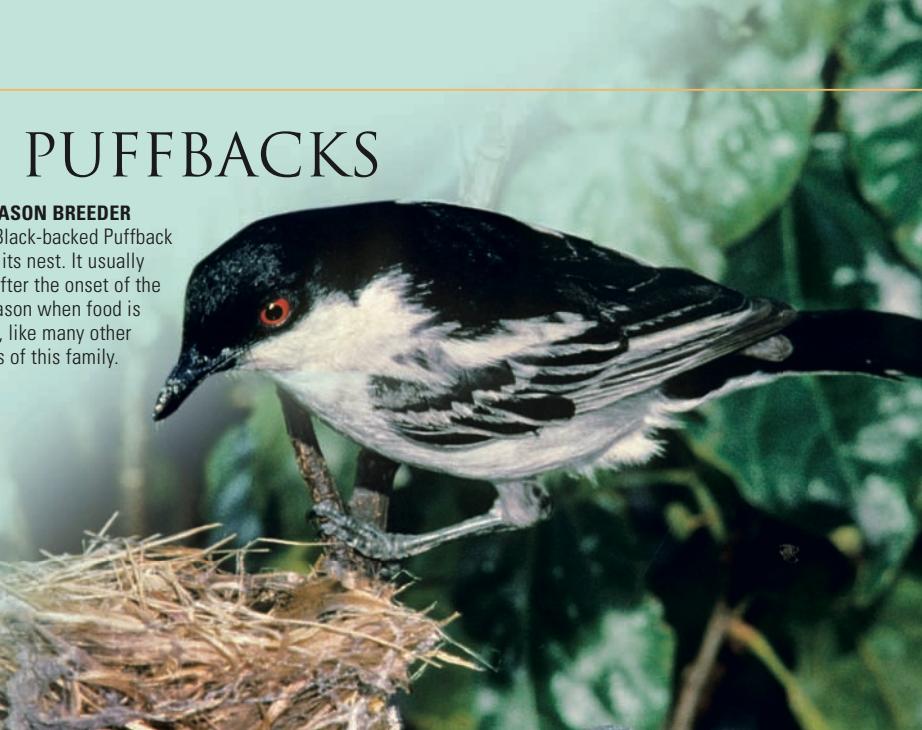
**LENGTH**  
20–23cm (8–9in)  
**WEIGHT**  
50g (1⅓oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Scrubby semi-desert, thickets, open forest, woodland, and gardens

The Black-crowned Tchagra is a medium-large species of thin-billed bushshrike. The adult has an intricate head pattern: a white stripe above and a black stripe through the eye, topped with a black crown. The underparts are cream-coloured or off-white, the upperparts are brown or grey, and the wings show a variable amount of chestnut-brown. The tail is black with a white outer border that is clearly visible in flight. The sexes are similar, but the juvenile is less distinctive than the adult, with a brown crown and duller underparts. The Black-crowned Tchagra is a



ADULT BLACK-CROWNED TCHAGRA



# BOATBILLS

**ORDER** Passeriformes  
**FAMILY** Machaerirhynchidae  
**SPECIES** 2

two species: the Yellow-breasted Boatbill of northeastern Australia and New Guinea; and the Black-breasted Boatbill, found in the mountains of New Guinea. These birds are named for their wide, flattened bill, which is almost shovel-like in profile.

**SMALL BROODS**  
A female Yellow-breasted Boatbill visits her nest. Boatbills make hammock-shaped nests from twigs and produce small broods of two young.



BOATBILLS ARE SMALL, boldly marked forest birds that behave like flycatchers. Males are mostly yellow and black, while females have green and grey upperparts. There are only

*Machaerirhynchus flaviventer*

## Yellow-breasted Boatbill



**LENGTH**  
11–13cm (4½–5in)

**WEIGHT**  
10g (⅓oz)

**MIGRATION**  
Non-migrant

**HABITAT** Forested areas, including dense second growth and edges, mainly in the lowlands

The Yellow-breasted Boatbill bears a resemblance to the Tody-flycatcher (see p.306) of South America, both in coloration and in its wide flat bill. The male has a white throat and bright yellow underparts. The female is much paler, both above and below, and several subspecies lack the thick black stripe through the eye. This bird frequently joins mixed-species flocks to search for insect prey, largely in the mid-storey of forests. The nest is a frail-looking basket of rootlets bound with cobwebs, and 2 or 3 eggs are laid.



MALE YELLOW-BREASTED BOATBILL

# VANGAS

**ORDER** Passeriformes  
**FAMILY** Vangidae  
**SPECIES** 22

is also found in the nearby Comoros Islands. Although all vangas live in or near trees, some live in more open areas such as savanna, while others are confined to dense humid forest.

## ANATOMY

Vangas range in size from shrikes to small crows, and their coloration also varies markedly – some are drab but three species are mainly blue. However, the feature that differs most is their bill shape. Several species have stout, hooked bills, and are generalist insect-eaters. The Sickle-billed Vanga has an extremely long, decurved bill to winkle food from cracks, and the Helmet Vanga's massive bill enables it to kill large prey.



### POWERFUL BILL

The Helmet Vanga's huge, deep bill is blue in adults and brown in juveniles. It can tackle larger prey than other vangas – including land crabs, tree frogs, and chameleons.

UNIQUE TO MADAGASCAR, vangas have evolved over many generations to occupy a wide range of different habitats and ecological niches on the island. One species, the Blue Vanga,

*Vanga curvirostris*

## Hook-billed Vanga



**LENGTH**  
25–29cm (10–11½in)

**WEIGHT**  
65–75g (2⅓–2⅔oz)

**MIGRATION**  
Non-migrant

**HABITAT** Often found in dense forest and scrub, but also recorded in plantations

With its long heavy bill and pied plumage, the Hook-billed Vanga is unmistakable. The male and female are alike in appearance. A predatory bird of Madagascan forests, this species feeds on large insects, including cicadas, as well as chameleons, and even mouse lemurs. It either beats its prey against a branch before consuming it, or impales it on a



ADULT HOOK-BILLED VANGA

thorn before tearing at its flesh with its bill. In the breeding season, it builds bulky cup-shaped nests lined with spiderwebs and placed prominently in a tree. Both sexes incubate the eggs and care for the 3 or 4 young.

*Cyanolanius madagascarinus*

## Blue Vanga



**LENGTH**  
16cm (6½in)

**WEIGHT**  
25g (⅞oz)

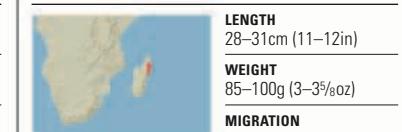
**MIGRATION**  
Non-migrant

**HABITAT** Primary evergreen forest, often around clearings

Aptly named, the male Blue Vanga is a brilliant blue above, with a bright blue bill and eye-ring and a black line through the eye. The underparts are white. The female differs in having a brown bill, some brown tones in the upperparts, and off-white to buff-coloured underparts. This vanga regularly joins mixed-species flocks, gleaning insects from the foliage.

*Euryceros prevostii*

## Helmet Vanga



**LENGTH**  
28–31cm (11–12in)

**WEIGHT**  
85–100g (3–3½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Found in the mid-storey of humid evergreen forest in lowland and foothills

A distinctive member of its family, the adult Helmet Vanga has a massive blue bill, with a black tip, and pale yellow eyes. It has a black head, wings, and underparts and a deep chestnut-brown back and tail. The black parts of the adult are buff in the juvenile. This species moves in mixed flocks with other large vanga species, but also perches quietly for long periods.

*Schetba rufa*

## Rufous Vanga



**LENGTH**  
20cm (8in)

**WEIGHT**  
35–40g (1½–7½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Primary evergreen forest, usually in areas with tall trees and an open understorey

This medium-sized vanga is renowned for its rich vocalizations. Its back and tail are rusty red and the underparts are white. The male differs from the female in an entirely black head and upper breast. The species feeds on small vertebrates and insects. The nest is constructed by both adults, in the low fork of a tree, and both parents tend the young.

ADULT FEMALE AT THE NEST

*Hypositta corallirostris*

## Nuthatch Vanga



**LENGTH**  
14cm (5½in)

**WEIGHT**  
14g (½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Humid lowland forest

Also known as the Coral-billed Nuthatch, the Nuthatch Vanga is endemic to Madagascar. The plumage is almost entirely blue, but the female is more buff in colour, especially below. The male has black around the eye and the base of the bill. This species hugs and climbs the bark of medium to large trees, but unlike typical nuthatches, it does not descend headfirst. Also, unlike nuthatches, the nest is a cup-shaped structure attached to the main trunk, and not in a hole.

JUVENILE NUTHATCH VANGA



## BUTCHERBIRDS

**ORDER** Passeriformes  
**FAMILY** Cracticidae  
**SPECIES** 13

THESE AUSTRALASIAN birds look much like crows due to their heavy, triangular bill, well-built body, and strong legs and feet. Most of them are black, grey, or white. Several species, particularly the Australian Magpie, have adapted to life in cities. Apart from this abundant species, the family also contains seven butcherbirds, three currawongs, and two shieldbills, which are endemic to New Guinea and, unlike the rest of the family, resemble small, all-dark woodswallows (see p.378).



## BEHAVIOUR

These bold, aggressive birds often become tame, and are highly vocal. They live in most habitats, but are especially numerous in eucalypt woodland, farmland, and suburban areas. They have a varied diet, including fruit, small animals, and carrion. Butcherbirds are named for their habit of wedging prey between fence wires or into a tree fork. Currawongs get their name from the wailing call of the Pied Currawong.

## DISMEMBERING PREY

By hanging their food on a tree, butcherbirds can tear apart larger prey than would otherwise be possible. A Grey Butcherbird is pictured (left).

*Cracticus nigrogularis*

## Pied Butcherbird



**LENGTH**  
32–35cm (12½–14in)

**WEIGHT**  
125g (4oz)

**MIGRATION**  
Non-migrant

**HABITAT** Woodland, farms, plains with trees and even towns and roadsides

Whereas the adult Pied Butcherbird is immediately recognizable by its striking black and white plumage, the juvenile is mainly grey-brown. The melodious fluting and piping songs of the Pied Butcherbird disguise a fierce predatory disposition. It is well-named for it impales its prey – insects, mice, lizards, or small birds – on a broken branch before tearing it into shreds, using its hooked bill. The nest is an untidy cup lined with grass and placed in the upright fork of a tall tree. The female incubates the eggs alone and is fed by the male during this time. About 3–5 young birds usually remain with their parents for up to 15 months and help the adults to raise the next brood.

ADULT PIED BUTCHERBIRD

*Gymnorhina tibicen*

## Australian Magpie



**LENGTH**  
34–44cm (13½–17½in)

**WEIGHT**  
275g (10oz)

**MIGRATION**  
Non-migrant

**HABITAT** Common in woodland, urban areas, and clearings

The Australian Magpie is found in a striking array of about five forms, all of which are basically black and white. They are distinguished in adult plumage by the varying amount of white in the wings and on the back, and the length of the bill, which is pale, with a dark tip. It is often found around human settlements, where it can become tame, but during the nesting season it may attack humans.

BLACK-BACKED FORM

*Strepera graculina*

## Pied Currawong



**LENGTH**  
41–51cm (16–20in)

**WEIGHT**  
300g (11oz)

**MIGRATION**  
Partial migrant

**HABITAT** Forested and wooded areas, but also around rural and urban areas with trees

At rest, despite its name, the Pied Currawong appears almost all black, except for the white at the tip and the base of the tail. In flight, however, when the long wings are also apparent, white flashes in its long wings and a white rump can be seen. The bill is long and conical, and like other currawongs, the eyes are pale. The Pied Currawong is often seen in flocks, which may number up to 100 birds in winter, but each pair breeds alone and is well separated from its neighbour. The nest is a large flat cup of sticks, lined with softer material, into which the female lays three eggs.

# WOODSWALLS

ORDER Passeriformes

FAMILY Artamidae

SPECIES 10

THESE GRACEFUL FLIERS from southeast Asia, New Guinea, and Australia are not related to swallows and martins (see p.405), but, like them, spend long periods on the wing catching flying insects. They have broad, pointed wings and are among the few songbirds able to soar. Woodswallows also feed on nectar, which they gather at flowering trees using the brush-like tip to their tongue.

**CLOSE CONTACT**

Like all of their family, White-breasted Woodswallows preen and roost in close-packed rows, perhaps for safety.

*Artamus personatus*

## Masked Woodswallow

LENGTH  
20cm (8in)WEIGHT  
34g (1 1/4oz)MIGRATION  
Partial migrant

HABITAT Open forest and woodland, scrub, heath, farmland, and vineyards



The male Masked Woodswallow has a dark face, which contrasts with its slate-grey upperparts and paler underparts. It has a thick, black-tipped bill and a white tip to its tail. The female is a paler version of the male, but has a dark grey face and brown-tinged underparts. The diet of this species consists mainly of flying insects, but it also takes prey from the ground. The Masked Woodswallow is highly nomadic, and moves in response to changes in rainfall and temperature.

**MALE MASKED WOODSWALLOW**

# IORAS

ORDER Passeriformes

FAMILY Aegithinidae

SPECIES 4

IORAS ARE SMALL insect-eating birds found from India, through southeast Asia, south as far as Java. They make up one of only four bird families unique to the Indomalayan realm (see p.70), and formerly were lumped together with one of the others – the leafbirds (see p.448). Ioras of both sexes are greenish yellow or green with white wingbars. The males have black upperparts. This plumage provides effective camouflage amid sun-dappled foliage.

**NESTING HYGIENE**

A female Common Iora removes a faecal sac ejected by a nestling. This keeps the nest area clean, and thus less visible to predators.

## BEHAVIOUR

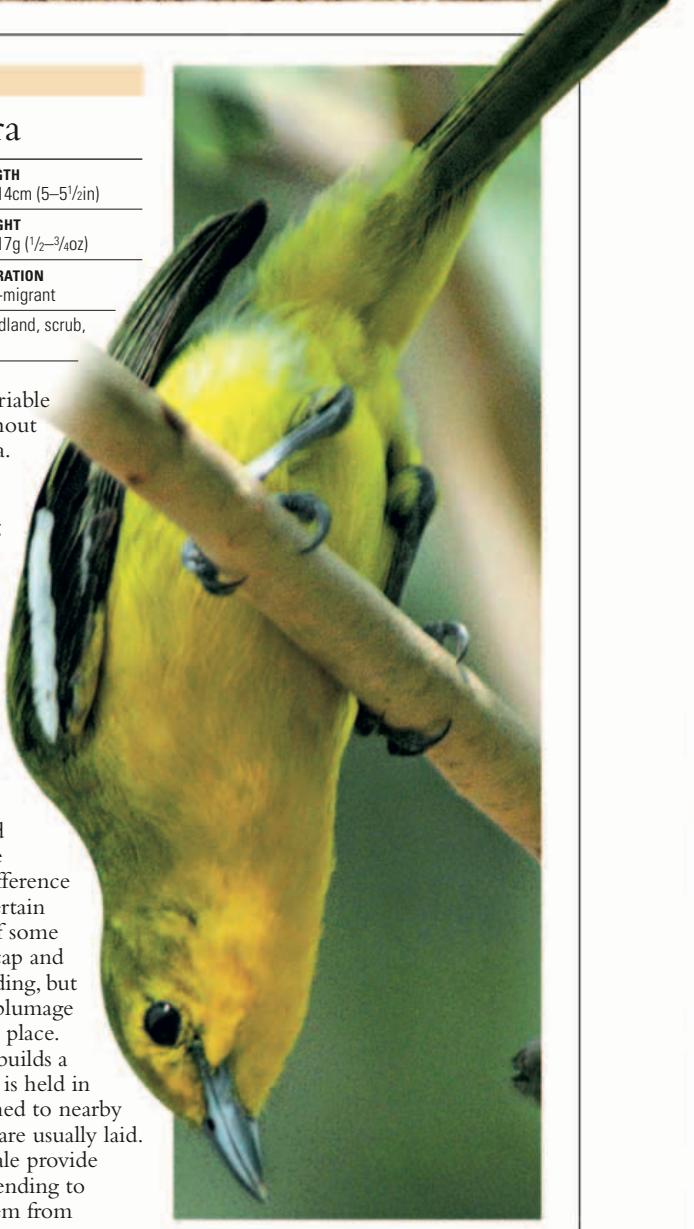
These birds live mostly in forest and lightly wooded habitats, and in cleared or cultivated areas such as agricultural land, orchards, parks, and gardens. One species, Marshall's Iora from northwestern India, occurs in arid scrubland. Ioras move quickly and acrobatically through the trees, searching the leaves for spiders, caterpillars, and small insects. During the breeding season, they are territorial and usually seen in pairs, although within their local area a pair will often join mixed feeding flocks of other small birds, such as minivets and tits. The climax of the male's courtship display is a slow, spiralling glide from a high perch to a lower one, with the lower back feathers fluffed up.

*Aegithina tiphia*

## Common Iora

LENGTH  
13–14cm (5–5 1/2in)WEIGHT  
12–17g (1/2–3/4oz)MIGRATION  
Non-migrant

HABITAT Mangrove forests, woodland, scrub, bamboo thickets, and orchards



This widespread and variable species is found throughout south and southeast Asia. There are a number of subspecies of the Common Iora differing quite considerably in their appearance. Generally, the adult Common Iora has a strong decurved bill, olive-green upperparts, dark wings with a double white wing-bar, and bright yellow underparts. The male tends to be brighter and blacker-backed than the female, although this difference is more noticeable in certain subspecies. The males of some subspecies have a dark cap and upperparts during breeding, but moult to a female-like plumage after breeding has taken place.

The Common Iora builds a cup-shaped nest, which is held in place by cobwebs attached to nearby branches, and 2–4 eggs are usually laid. Both the male and female provide food for the nestlings, tending to them and sheltering them from the elements.

**ADULT COMMON IORA**

# BRISTLEHEAD

**ORDER** Passeriformes  
**FAMILY** Pityriasiidae  
**SPECIES** 1

DNA some authorities suggest it is allied to the woodswallows (opposite) or butcherbirds (see p.377). The bristlehead's rarity and elusive, canopy-living habits add to the difficulty of its classification, but most ornithologists agree it is sufficiently unusual to be treated as a family in its own right.

THE BORNEAN BRISTLEHEAD is one of only three passerines to be given its own family. Its relationship to other birds is much debated, and based on biochemical studies of its

crow-like bird, with a massive hooked bill and short tail. The species gets its name from the short yellow bristles on its orange-yellow crown. It has a predominantly glossy black plumage that contrasts with its red face, throat, neck, and thighs. The Bornean Bristlehead is a noisy bird, and uses a variety of contact calls within its group. Very little is known about its breeding patterns.

The species is classified as globally near-threatened due to the almost complete destruction of its native lowland peat-swamp forest. However, it appears able to survive in less threatened upland forest areas.

# CUCKOOSHRIKES

**ORDER** Passeriformes  
**FAMILY** Campephagidae  
**SPECIES** 81

in the genus *Coracina*, and the rather cuckoo-like plumage and shape of many of these birds, most noticeable in flight. The family can be split into two groups. In the largest group are the cuckooshrikes, cicadabirds, and trillers (including all of the genus *Coracina*); these occur in Africa, southern and southeast Asia, Australasia, and islands in the western Pacific. The second group contains the 13 species of minivet, found only in Asia.



**BLACK-FACED CUCKOOSHRIKE**  
Cuckooshrikes in the genus *Coracina* are mainly soft grey or black, with slim bodies, long, pointed wings, and fairly long tails.

## BEHAVIOUR

Minivets are small, active insect-eaters that often gather in parties of up to 20 birds, constantly calling to each other as the flock moves through forest or open woodland. Males of most species are scarlet and black, or orange and black, while females are duller yellow, orange, and grey. The cuckooshrikes and cicadabirds also live in forest or wooded habitats, often in groups, but they are slower-moving and many of

them eat fruit as well as insects. A few species feed on the ground.

All members of the family form monogamous pairs, and lay two to five eggs.

### WATCHFUL PARENTS

A pair of Small Minivets (the male is on the right) watch over their three young nestlings. This species is less colourful than most other minivets.



*Pityriasis gymnocephala*

### Bornean Bristlehead

<b>LENGTH</b>	25cm (10in)
<b>WEIGHT</b>	120–140g (4–5oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Lowland primary rainforest; also other higher-level wooded areas

This unusual bird is the sole member of its family and is found only on the island of Borneo. In appearance, the Bornean Bristlehead is a bare-headed,

*Coracina lineata*

### Barred Cuckooshrike

<b>LENGTH</b>	22–29cm (8½–11½in)
<b>WEIGHT</b>	65–100g (2½–3¾oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Rainforest and other wooded areas

A dark, neatly marked species, the adult Barred Cuckooshrike has a narrow black line separating its yellow eyes and dark bill. It is slate-grey on the upperparts and breast, with a finely barred black and white belly. The juvenile has dark eyes and pale off-white underparts. Some Barred Cuckooshrikes found in Australia undertake nomadic movements in search of fruiting trees. Little is known about the movements of other populations, although they are thought to be largely sedentary.



### ADULT BLACK-FACED CUCKOOSHRIKE

*Coracina novaehollandiae*

### Black-faced Cuckooshrike

<b>LENGTH</b>	32–35cm (12½–14in)
<b>WEIGHT</b>	100–150g (4–5oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Open forest, grassland, scrub, farmland, parks, and gardens

The adult Black-faced Cuckooshrike has a distinct black facial mask and throat, slate-grey upperparts, and paler grey underparts. The juvenile is more barred, with a duller dark mask and pale throat. The species feeds on insects, fruit, and seeds. The nest is a shallow saucer of sticks and bark, bound together with cobwebs. Both parents care for the young birds.

*Coracina tenuirostris*

### Common Cicadabird

<b>LENGTH</b>	24–27cm (9½–10½in)
<b>WEIGHT</b>	55–75g (2–2½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Rainforest canopy, eucalyptus forest, and other wooded and semi-wooded areas

An elusive species, the Common Cicadabird is most likely to be heard, its staccato buzzing noise similar to the sounds made by a cicada. The male is a uniform dark grey, while the female has a thin white line above and below the eye, brown upperparts, and pale barred underparts. The juvenile is similar to the female, but is paler brown above. The species is a migrant breeding bird in southeastern Australia, and a year-round resident in north Australia, New Guinea, and Indonesia.

*Lalage sueurii*

## White-shouldered Triller



**LENGTH**  
18cm (7in)  
**WEIGHT**  
25g (7/8oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Lightly wooded areas and mangroves

A small bird, the male White-shouldered Triller has a striking pied plumage, with a wide white shoulder patch and a grey-white rump. Most males show a white eyebrow, but in some, like the bird pictured below, it is absent. The female is drabber, with brown plumage and faint barring on the flanks. The species feeds on insect larvae, which it gleans from foliage. Not considered threatened, it is only found in central Indonesia.



ADULT MALE

*Campephaga phoenicea*

## Red-shouldered Cuckooshrike



**LENGTH**  
20cm (8in)  
**WEIGHT**  
25g (7/8oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Wooded savanna and narrow strips of forest

The Red-shouldered Cuckooshrike is a typical representative of this African genus of cuckooshrike. It has glossy black plumage and striking yellow cheeks. As the name of the species indicates, the male Red-shouldered Cuckooshrike differs from other members of the *Campephaga* genus by its conspicuous red shoulder patch. The female is grey-brown above, with densely barred pale underparts and yellow-edged wing and tail feathers and, unlike the male, cannot be easily distinguished from near relatives.



MALE SCARLET MINIVET

*Pericrocotus ethologus*

## Long-tailed Minivet



**LENGTH**  
20cm (8in)  
**WEIGHT**  
18–20g (5/8–11/16oz)  
**MIGRATION**  
Partial migrant

**HABITAT** Open broad-leaved and coniferous forest, often lower in winter in secondary wooded habitats

One of a group of red and black minivets found in southern Asia, the Long-tailed Minivet is a small, arboreal bird. Only the adult male of the species is red and black, with a red U-shaped patch on its black wings, and red underparts. The female is largely grey and yellow, its pale grey throat and yellow eyebrow distinguishing it from other minivet species. The juvenile is similar to the female, except for a red tinge that is present on the rump of the juvenile male.

JUVENILE MALE

*Pericrocotus flammeus*

## Scarlet Minivet



**LENGTH**  
20–22cm (8–8 1/2in)  
**WEIGHT**  
25g (7/8oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Open tropical, subtropical, and temperate broad-leaved forest; occasionally in conifers

The male Scarlet Minivet is a striking red and black bird that can be told apart from its similar relatives by its larger size, stocky build, and orange-red underparts. Viewed close up, its red wing patch reveals an outlying blob of red on the wing-tips, which is an identifying feature of the bird. The female is grey and yellow above, with yellow underparts. Highly social, this species forms large flocks during the non-breeding season, often joining mixed-species flocks as it feeds in the canopy.

## SITELLAS

**ORDER** Passeriformes  
**FAMILY** Neosittidae  
**SPECIES** 3

OF THE THREE SPECIES of sitellas, two are found in New Guinea and the third in Australia (in most of the continent). Sitellas bear a superficial resemblance to

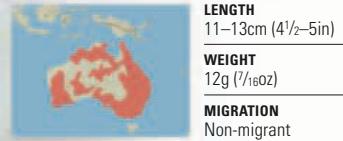
nuthatches (p.472) in structure, and sometimes in plumage, but a much greater similarity in their feeding behaviour. This family is highly social, feeding, breeding, and roosting together. Nests are well-camouflaged cups attached to a tree fork, moulded to resemble a knot on the bark.

## CLINGING HEAD-DOWNWARDS

A Varied Sittella works its way down a tree, in a typical "rocking-horse" motion, in search of insects.

*Daphoenositta chrysopera*

## Varied Sittella



**LENGTH**  
11–13cm (4 1/2–5in)  
**WEIGHT**  
12g (7/16oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Eucalyptus woodland, forest, and scrub; avoids dense rainforest



Well named for the wide variety of plumage types throughout its range in Australia, the subspecies of the

Varied Sittella differ in the colours of the head and wing patches and in the amount of streaking on the underparts.

Most adults of the species, however, have long, slender bills and are gray above and white below. There are five distinct subspecies. The subspecies *D. c. leucocephala* (shown here) is named for its white head; in addition, it has a white neck, an orange wing patch, and streaked underparts. The Varied Sittella forms noisy groups that carefully search for invertebrates on the surfaces of trunks and branches.

VARIED SITTELLA (*D. C. LEUCOCEPHALA*)

# SHRIKETITS

**ORDER** Passeriformes  
**FAMILY** Falcunculidae  
**SPECIES** 4

their own family separate from the whistlers and shrikethrushes; they were formerly regarded as a single species that included several subspecies. Among their other close relatives are the Australasian sitellas. Shriketits are principally forest-based species, although they do not shun more open habitats, such as parks and golf courses, as long as they contain trees. These short-tailed Australian birds are fairly round-bodied and have a formidable stout and strongly hooked bill. The clear, animated songs of the shriketits often contain much mimicry of other bird species, according to the locality. The nest, constructed during the summer months by the Australian species, is a deep cup, located well above head height in a tall tree and supported by a vertical stem. The birds usually lay two or three well-spotted eggs.

SHRIKETITS COMPRIZE a group of four species: three in Australia and the fourth in the highlands of New Guinea. These have only recently been recognized as constituting

## *Falcunculus frontatus*

### Crested Shriketit



<b>LENGTH</b>	18–19cm (7–7½in)
<b>WEIGHT</b>	25–30g (7/16–1 1/16oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Eucalyptus forest and woodland, gardens, and coastal scrub

Distinguished by its black crest, the Crested, or Eastern, Shriketit has two broad white stripes on its head and a large bill, with a patch of white at its base. The sexes are very similar, except for the throat, which is black in the male and green in the female. The Crested Shriketit uses its strong, notched bill to open seedpods, caterpillar cocoons, and galls and to pick insects from branches. It also tears off loose bark as it searches for its insect prey, making quite a noise as it does so. It nests in groups, making a nest of bark and spiders' webs, usually placed near the top of a tree.



MALE CRESTED SHRIKETIT

# WHISTLERS

**ORDER** Passeriformes  
**FAMILY** Pachycephalidae  
**SPECIES** 41

WHISTLERS OCCUR FROM India through southeast Asia and Indonesia, but most species are found in Australia and New Guinea. Most species within this family are

sedentary, but some are long-distance migrants. The family name hints at the vocal capacity of this group, which boasts some of Australia's finest songsters.

## ANATOMY

All whistlers are characterized by their strong feet. They usually have relatively large and robust, hooked or stubby bills, which are used for catching prey, mainly insects, but they also eat small vertebrates, other birds' eggs and nestlings, and fruit. Whistlers typically also have large, rounded heads, giving rise to their alternative name, thickheads.

Most are brown, olive, green, or grey in coloration, but some species are more striking, with yellow, rufous, and black plumage.



### TREE-FORK NEST

Birds of this family, such as this Rufous Whistler, generally build nests from grasses, lichen, and twigs in a fork in a bush or tree.

## *Pachycephala pectoralis*

### Golden Whistler



<b>LENGTH</b>	17cm (6 1/2in)
<b>WEIGHT</b>	20–50g (1 1/16–13 3/4oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rainforest, open forest, and woodland; low scrub and coastal vegetation

Green and yellow in colour, the male Golden Whistler has a splendid black head, white throat, and golden nape. The female is largely dull brown, although some races have yellow-tinted underparts. The Golden Whistler is highly vocal during the



MALE GOLDEN WHISTLER

breeding season, producing a range of mellifluous notes, many being strong and ending in sharp cracks. It often sings in response to sudden loud noises, giving rise to its other name of Thunderbird. The Golden Whistler shows much variation in size across its vast geographical range, as indicated by its large weight range.

## NESTING



The nest of the Golden Whistler is a shallow cup built from twigs, grass, and bark, lined with finer grass and bound together with spiders' webs. Both parents share the incubation and care of the young, and feed them on insects, spiders, and other small arthropods. Berries are also given. Most food is picked from the leaves and bark of the lower or middle levels of a tree.

## *Pachycephala rufiventris*

### Rufous Whistler



<b>LENGTH</b>	17cm (6 1/2in)
<b>WEIGHT</b>	20–25g (1 1/16–7/8oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wide range of open forest and woodland environments

The male Rufous Whistler has a white throat, a black breast-band, grey upperparts, and rufous underparts. The female is dull grey to brown, with heavily streaked underparts. Like other whistlers, this species is very vocal during the breeding season. Its robust song consists of sharp "chik" notes, bursts of whiplash-like and explosive "ee-chong" notes, and loud sections of more melodic song. It breeds in monogamous pairs and both the male and the female incubate the eggs.

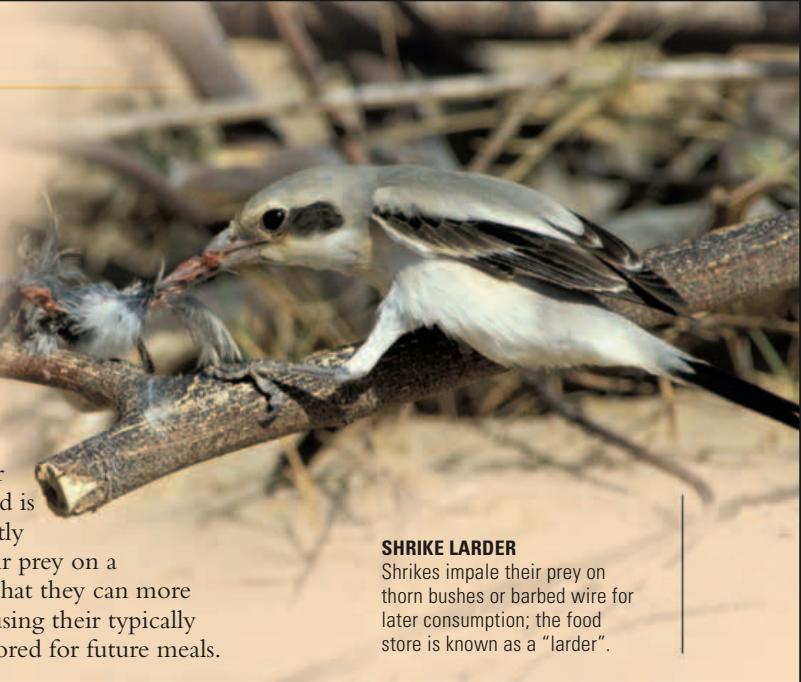
# SHRIKES

**ORDER** Passeriformes  
**FAMILY** Laniidae  
**SPECIES** 30

ALTHOUGH BIRDS OF this family are widespread across northern Eurasia and Africa, only two species of shrike occur in the Americas, both in North America. They are principally birds of open country, using prominent lookouts such as tall bushes or posts to search for their prey, which ranges from small birds and mammals, to beetles, lizards, and frogs. However, a handful of species are forest-dependent, including one of the rarest members of the family, the São Tomé Fiscal, which is listed as critically endangered.

## BEHAVIOUR

The majority of species of this family of large-headed and sharp-clawed birds, are in the genus *Lanius*, which in Latin means butcher. This name is reflected in the alternative English name for shrikes and butcherbirds, and is a reference to their apparently brutal habit of securing their prey on a twig or barb on a fence so that they can more easily tear off small pieces, using their typically hooked beak. The prey is stored for future meals.



### SHRIKE LARDER

Shrikes impale their prey on thorn bushes or barbed wire for later consumption; the food store is known as a "larder".

*Corvinella corvina*

### Yellow-billed Shrike

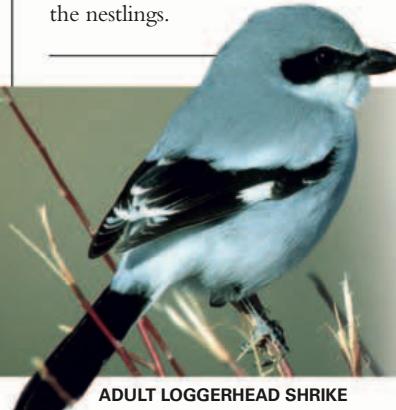


**LENGTH**  
30cm (12in)  
**WEIGHT**  
65g (2½oz)  
**MIGRATION**  
Partial migrant

**HABITAT** Grassland and scrub with scattered trees, as well as open woodland

Named for its bright yellow bill, the Yellow-billed Shrike is a large shrike, with a brown mask and an overall streaky-brown coloration. It has small wings with a rufous wing patch that is very noticeable in flight. The long, tapering tail is 18cm (7in) long. The sexes are similar in plumage and differ only in the central flank feathers – rufous in the male but cinnamon or maroon in the female. These are exposed when the birds preen or display. The juvenile has buff fringes on the wings.

The Yellow-billed Shrike is a sociable bird that is usually found in small groups of 6–15, often sitting conspicuously on exposed perches. From these perches, it keeps a lookout for insects, the main part of its diet. It also feeds on spiders, slugs, and lizards. A rather noisy bird, the species has a complex repertoire of buzzing and chattering calls. The cup-shaped nest is placed in a bush or tree and 4 or 5 eggs are laid. At a given time, only one female in a group breeds, and the other members provide food and protection to the female in the nest and the nestlings.



*Lanius collurio*

### Red-backed Shrike



**LENGTH**  
18cm (7in)  
**WEIGHT**  
30g (1⅓oz)  
**MIGRATION**  
Migrant

**HABITAT** Breeds in open areas of scrubland, heath, and farmland; winters mainly in arid savanna

Although of a similar size, the sexes of this species differ considerably in appearance. The male has a grey head, a thick black face mask, a red-brown back, pale unstreaked underparts, a grey rump, and black tail. The female and juvenile are brown above with scalloped markings on their underparts. This shrike feeds on insects and small animals such as frogs, birds, and bats, which it hunts by swooping from a perch.



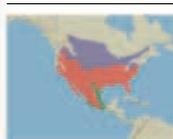
MALE RED-BACKED SHRIKE

### BREEDING BEHAVIOUR

In spring, the male Red-backed Shrike arrives at the breeding site a few days before the female, advertising its presence with a song. Once a suitable mate has been attracted, a complex courtship commences, with the male performing a zigzag fluttering display. Both sexes co-operate to build the nest and feed the young. Sometimes, non-breeding birds also help to feed the chicks.

*Lanius ludovicianus*

### Loggerhead Shrike



**LENGTH**  
22cm (8½in)  
**WEIGHT**  
50g (1¾oz)  
**MIGRATION**  
Migrant

**HABITAT** Wide variety of habitats; prefers open areas with scattered bushes and trees

The Loggerhead Shrike is a medium-sized songbird that shows some geographical variations. However, most subspecies have a grey head, with a distinct black mask, white underparts, and a grey back and rump. It has black wings marked with small white patches and a black tail. The juvenile is brown with fine barring above and below. This species feeds largely on insects. Northern populations in the USA are migratory, while those from further south are largely sedentary.

*Lanius collaris*

### Common Fiscal



**LENGTH**  
21–23cm (8½–9in)  
**WEIGHT**  
30–40g (1⅓–1⅔oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Wide variety of open spaces and low ground cover, including urban areas

Found throughout southern Africa, the Common Fiscal is a medium-sized black and white bird. The adult is all white below and black above, displaying a varying amount of white on the head and wings. The juvenile has barred rufous-brown upperparts and pale, brown-barred underparts. This is a familiar species, often found in close association with human habitations, and a number of different forms occur. It is a solitary bird, usually found sitting on exposed perches.



ADULT COMMON FISCAL

# VIREOS AND RELATIVES

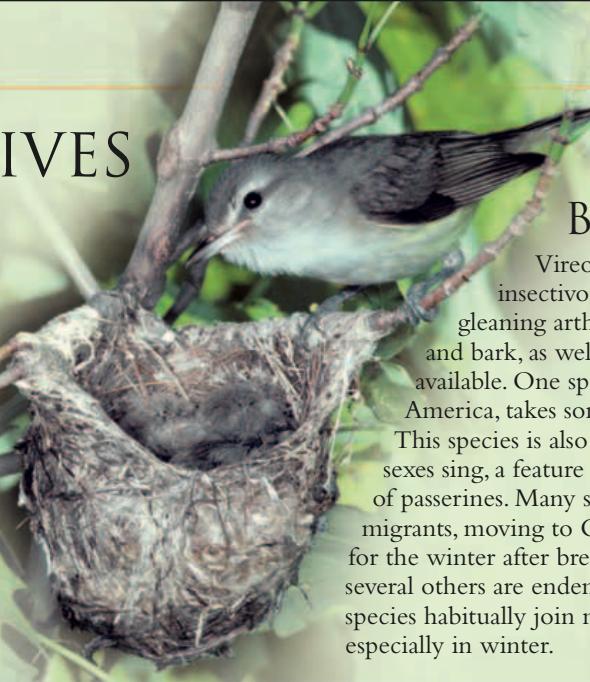
**ORDER** Passeriformes  
**FAMILY** Vireonidae  
**SPECIES** 52

with fairly heavy beaks. They inhabit scrub and forests. Only one or two species have colourful plumage. Their songs are repetitive and rarely musical. Three species are of conservation concern, the San Andrés and Chocó vireos, both from Colombia, and the Black-capped Vireo, which breeds in the southern USA.

**VIREOS, A FAMILY**  
exclusive to the Americas, are generally dull-plumaged birds, mainly rather small in size, but

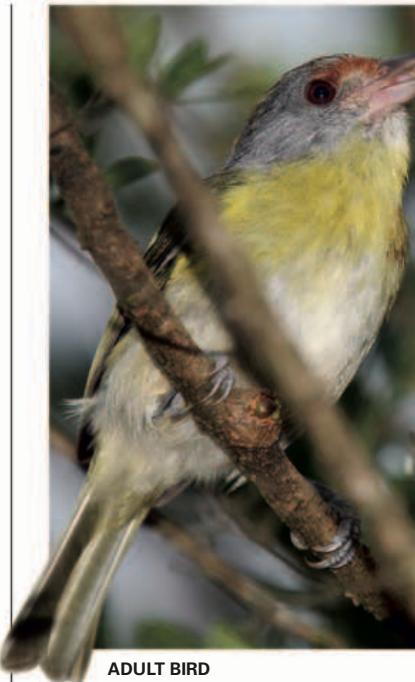
## WARBLING VIREO NEST

All vireos construct bag-like nests, of bark, leaves, moss, and grass, bound with spider silk.



## BEHAVIOUR

Vireos and their relatives are insectivores. They feed principally by gleaning arthropods and insects from foliage and bark, as well as taking some fruit when available. One species, the Grey Vireo of North America, takes some of its food on the ground. This species is also notable for the fact that both sexes sing, a feature that is unique within this family of passerines. Many species are long-distance migrants, moving to Central and even South America for the winter after breeding in North America, but several others are endemic to single islands. Some vireo species habitually join mixed-species foraging flocks, especially in winter.



ADULT BIRD

## Cyclarhis gujanensis

### Rufous-browed Peppershrike



<b>LENGTH</b>	15–17cm (6–6½in)
<b>WEIGHT</b>	30g (1⅓oz)
<b>MIGRATION</b>	Non-migrant
<b>HABITAT</b> Forest, woodland, and scrub	

Despite its name, the Rufous-browed Peppershrike is actually a member of the vireo family. It has a grey head with a broad rufous-brown stripe above the eyes, pale lemon breast, off-white belly, and olive-green upperparts. However, its most distinctive feature is its thick, pale bill, which is strongly hooked to help it feed on insects and fruit. It has a varied series of loud calls and song and is more commonly heard than seen, as it usually feeds high in the canopy.

feathers and a fanned out tail and the female calls out to respond to the display. The nest is a cup in a fork of a branch. The species breeds from southern Canada down through eastern USA to Florida. It winters in South America.



ADULT RED-EYED VIREO

## Vireo olivaceus

### Red-eyed Vireo



<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	17g (⅔oz)
<b>MIGRATION</b>	Migrant
<b>HABITAT</b> Woodland	

The Red-eyed Vireo has a strong bill and a distinctive head pattern – a dark-bordered grey crown with a white stripe above and a dark line through its noticeably red eyes. Its upperparts are green, strongly contrasting with its white breast. Its wings are long.

The Red-eyed Vireo is a very vocal bird and is strongly territorial in its summer breeding grounds. In summer, it gleans insects from treetop foliage. In contrast, on its wintering grounds, it does not sing and feeds mainly on fruit, especially before migration. During the breeding season, the male displays by swaying with fluffed up

## Vireo flavifrons

### Yellow-throated Vireo



<b>LENGTH</b>	14cm (5½in)
<b>WEIGHT</b>	18g (⅔oz)
<b>MIGRATION</b>	Migrant
<b>HABITAT</b> Forest and woodland	

The Yellow-throated Vireo has distinctive facial patterning: a short black line between its eye and stout bill, and yellow “spectacles” surrounding its dark eye. It has a bright yellow throat and breast, which contrast with its white belly and undertail. Its upperparts graduate in colour from olive-green to greyish green. The wings are darker, with two distinct broad, white wing-bars. It forages alone or in pairs for insects and sometimes fruit.

## Vireo gilvus

### Warbling Vireo



<b>LENGTH</b>	14cm (5½in)
<b>WEIGHT</b>	12g (⅔oz)
<b>MIGRATION</b>	Migrant
<b>HABITAT</b> Breeds mainly in deciduous woodland; occurs in more varied habitat while on passage	

A small, plain songbird, the Warbling Vireo has a characteristic pale stripe above its eyes. It is olive-brown above and paler below, with brighter, more yellow flanks. Birds in the western part of its range are slightly smaller than those found in the east. The Warbling Vireo forages for insects in trees but feeds on fruit as well, especially before migration. Its song is a long, rapid warble. It makes a deep cup-shaped nest, suspended from a tree branch or shrub, and the male helps the female with the incubation of the eggs.

ADULT WARBLING VIREO



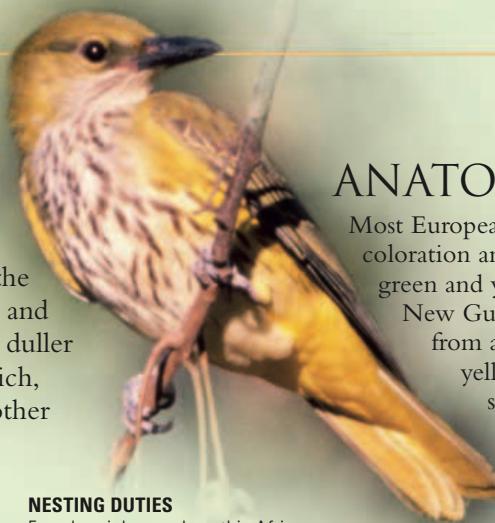
# ORIOLES

ORDER Passeriformes

FAMILY Oriolidae

SPECIES 29

THE NAME ORIOLE is derived from the Latin word for golden, which admirably suits the generally yellow or red and black plumage of the males, although females have duller plumage. Orioles comprise two genera, one of which, figbirds, is confined to Australasia. Species of the other genus range across much of Europe, Asia, and sub-Saharan Africa. Despite the often colourful plumage of the males, they are not easy to glimpse in their forested habitats, but their flute-like songs are a good guide to their presence.

**NESTING DUTIES**

Female orioles, such as this African Golden Oriole, take responsibility for most of the nesting duties.

## ANATOMY

Most European and African species of oriole show varying coloration and patterning in black and yellow (males) or green and yellow (females). Species from Indonesia and New Guinea exhibit a much wider array of colours, from all black with a chestnut vent to dull yellowish-green. Male figbirds have bare red skin around the eyes. While Eurasian and African orioles have very slightly decurved and mid-length bills, Australian figbirds possess short stout beaks with a hooked tip. The latter eat fruit and insects, with most species showing a predilection for large hairy caterpillars.

*Spherotheces vieilloti*

### Australasian Figbird

LENGTH  
27–30cm (10½–12in)WEIGHT  
100–125g (3½–4oz)MIGRATION  
Non-migrant

HABITAT Rainforest edges, woodland, mangroves, orchards, parks, and gardens

The male Australasian Figbird has a black head, with a large area of bare red skin around the eye, a grey chin and breast, green upperparts, paler underparts, and red legs. The male of the subspecies found in northern

Australia is more yellow below. The female is dull in comparison – green above, with a streaked breast and grey legs. The Australasian Figbird is a very social species, living in small groups during the breeding season and larger flocks during the winter. The flocks feed on fruiting trees and show a preference for figs, hence the bird's name. It is parrot-like in its behaviour, climbing to treetops and hanging from branches as it feeds on fruit and insects. It is a noisy bird with loud squeaky calls.

**MALE AUSTRALASIAN FIGBIRD***Oriolus oriolus*

### Eurasian Golden Oriole

LENGTH  
24cm (9½in)WEIGHT  
80g (2¾oz)MIGRATION  
Migrant

HABITAT Deciduous lowland woodland, parks, and gardens

The male Eurasian Golden Oriole is a striking bird with a golden yellow head, back, and underparts. Its flight feathers are black with yellow edgings and patches. It has a pink bill and a distinct black area in front of the eye. The female is olive-green above and black-flecked below, with a brighter yellow rump and undertail. Despite the gaudy appearance of the male, the Eurasian Golden Oriole can be difficult to see in the dappled yellow and green leaves of the canopy. However, it is easily identified by its song, an almost ethereal flute whistle that carries over a considerable distance. A solitary bird, it frequents the upper areas of trees.

**GOLDEN MALE**

The male Eurasian Golden Oriole reveals brilliant yellow plumage that contrasts strongly with its jet-black wings.

**STREAKY FEMALE**

The female is much less striking than the male with its olive-green upperparts and pale underparts with dark streaks.

*Oriolus flavocinctus*

### Yellow Oriole

LENGTH  
26–30cm (10–12in)WEIGHT  
90g (3¼oz)MIGRATION  
Non-migrant

HABITAT Tropical rainforest, woodland, mangroves, riverside vegetation, parks, and gardens

The Yellow Oriole, also known as the Green Oriole, is common in tropical Queensland and northern Australia. The adult bird is a uniform yellowish green, with numerous black flecks and dark wings. It has a pink bill and conspicuous red eyes. The juvenile is

duller, with dark eyes and a brown bill. Despite its bright coloration, the Yellow Oriole is inconspicuous and elusive as its plumage blends into the foliage of the forest canopy. The species has a loud, bubbling call that is usually the first sign of its presence.

Breeding takes place during the wet season from October to March, and the nest is a deep cup constructed from strips of bark and vines and slung between leafy branches. The Yellow Oriole typically lays two eggs. Another species of oriole, the Olive-backed Oriole, is also found throughout much of eastern and northern Australia. Although similar in appearance to the Yellow Oriole, it is duller above and paler underneath.

**INTRICATE ENGINEERING**

The Golden Oriole makes an impressive nest, usually in the fork of a thin branch high in a tree. The nest is slung from the fork like a hammock. Its base of plant fibres, grass, leaves, and moss is held together by long woven strands of bark or grass, or sometimes glued together by saliva. The species usually lays a clutch of 3 or 4 eggs.

# SHRIKETHRUSHES AND RELATIVES

ORDER Passeriformes

FAMILY Colluricinclidae

SPECIES 14

THIS IS A RELATIVELY small group of species that is often included within an expanded family of whistlers (see p.381). The grouping reaches its highest diversity in New Guinea, where 9 of the 14 species and a great many subspecies occur; two other species, about which little is known, are restricted to single Indonesian islands.

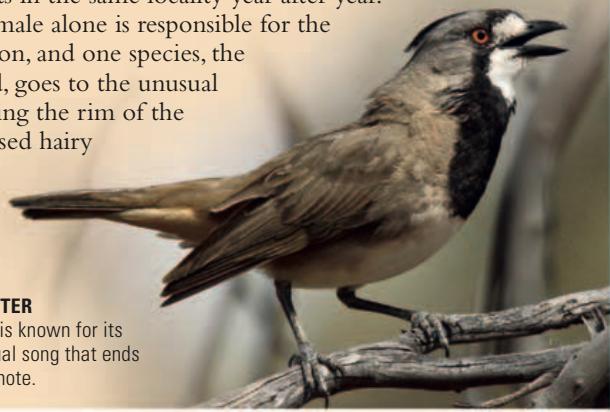
## BEHAVIOUR

Most species within this family are forest dwellers. Many shrikethrushes are somewhat unusual among passerines in constructing their carefully woven stick nests in the same locality year after year.

Typically, the female alone is responsible for the nest's construction, and one species, the Crested Bellbird, goes to the unusual length of adorning the rim of the nest with paralysed hairy caterpillars, possibly as a defensive measure.

### RENNED SONGSTER

The Crested Bellbird is known for its distinctive and unusual song that ends with a cow-bell-like note.



# DRONGOS

ORDER Passeriformes

FAMILY Dicruridae

SPECIES 22

THIS FAMILY OCCURS in sub-Saharan Africa, southern and southeast Asia, New Guinea and coastal eastern Australia. Most drongos have uniformly black

plumage with a green or purple gloss. Species are distinguished by tail shape (forked, square, or with elongated feathers) and whether there is a crest or not. Sexes are alike in all species.

## BEHAVIOUR

Drongos prefer wooded habitats, but some species have adapted to more open country. They often perch apparently lethargically on the same branch for long periods, before sallying forth to feed on fruit or take an insect in flight. Drongos fiercely defend their nests from all-comers, even large raptors, but several species are frequent victims of cuckoo brood parasitization.



### FLIMSY NEST

Drongos, such as this Spangled Drongo, build flimsy stick nests, usually sited in the fork of a tree. Both parents incubate the eggs and care for the young.



JUVENILE GREY SHRIKETHRUSH

*Oreoica gutturalis*

## Crested Bellbird

LENGTH  
20–22cm (8–8½in)WEIGHT  
60–65g (2⅓–2⅔oz)MIGRATION  
Non-migrant

HABITAT Arid interior woodland and scrub

The male Crested Bellbird has a black cap and breast that contrasts with its white face and throat and bright yellow eyes. The female is duller, lacking the black patch on the breast. The Crested Bellbird is a common bird of dry inland Australia, though it is more often heard than seen as it forages inconspicuously on the ground. Its song is a series of piping, rhythmic notes. It is usually solitary, but can be found in pairs during the breeding season. Small family parties may form for short periods.

MALE  
CRESTED  
BELLBIRD

## Grey Shrikethrush

LENGTH  
22–25cm (8½–10in)WEIGHT  
65–75g (2⅓–2⅔oz)MIGRATION  
Non-migrant

HABITAT Widespread from coastal scrub to tropical forest and arid inland woodland

The Grey Shrikethrush is known for its song, which is a series of loud ringing whistles and mellow musical notes. Grey overall with more olive on its upperparts, the male is distinguished from the female by its black bill and small white area in front of the eye. The juvenile has a pale brown eyebrow and streaking on the throat and breast.

*Dicrurus forficatus*

## Crested Drongo

LENGTH  
26cm (10in)WEIGHT  
45–50g (1⅓–1⅔oz)MIGRATION  
Non-migrant

HABITAT Sparsely wooded terrain

it is sometimes seen in pairs and mixed-species flocks. The Crested Drongo is a dextrous bird that performs aerial acrobatics in order to catch its insect prey. An aggressive species, it attacks intruders that venture too close to its nest – including eagles, dogs, and even humans. The Crested Drongo is the only member of its family found in

Madagascar (as well as the island of Anjouan in the Comoros).

The adult Crested Drongo is glossy black, with a blue sheen to its plumage and brown tips to the wings, and has red eyes and a forked tail. Its most noticeable feature, which also gives it its name, is the erect tuft of feathers that sprouts from its forehead. The juvenile is browner and lacks this head tuft. The species is usually solitary, though

ADULT CRESTED DRONGO



# FANTAILS

**ORDER** Passeriformes  
**FAMILY** Rhipiduridae  
**SPECIES** 43

to Fiji and Samoa, with half of all species occurring in New Guinea. This is a uniform group of relatively small, slim-bodied, birds with short bills. They are notable for their long tails that, as their name suggests, are frequently fanned and waved from side to side, exposing white tail spots. Most species are a mixture of black, brown, and grey, often relieved by white throat patches or eyebrows, although some species are rufous to an extent.

FANTAILS ARE FOUND from southern Asia to New Zealand and across the Pacific

## BEHAVIOUR

Fantails are almost exclusively insectivorous, catching their prey in acrobatic sallies from the understorey or canopy of their forested habitats. One species frequently resorts to gleaning insects from the backs of sheep. Breeding occurs almost year-round, and nests are constructed of bark and moss, and lined with a variety of soft materials.

### TYPICAL BROOD

This Rufous Fantail parent is feeding an insect to its nestlings. Most fantails have a brood of two chicks.



### Rhipidura albicollis

#### White-throated Fantail



**LENGTH** 17–20cm (6½–8in)  
**WEIGHT** 13g (½oz)  
**MIGRATION** Non-migrant

**HABITAT** Variety of wooded areas from broad-leaved evergreen forest to parks and gardens

The White-throated Fantail is predominantly black, except for its narrow white eyebrows, white chin and throat, and white-tipped tail feathers. The juvenile shows a much smaller pale area on the throat and has a browner tail. The species forages on small flying insects, tending to feed in the undergrowth or lower levels of the canopy. It frequently catches flies in flight and joins mixed-species feeding flocks. Although generally a resident



#### JUVENILE WHITE-THROATED FANTAIL

species that can be found at the same sites all the year round, birds that breed in higher mountainous areas move to lower altitudes during winter. The White-throated Fantail is a relatively large member of its family and a common species throughout its extensive range.

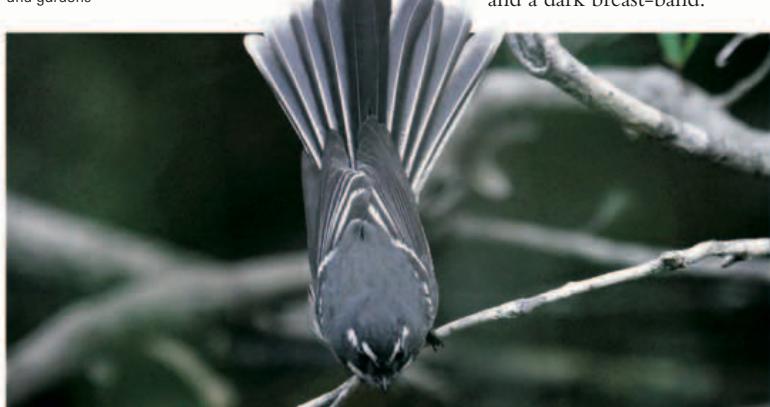
### Rhipidura albiscapa

#### Grey Fantail



**LENGTH** 14–17cm (5½–6½in)  
**WEIGHT** 8g (½oz)  
**MIGRATION** Partial migrant

**HABITAT** Forest, woodland, scrub, parks, and gardens



ADULT GREY FANTAIL

### Rhipidura leucophrys

#### Willie Wagtail



**LENGTH** 19–21cm (7½–8½in)  
**WEIGHT** 17–25g (½–7/16oz)  
**MIGRATION** Non-migrant

**HABITAT** Almost anywhere, except dense forest

Both the male and the female of this species have black upperparts that contrast with their thin white eyebrows and white underparts. However, when seen at close range,



## GROUND-FEEDING

The Willie Wagtail captures most of its preferred insect and larvae food at or around ground level. As a result, up to three quarters of its time is spent foraging on the floor. It often runs around quickly and erratically, before suddenly stopping and flicking its wings in a characteristic fashion to disturb its prey. At other times, it makes short flights from a low perch in order to catch flying insects on the wing.

the Willie Wagtail also shows some faint pale spotting on the wings and a hint of a moustache stripe. It is a tame, fearless bird that is quite at home in urban areas, where it can be observed darting about in parks and gardens. The Willie Wagtail is one of Australia's most familiar birds, found throughout most of the continent, except for Tasmania. The name "Wagtail" is confusing, because although it flicks and wags its tail from side to side, it is actually a member of the fantail family, and not one of the wagtails of Europe and Asia.

### ADULT WILLIE WAGTAIL FEEDING CHICKS



# MONARCHS

**ORDER** Passeriformes  
**FAMILY** Monarchidae  
**SPECIES** 87

**INHABITANTS OF FOREST** and woodland, with many species confined to single islands or small archipelagos,

monarchs are a highly threatened group. Of the almost 90 species, some 19 are classed as being at some risk of extinction. In most cases, the threat is a result of human activity, either through habitat loss and land development, or the introduction of non-native species.

## ANATOMY

This group, which includes the paradise flycatchers, is characterized by their flat broad bills, small feet, and steep foreheads, with some species having crests or long tails or both. The long tails that distinguish some species appear to have a sexual role, as particularly long-tailed males appear to be most successful at mating with neighbouring females. Plumage is typically striking, with different species displaying various combinations of blue, black, rufous, white, and yellow. Several of the paradise flycatchers have different colour forms within a species. Most species within the monarch family show no plumage differences between males and females, and juveniles may take some time to acquire full adult plumage.

### CRESTED APPEARANCE

Most paradise flycatchers, such as this African Paradise Flycatcher are rufous above with shaggy crests, bare skin around the eyes, and long tails.



## BEHAVIOUR

Most birds within this family feed at different heights within the forest, and in some species, the two sexes occupy different foraging niches.

Most monarchs are principally insectivores, but a few species also take fruit. Nesting duties are usually shared between the sexes.

The territories of sedentary species may be defended year-round with vocalizations and visual displays. Most monarchs are monogamous, but a few are polygamous or have communal breeding systems.



**PIED MONARCH NEST**

Monarchs typically construct cup-shaped nests, with walls festooned with lichens, moss, cocoons, or spiderwebs.

*Hypothymis azurea*

### Black-naped Monarch



**LENGTH** 15–17cm (6–6½in)  
**WEIGHT** 9–13g (1¹/₃₂–7/₁₆oz)  
**MIGRATION** Non-migrant

**HABITAT** Forested areas, especially bamboo

Bright blue above, except for a small black spot at the back of the head and the black base of the bill, the male Black-naped Monarch has a white belly and undertail. The female is duller, with only a faint blue tint to the upperparts, and brown wings. It also lacks the black nape spot of the male. A bird of lowland forest, it feeds only on insects, expertly spotting and catching them in the air. The breeding season is between April and July, with the female laying 3 or 4 eggs.



**MALE BLACK-NAPED MONARCH**

*Terpsiphone viridis*

### African Paradise Flycatcher



**LENGTH** 18cm (7in)  
**WEIGHT** 12–14g (7/₁₆–1¹/₈oz)  
**MIGRATION** Partial migrant

**HABITAT** Mainly open woodland



**ADULT FEMALE**

The male and female African Paradise Flycatchers are similar in plumage, except for the elongated central tail feathers of the male, which project 10–18cm (4–7in) beyond other feathers. It is a variable species, with a number of different subspecies – most have a noticeable pale blue ring around the eye, a black head and breast, and rufous upperparts. The species is found in most of sub-Saharan Africa.

*Terpsiphone paradisi*

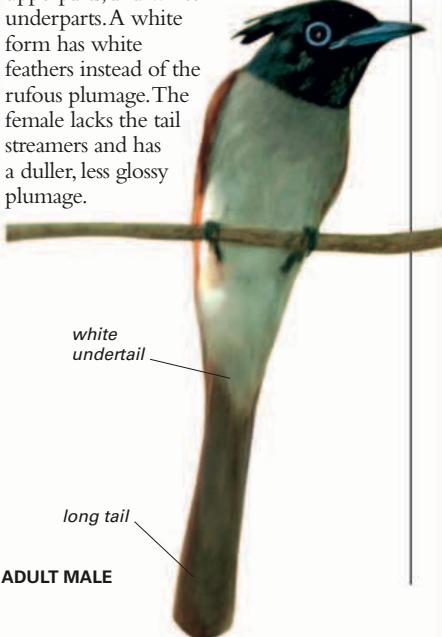
### Asian Paradise Flycatcher



**LENGTH** 20cm (8in)  
**WEIGHT** 20–25g (1¹/₁₆–7/₈oz)  
**MIGRATION** Migrant

**HABITAT** Forest, mangroves, gardens, and parks

The male Asian Paradise Flycatcher has an exceptionally long tail, with two central feathers extending up to 30cm (12in) beyond the other feathers. A black head and throat contrasts sharply with a blue eye-ring, rufous upperparts, and white underparts. A white form has white feathers instead of the rufous plumage. The female lacks the tail streamers and has a duller, less glossy plumage.



*white undertail*

*long tail*

*Eutrichomyias rowleyi*

### Cerulean Paradise Flycatcher



**LENGTH** 18cm (7in)  
**WEIGHT** 15g (⁹/₁₆oz)  
**MIGRATION** Non-migrant

**HABITAT** Broad-leaved, tropical hill rainforest  
**RED LIST CATEGORY** Critically endangered

Both male and female Cerulean Paradise Flycatchers are brightly coloured – cerulean blue above and paler blue below, with a white eye-ring and a bluish black bill. The species mainly feeds on insects and small invertebrates. It is found only on the island of Sangihe, Indonesia, and until recently, was feared extinct, as it had not been sighted with certainty since 1878. However, an expedition discovered a population of at least 19 birds in 1998. It is endangered because much of its rainforest habitat on the island has been cleared for agriculture.

*Chasiempis sandwichensis*

## Elepaio



## LENGTH

14cm (5½in)

## WEIGHT

12–18g (7/16–5/8oz)

## MIGRATION

Non-migrant

## HABITAT

Woodland, preferably at high altitude

## RED LIST CATEGORY

Endangered

The Elepaio adult is a blend of black, white, and rufous, with a distinctive wing-bar. The juvenile is plainer and more rufous. It feeds on insects, gleaning them from foliage or catching them on the wing. It constructs a cup-shaped nest in the branches of a wide variety of trees.

Although the Elepaio is one of Hawaii's most abundant native songbirds, it is still classed as endangered due to severe recent declines. The species occurs only on three Hawaiian islands: Big Island, Oahu, and Kauai. The main threat to the Elepaio is habitat destruction.



JUVENILE ELEPAIO

*Monarcha melanopsis*

## Black-faced Monarch



## LENGTH

16–19cm (6½–7½in)

## WEIGHT

20–30g (1⅓–1⅓oz)

## MIGRATION

Partial migrant

## HABITAT

Lowland rainforest

The Black-faced Monarch breeds on the east coast of Australia, with many birds moving north to winter in New Guinea. The adult bird is blue-grey above and rufous-orange below. It has a black face, eye-rings, and throat, separated from its large black eyes by a paler area. The juvenile is duller, with a completely grey face that lacks the black areas of plumage. Unlike many similar flycatcher species, the Black-faced Monarch is slow and unobtrusive as it forages for insects in the mid-level of the rainforest canopy. It is usually seen singly or occasionally in pairs.



ADULT BLACK-FACED MONARCH

*Monarcha trivirgatus*

## Spectacled Monarch



## LENGTH

14–16cm (5½–6½in)

## WEIGHT

10–15g (3/8–9/16oz)

## MIGRATION

Partial migrant

## HABITAT

Rainforest

## ADULT SPECTACLED MONARCH

A medium-sized flycatcher, the Spectacled Monarch has a grey back, orange breast, white belly, and white undertail. When seen from above its grey tail has prominent white outer tips. However, the species' most distinctive feature is the black face-mask of the adult bird, which also extends to the throat. The juvenile Spectacled Monarch lacks this dark area of facial plumage and instead has a grey face and throat.

The Spectacled Monarch is highly active as it darts and hovers around the

middle of the canopy, searching for insects. It often spreads and waves its tail as it is feeding, showing off the noticeable white tip. It breeds from October through February and builds a nest made of bark, spider webs, and roots. Its most distinctive call is a series of strong, upward whistles.

The Spectacled Monarch is found in Australia, as well as parts of New Guinea, Timor, and Indonesia. In Australia, it is partially migratory across most of its range, though it is resident in northern Queensland.

*Arses kaupi*

## Pied Monarch



## LENGTH

16cm (6½in)

## WEIGHT

13–15g (7/16–9/16oz)

## MIGRATION

Non-migrant

## HABITAT

Rainforest and vine scrub



FEMALE PIED MONARCH

The Pied Monarch is found only in Australia's northern Queensland. It has distinctive black and white plumage, with a black head, face, breast-band, wings, and tail, which contrast with its fluffy white neck collar, crescent-shaped white back marking, underparts, and rump. The female has an incomplete neck collar and broader black breast-band. Both sexes have a blue area of bare skin that forms a ring around the eye. Although usually seen alone or in pairs the species is also sometimes seen displaying in excited groups of 3–5 birds that fluff out their white neck frills and back patches.



Grallina cyanoleuca

## Magpielark



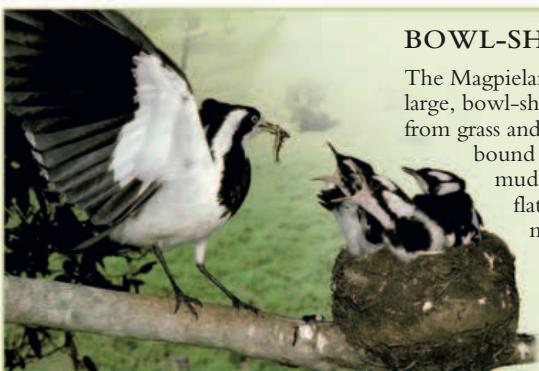
<b>LENGTH</b>	26–30cm (10–12in)
<b>WEIGHT</b>	80g (27/16oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wide variety, except for very dry areas

One of the most conspicuous of Australia's birds, the Magpielark is also resident on the island of Timor. Both sexes are black and white in their plumage, though they have some

### FEMALE MAGPIELARK

subtle differences that distinguish them – the male has a thin white eyebrow and an entirely black forehead and throat, whereas the female has a more open-faced appearance due to its white forehead and throat. The juvenile resembles the female, but lacks the distinct white eye-ring of the adult. The Magpielark feeds on worms, larvae, and insects, usually foraging on the ground. It is fearless and tame, commonly found around human habitation, where its loud metallic calls are one of the most familiar bird sounds.



### BOWL-SHAPED NEST

The Magpielark builds a distinctive large, bowl-shaped nest. It is made from grass and other plant material, bound together with wet mud, and placed on a flat branch. Both the male and female build the nest and also share the incubation of the 3–4 eggs and care of the young.

Myiagra inquieta

## Restless Flycatcher



<b>LENGTH</b>	20cm (8in)
<b>WEIGHT</b>	20g (11/16oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open forest and woodland, farmland, and scrub; usually near water

As its name suggests, the Restless Flycatcher is an active species that is constantly on the move, rapidly fluttering its wings and waving and spreading its tail. In appearance, the male and female Restless Flycatcher are similar – sleek-looking, medium-sized, long-tailed birds with a peaked crown. In terms of plumage they have a glossy blue-black head, back, and tail;

grey-brown wings; and largely white underparts, except for a variable buff tint on the flanks. The juvenile is similar to the adults, but slightly duller, with some pale edging to the wing feathers. It feeds close to the ground, hovering over grass and foliage, constantly calling before snatching its insect prey from the ground or a plant. The species also uses perches from which it sallies forth, swooping in different directions. It is usually seen alone or in pairs, but also joins mixed foraging flocks with other species.

The Restless Flycatcher makes a diverse collection of distinctive sounds, the most common being a clear, high-pitched, musical "tu-whee". Other calls include a harsh buzzing. It also utters a series of metallic sounds, given while the bird is hovering, which usually end with a deep rattling.

Myiagra alecto

## Shining Flycatcher

<b>LENGTH</b>	17–19cm (6 1/2–7 1/2in)
<b>WEIGHT</b>	20g (11/16oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rainforest, mangroves, creeks, and swamps, usually around water

The Shining Flycatcher is found in eastern and northern Australia, New Guinea, and Indonesia. It is a striking species in that the plumage of the male is distinctly different from the female's mainly rufous-chestnut colouring. The male is a uniform, iridescent glossy blue-black in colour, except for the bright orange-red inside its mouth, a feature that can sometimes be seen when the bird is calling. The female, on the other hand,

is distinguishable by its bright rufous-chestnut back and tail, which contrasts with its blue-black head and white underparts. It also has dark rufous-chestnut wing-tips. The juvenile is similar to the female, but shows variable amounts of rust-coloured plumage on its underparts.

Usually found in close proximity to water, the Shining Flycatcher is an active species that tends to feed low down in the understorey, often foraging among bare areas of mud on tidal areas or around the roots of mangroves. As it feeds, it calls frequently, flicking its tail and wings in order to disturb its prey, which largely consists of insects. The song of the species comprises of a diverse series of clear musical whistles and buzzing croaks. However, its most common call is a fast series of clear whistles that gradually increases in volume.

### PAIR AT NEST



ADULT RESTLESS FLYCATCHER

Lamprolia victoriae

## Silktail

<b>LENGTH</b>	12cm (4 1/2in)
<b>WEIGHT</b>	15–20g (9/16–11/16oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wet rainforest

The Silktail is currently classified as a short-tailed monarch flycatcher. It is a striking species that has iridescent entirely black plumage, except for its white rump and short, rounded tail. The feathers of its head and breast are spangled with metallic blue-green feathers. The Silktail is restricted to just two Fijian islands, Taveuni and Vanua Levu, and is considered to be near-threatened.

# CROWS AND JAYS

**ORDER** Passeriformes  
**FAMILY** Corvidae  
**SPECIES** 117

THIS FAMILY CONSISTS OF a mixture of some of the most familiar species, such as the Eurasian Magpie of Europe and Blue Jay of North America, as well as some of the rarest and most poorly known birds on Earth. Many are highly adaptive and successful, but others are dependent on a

single, often threatened habitat and have small ranges. Their scavenging habits have perhaps led to their role as birds of ill omen in folklore and legend. Crows are comparatively long-lived passerines, with some species living for up to ten years.

## ANATOMY

Crows and jays are among the largest of passerines, though most of the American representatives of the family are rather smaller, some of them being no bigger than large thrushes. While most crow species live in wooded habitats and are principally arboreal, one group, the ground jays of central Asia, are exclusively ground-dwelling and are noted for being swift runners (preferring not to take to the air in the face of danger) and for having rather long, slim, and slightly decurved bills. Although many Eurasian and North American species are notable for their almost entirely black or black and grey plumage, and best distinguished by overall body size, bill shape and size, and calls, other species, principally of Asia and

South America have much more colourful plumage, exhibiting blue, bright green, and many other colours. Some species are characterized by their long tails, and are usually referred to as magpies or treepies. Crows are strong fliers, though few are migratory, and some are able to remain aloft for long periods, engaging in wild and tumbling flights.



**COLOURFUL CROW**  
One of the most colourful of crows is the Common Green Magpie, an Asian species that defies the widespread misconception of crows being largely black, grey, and white birds.



### TYPICAL SILHOUETTE

This Hooded Crow is typical of many crows, with its broad-based wings, well-fingered wingtips, bulky body, and large head and bill.

## BEHAVIOUR

Crows are famed for their adaptability and this characteristic is perhaps best observed in their diets and feeding behaviour. In line with their reputation for intelligence, crows are often among the first birds to learn to take advantage of a new food

resource. Their diet includes both plant- and animal-based foods, including nuts, large insects, and even such diverse items as mussels. Food is usually manipulated using the feet, but some crows are capable of fashioning "tools", including hooks, to prise open certain types of nut. Other species wash their food first, possibly as a means of softening harder items. Several crows time their nesting seasons to take advantage of peak food supplies for their young. Rooks often lay their eggs in early spring, when earthworms are abundant.

### FEEDING TOGETHER

The nimble Azure-winged Magpie usually occurs in family groups and is omnivorous, feeding on insects and berries.



### PLAYING OR FIGHTING?

Crows can be aggressive when feeding, but they are also one of the few birds known to engage in "playful" behaviour.

### SOCIAL INTERACTION

Many crow species roost in large flocks and nest colonially. Even those that nest alone form communal roosts and feed in flocks during the non-breeding season.




***Platysmurus galericulatus***
**Crested Jay****HABITAT** Lowland forest

<b>LENGTH</b>	31–33cm (12–13in)
<b>WEIGHT</b>	80g (2½oz)
<b>MIGRATION</b>	Non-migrant

**ADULT CRESTED JAY**

The Crested Jay has the longest crest of all jays. Another distinctive feature is the crescent-shaped white patch on its neck that contrasts prominently with its dark plumage. Some scientists consider the Crested Jay to be one of

the most primitive of the crow family. Like the other members of this group, it is an inquisitive and noisy bird, with a loud call. It is usually found in pairs or small family groups.


***Cyanocitta cristata***
**Blue Jay****HABITAT** Woods, parks, and gardens

<b>LENGTH</b>	25–28cm (10–11in)
<b>WEIGHT</b>	88g (3¼oz)
<b>MIGRATION</b>	Partial migrant

The Blue Jay is the most common and widespread of North American jays. When in flight, the white spots on its blue wings and tail are visible. Black barring

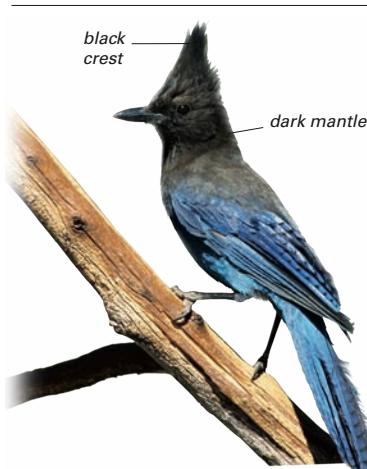
extends from its flight feathers to the tail and it has white underparts. The sexes are alike. Blue Jays adapt readily to people, taking up residence in town parks and gardens. They are usually seen alone or in pairs, but form small flocks after breeding, and larger groups on migration.

**ADULT BLUE JAY**

stretches across its white wing patches. The blue on its wings and tail is often described as being like a jester's cap.


***Cyanocitta stelleri***
**Steller's Jay****HABITAT** Pine woods; mixed conifer and oak woods

<b>LENGTH</b>	28–32cm (11–12½in)
<b>WEIGHT</b>	125g (4oz)
<b>MIGRATION</b>	Non-migrant

**SOUTHERN COLOUR FORM**

Steller's Jay is common in western North America. Its range extends from Alaska to Central America, with the northernmost birds being darkest and greyest, becoming more blue the farther south they are found. Generally a shy bird, Steller's Jay can become tame when regularly fed – at bird tables, campsites, and roadside picnic places. However, it depends for most of its food on acorns and the seeds found in pine cones. Like other jays, it is an omnivore and a scavenger, and will also rob nests and eat insects and frogs. It uses mud to anchor its bulky nest of twigs together.


***Aphelocoma californica***
**Western Scrub Jay****HABITAT** Open country with trees and bushes, from desert to canyon sides

<b>LENGTH</b>	27–31cm (10½–12in)
<b>WEIGHT</b>	75–80g (2½–2¾oz)
<b>MIGRATION</b>	Non-migrant

There are many different subspecies of Scrub Jay, varying in size and in the shades of blue and pattern of their plumage. The lack of a crest distinguishes it from other American jays. It has a white eyebrow over the dark eye patch and a smoky brown back. The Western Scrub Jay is territorial and usually found in pairs or small family groups. Like most other jays, it depends on acorns and pine-nuts, but it also robs the nests of other birds, taking eggs and nestlings. Its diet also consists of insects, frogs, lizards, and mice. When feeding on the ground, it stays close to cover. During courtship, the male hops around the female in an upright posture, with its head erect and its tail spread and dragging on the ground. The clutch size ranges from 2 to 6 eggs. The female incubates them for about 15 to 17 days and is fed by the male during this time.

**ADULT WESTERN SCRUB JAY**

***Gymnorhinus cyanocephalus***
**Pinyon Jay****HABITAT** Pinyon pine woods

<b>LENGTH</b>	25–28cm (10–11in)
<b>WEIGHT</b>	100g (3½oz)
<b>MIGRATION</b>	Non-migrant

**RED LIST CATEGORY** Vulnerable

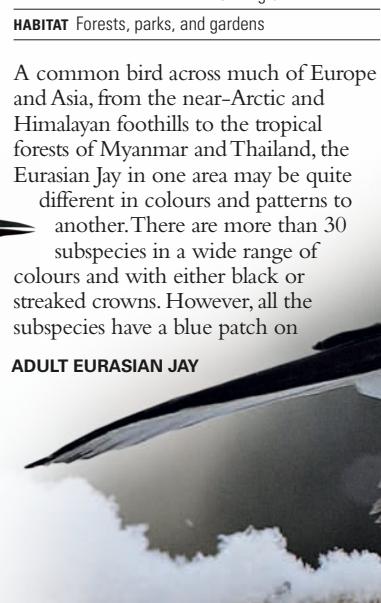
An unusual jay because of its plain dull-blue plumage, the Pinyon Jay is a highly social bird. Flocks of these jays may consist of up to 200 birds, which forage and roost together and nest in colonies. Their breeding time is closely tied to the availability of pine-seeds, but they supplement their diet with fruit, berries, and insects.

**ADULT PINYON JAY**

***Garrulus glandarius***
**Eurasian Jay****HABITAT** Forests, parks, and gardens

<b>LENGTH</b>	35cm (14in)
<b>WEIGHT</b>	175g (6oz)
<b>MIGRATION</b>	Non-migrant

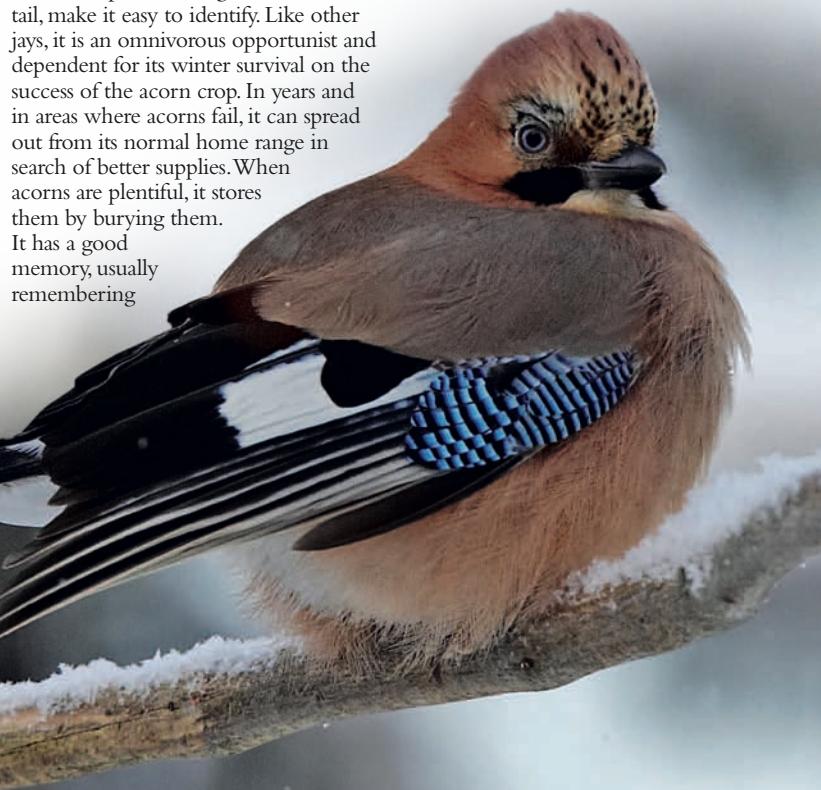
A common bird across much of Europe and Asia, from the near-Arctic and Himalayan foothills to the tropical forests of Myanmar and Thailand, the Eurasian Jay in one area may be quite different in colours and patterns to another. There are more than 30 subspecies in a wide range of colours and with either black or streaked crowns. However, all the subspecies have a blue patch on

**ADULT EURASIAN JAY**

their forewing. A shy bird, the Eurasian Jay is almost always seen flying away, when the white wing patches on its otherwise black hindwings and the white rump, contrasting with the black tail, make it easy to identify. Like other jays, it is an omnivorous opportunist and dependent for its winter survival on the success of the acorn crop. In years and in areas where acorns fail, it can spread out from its normal home range in search of better supplies. When acorns are plentiful, it stores them by burying them.

It has a good memory, usually remembering

where the buried acorns are. However, it often does not return to its food store, thereby playing an important role in the regeneration of oak forests.





ADULT AZURE-WINGED MAGPIE

*Garrulus lidthi*

## Lidth's Jay

LENGTH  
38cm (15in)WEIGHT  
175–200g (6–7oz)MIGRATION  
Non-migrant**HABITAT** Woodland, including pine woods and cultivated areas**RED LIST CATEGORY** Vulnerable

This striking black, blue, and chestnut bird is only found on a few Japanese islands, where it is called the Ruri-kakesu (meaning the “lapis lazuli Jay”). It mainly eats acorns and some insects and is usually found in pairs or small groups, although larger flocks have been seen. Unlike other jays, Lidth’s Jay habitually builds its nest in a large tree-hole, using twigs and sticks, and then lines it with softer material. Although once hunted for its plumage, Lidth’s Jay is now fully protected.

*Cyanopica cyanus*

## Azure-winged Magpie

LENGTH  
35cm (14in)WEIGHT  
75g (2½oz)MIGRATION  
Non-migrant**HABITAT** Woodland, especially pines, and also open country with olive and cork oak groves

Confined to Spain, Portugal, and eastern Asia, the Azure-winged Magpie is smaller and more delicate than other magpies. It has a glossy black head and a white throat. Its back and underparts are pale grey-brown in colour, while its wings and the feathers of its long tail are azure blue, giving rise to its common name. It often flicks its wings and tail when excited. It has a variety of calls: high whistles and deeper notes.

The Azure-winged Magpie feeds largely on insects, but also takes seeds, fruit, and scraps, usually from the ground, and stores food for later use. It is a very sociable species, feeding in family parties after the breeding season, often forming flocks of 30 or more birds. It breeds in colonies and other members of the flock may assist a pair during the breeding season. The nest is built in the fork of a branch near the top of a tree and more than one pair may nest in the same tree.

*Urocissa erythrorhyncha*  
Red-billed Blue MagpieLENGTH  
68cm (27in)WEIGHT  
150g (5oz)MIGRATION  
Non-migrant**HABITAT** Jungle, forest, and scrub, as well as cultivated areas with trees and gardens*Cissa chinensis*  
Common Green MagpieLENGTH  
38cm (15in)WEIGHT  
125g (4oz)MIGRATION  
Non-migrant**HABITAT** Evergreen forest and bamboo jungle as well as open scrub and gardens

The black head, white nape, orange-red bill, and the two long blue, white-tipped central tail feathers are characteristic of the Red-billed Blue Magpie. When flying, it glides with its tail spread. On the ground, it hops with its tail held high. A noisy bird, it lives in small flocks, feeding on insects, fruit, and carrion. It whistles, screeches, and chatters, and will also mimic other birds.

A striking green bird, the Common Green Magpie has chestnut-red wings and a bright red eye-ring, and legs. Usually shy, it whistles, shrieks, and chatters noisily, making it more easily heard than seen. It forms small groups and sometimes joins other species to feed in trees or on the ground. It eats invertebrates, small mammals, young birds and eggs, and carrion.

*Pica pica*

## Eurasian Magpie

LENGTH  
45cm (17½in)WEIGHT  
225g (8oz)MIGRATION  
Non-migrant**HABITAT** Woodland, open ground with bushes and hedges, and urban gardens

The Eurasian Magpie has a black head, upper breast, back, rump, and tail and a white belly. The dark wings have a blue, purple, and green sheen, and a broad white wing stripe is evident when the bird is at rest. It feeds on a wide range of animal and vegetable food, including

## ADULT EURASIAN MAGPIE

insects, seeds, young birds and eggs, and scraps. It is notorious for liking shiny objects. Magpies give loud chattering and rattling calls, but also have a quiet song. The Eurasian Magpie is a territorial bird and will form flocks after the breeding season and roost in groups. Three species of magpies are in the *Pica* genus: Black-billed, Yellow-billed, and Eurasian.

*Nucifraga columbiana*

## Clark's Nutcracker

LENGTH  
30cm (12in)WEIGHT  
125g (4oz)MIGRATION  
Partial migrant**HABITAT** Coniferous forest

A stocky bird, Clark's Nutcracker is mainly grey in colour, with black-and-white wings and tail, the outer tail feathers being white. It eats conifer seeds rather than nuts, and its long pointed beak enables it to probe into pine cones, which it holds with one foot while prising the seeds out.

It will also eat insects, eggs, and young birds, and will even come to bird-feeders for peanuts and suet. Clark's Nutcracker has a pouch under its beak that enables it to carry 60 or more seeds at a time. In winter, it habitually stores food, usually in the ground, retrieving it when supplies are short. If seed crops fail and its stores run out, it will irrupt, moving a considerable distance away from its usual range to lower ground, even into desert areas.

In the breeding season, a pair is territorial, keeping other birds away, but in winter, the species can be found feeding in large groups, especially when irrupting. Unlike a magpie or jay, Clark's Nutcracker walks rather than hops and its flight is undulating.

*Nucifraga caryocatactes*

## Spotted Nutcracker

LENGTH  
33cm (13in)WEIGHT  
175g (6oz)MIGRATION  
Partial migrant**HABITAT** Coniferous woodland, sometimes mixed with deciduous trees

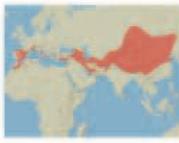
but will form feeding flocks in autumn. Unlike other members of the crow family, a pair shares parental duties, with both birds incubating the eggs and feeding the young.



## ADULT SPOTTED NUTCRACKER

*Pyrrhocorax pyrrhocorax*

## Red-billed Chough



<b>LENGTH</b>	39cm (15 1/2in)
<b>WEIGHT</b>	300g (11oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rocky areas, from mountains to quarries and coastal cliffs with nearby grass

### PAIR OF RED-BILLED CHOGHS

The range of the Red-billed Chough extends from the Himalayas to western Europe. It is a distinctive glossy black bird, with red bill and legs. It feeds mostly on the ground, eating insects and other invertebrates as well as some seeds. Its nest is usually built in a rock crevice or cave. A skilled flier, it soars high, swoops steeply, and performs aerial twists and tumbles.

Widely distributed in southern Asia, this slim, long-bodied crow has been introduced to the Middle East and Europe, where it thrives. It has a glossy jet black face, crown, and throat, while its neck, back, and underparts are grey. It gathers in flocks throughout the year and roosts communally.

The House Crow is omnivorous, eating insects, seeds, and carrion, but also taking advantage of the waste in towns and cities, scavenging on rubbish tips and around markets, farms, and fisheries. It will even enter buildings to steal food. It nests close to human habitation, often in trees, but will readily use buildings, pylons, cranes, and street lamps as nesting sites. Natural nests are built from sticks and twigs, while in urban areas, they may be entirely made up of wire and other metal. Like many crows, the House Crow is intelligent and, unlike most birds, is able to recognize a hunter with a gun, flying off immediately.

This intelligent bird is very sociable, roosting communally and forming large family groups. These groups consist of offspring from previous years, who help their parents rear later broods.

*Corvus splendens*

## House Crow



<b>LENGTH</b>	42cm (16 1/2in)
<b>WEIGHT</b>	275–325g (10–12oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wooded hills to coastal mangroves; also thrives in urban areas

**ADULT HOUSE CROW***Corvus brachyrhynchos*

## American Crow



<b>LENGTH</b>	45cm (17 1/2in)
<b>WEIGHT</b>	500g (18oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open woodland, farmland and parks, and urban areas

The American Crow has jet black plumage, dark eyes, and a large black bill. It is omnivorous and a scavenger, feeding on seeds, insects, reptiles, mammals, and the eggs and young of other birds. While it does eat crops, it also removes harmful insect pests. On the coast, it drops shellfish onto rocks to crack them open.

**ADULT AMERICAN CROW***Ptilostomus afer*

## Piapiac



<b>LENGTH</b>	46cm (18in)
<b>WEIGHT</b>	125g (4oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open country, cultivated fields, pasture, and lawns in towns and villages

A slender, long-tailed glossy black crow, with a black bill, the Piapiac is sometimes called the Black Magpie. Unlike other crows, it has only 10 tail feathers. It feeds on insects, often from around the feet of cattle, and it will even take parasites from a cow's back. It breeds cooperatively, with several adults and juveniles attending one nest. It is agile and runs along tree branches and also hops and runs on the ground.

**ADULT PIAPIAC****ADULT WESTERN JACKDAW***Corvus monedula*

## Western Jackdaw

<b>LENGTH</b>	33cm (13in)
<b>WEIGHT</b>	250g (9oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open woodland, cultivated fields, pasture, parks in villages and towns, and sea coasts

An agile flier, the Western Jackdaw is a small crow with a quick wingbeat. Its plumage is greyish black except for the cheeks, nape, and neck, which are pale grey. It feeds on insects, seeds, and grain. A hole-nesting bird, it usually chooses a tree hole or rock crevice, but has also taken to building large nests of sticks in chimneys and lofts.

**ADULT ROOK***Corvus frugilegus*

## Rook



<b>LENGTH</b>	45cm (17 1/2in)
<b>WEIGHT</b>	400–475g (14–17oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open country and pasture with woods or clumps of trees

Also called the Bare-faced Crow, due to the grey-white skin around the base of its bill in front of the eyes, the Rook has black plumage with a purple-blue sheen and its bill is grey-black. Its call is a loud, raucous cawing and its flight direct and steady. It has long been regarded as an agricultural pest because it eats worms and grain, but it also consumes insect larvae that would otherwise be damaging to crops.

### SOCIAL BONDS

Like many members of the crow family, the Rook is a highly social bird. Its communal nesting place is called a "rookery", where there can be several hundred nests. Courtship involves singing, bowing, and display flights. The pair will preen and feed each other to maintain the bond between them. Both parents build the nest and feed the young, but only the female incubates the eggs.



*Corvus corone***Carrion Crow**

<b>LENGTH</b>	48–52cm (19–20½in)
<b>WEIGHT</b>	400–600g (14–21oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open farmland, coasts, and uplands; parks and gardens

A common bird throughout its very wide range, the Carrion Crow includes three distinct subspecies. One is all black, another is grey and black, and the third is similar to the

**ADULT CARRION CROW AT A CARCASS**

Hooded Crow, but has a heavier bill, longer throat feathers, and much paler grey parts. As its common name suggests, the Carrion Crow feeds on carcasses but, like others of the family, has a wide-ranging diet including vegetable matter and will even steal food (kleptoparasitize) from smaller birds. It may drop shellfish onto rocks in order to get to their fleshy part and there is even a record of a crow seizing a bat in flight.

The call of the Carrion Crow is a loud, harsh “caw krра krра krра” and its bold, upright stance is characteristic of the species.

*Corvus corax***Northern Raven**

<b>LENGTH</b>	58–69cm (23–27in)
<b>WEIGHT</b>	0.9–1.6kg (2–3½lb)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rugged mountains, coastal cliffs, steppes, and semi-desert

Achieving the distinction of reaching one of the highest altitudes on record for a passerine bird, the Northern Raven has been sighted at well over 6,000m (19,600ft) on Mount Everest. It is a large, black bird with a robust bill and a ruff of feathers on its throat called “hackles”. The tail is wedge-shaped. Both the sexes look similar. A bird of the mountains, it shies away from areas modified or settled by humans.

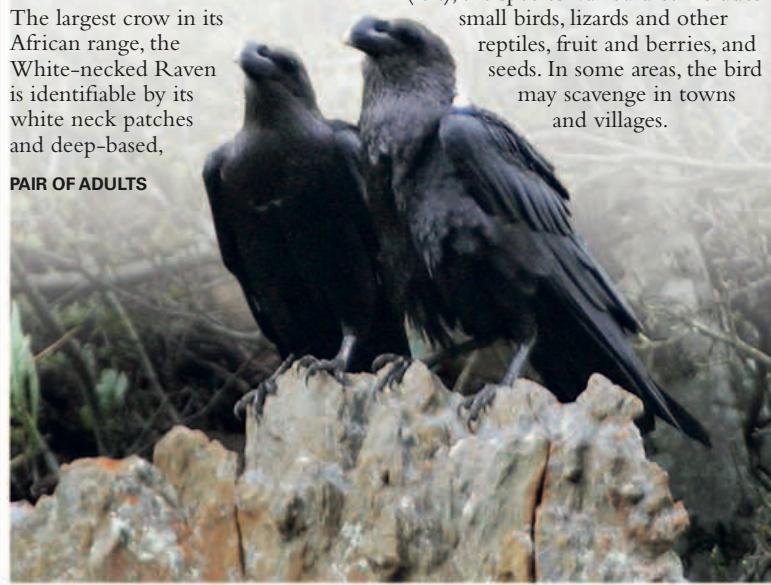
A powerful bird in the air, the Northern Raven is well known for its playful manouevres and effortless acrobatic displays, especially during early spring. It has been seen rolling down a snowbound hillside, apparently for “enjoyment”. It is a solitary nester, although the species is sociable and large flocks gather occasionally, especially at nocturnal roosts. It begins its nest-building and display activities by late February or even earlier in most areas. Both parents care for the young, which may remain with them for up to six months after fledging.

*Corvus albicollis***White-necked Raven**

<b>LENGTH</b>	50–54cm (19½–21½in)
<b>WEIGHT</b>	900g (32oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Cliffs and gorges in mountainous areas, including open forest

The largest crow in its African range, the White-necked Raven is identifiable by its white neck patches and deep-based,

**PAIR OF ADULTS**

arched bill. In flight, the broad-based wings and short tail are clearly outlined. As in most crows, there is no difference between the male and the female. The species is highly gregarious, forming small flocks in the non-breeding season, which may swell to as many as 800 in number. The White-necked Raven joins other crows, kites, and vultures at animal carcasses and also congregates at locust swarms. Like the Carrion Crow (left), the species' varied diet includes small birds, lizards and other reptiles, fruit and berries, and seeds. In some areas, the bird may scavenge in towns and villages.

**SCAVENGING**

Like many crows, despite its ability to forage for food, the Northern Raven is first and foremost a scavenger, taking all kinds of carrion, from dead sheep, cattle, and rabbits, to fish. At a kill on the ground, it waddles and occasionally hops into position, jostling for space near the carcass.

*Corvus macrorhynchos***Large-billed Crow**

<b>LENGTH</b>	48–59cm (19–23in)
<b>WEIGHT</b>	450–650g (16–23oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Woodland and forest, in some areas more coastal and in others, principally around habitation

Like many of its relatives, the Large-billed Crow has a dull black plumage, although in some areas it may be glossy. It is chiefly recognizable by its long bill, steep forehead, and its long, wedge-shaped tail. A gregarious bird, it is usually found in pairs or small groups, but larger flocks are also common at feeding places or roosting sites. A pair of Large-billed Crows may remain together for life. The nest is built in a solitary site, usually in the fork of a large tree, and consists of a platform of twigs. The female incubates the eggs, but both sexes feed the young. The Himalayan populations perform fantastic aerobatic displays.

**ADULT NORTHERN RAVEN**



## Pied Crow



<b>LENGTH</b>	46–50cm (18–19½in)
<b>WEIGHT</b>	500–600g (18–21oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open country with forest or cultivation, towns and villages, semi-desert areas with oases

The Pied Crow is distinguished by its black plumage, which contrasts with its bold white collar and breast. It is similar to the White-necked Raven (opposite), which may occasionally

show some white on the breast, but has a much larger bill.

The Pied Crow is a gregarious species, with as many as 1,000 birds gathering at rubbish dumps and slaughterhouses, without any fear of humans. In addition to its habitual scavenging activities, this crow eats a high proportion of vegetable matter and is capable of taking insects on the wing or even of killing fruit bats roosting in the tree canopy. Its nests are well separated from other birds, but may be parasitized by the Great Spotted Cuckoo (see p.274), a species that frequently targets crows.

PAIR OF ADULT PIED CROWS



## MUDNESTERS

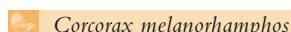
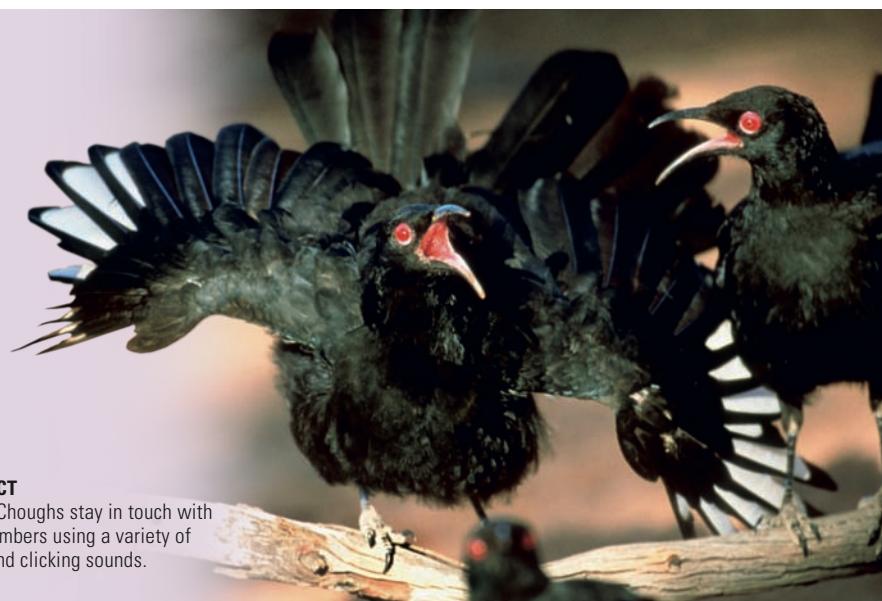
<b>ORDER</b>	Passeriformes
<b>FAMILY</b>	Corcoracidae
<b>SPECIES</b>	2

of about a dozen birds, with a dominant adult male paired with one or more adult females, as well as three to eight young born in previous years. All members of the group work together to build a large, bowl-shaped mud nest, and the younger birds help the breeding adults to incubate the eggs and feed the next generation of nestlings. Outside the breeding season, several groups of mudnesters may join together to form larger flocks and are usually found feeding on the ground.

BOTH SPECIES IN THIS Australian family are highly social birds that live communally, forming tight-knit family groups and breeding co-operatively. Each group consists

### CLOSE CONTACT

White-winged Choughs stay in touch with other group members using a variety of soft whistles and clicking sounds.



## White-winged Chough



<b>LENGTH</b>	45cm (17½in)
<b>WEIGHT</b>	350g (13oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Eucalyptus woodland, forest, and mallee scrub

### ADULT WHITE-WINGED CHOUGH

In flight, the white wing feathers that give the White-winged Chough its name, are clearly visible. It is black in colour and has a long tail. It moves in small groups, usually of 4–8 birds, foraging in leaf litter with a sideways sweep of the bill, or probing the soil for invertebrates. Its breeding is communal, with the group consisting of a dominant male, several females, and offspring of previous years, all helping to build the large mud-bowl nest.



## Apostlebird

<b>LENGTH</b>	29–32cm (11½–12½in)
<b>WEIGHT</b>	125g (4oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Woodland and shrubland, especially in Cypress and Casuarina stands; never far from water

The Apostlebird has a black stout bill, grey plumage, brown wings, and a black tail. Both the sexes look alike. The Apostlebird mainly eats insects or

mice, often taken from roadsides, but in winter, it switches to small seeds.

Like the White-winged Chough (left), it lives communally in groups of up to 20, but may form feeding flocks of hundreds. Its nest is a large bowl of grass, heavily plastered with mud and attached to a horizontal branch; 2–5 eggs are laid. All members of the group incubate and feed the young, which remain dependent on the adults for food for several months.

It inhabits the eastern and southeastern inland regions of Australia and in recent years, the Apostlebird has been spreading its range westwards.

PAIR OF APOSTLEBIRDS



# BIRDS-OF-PARADISE

**ORDER** Passeriformes  
**FAMILY** Paradisaeidae  
**SPECIES** 40

FEW BIRDS ARE MORE charismatic than the birds-of-paradise. As a family, they are almost entirely

restricted to New Guinea, with less than a handful of species occurring in the rainforests of northeastern Australia and a few in Indonesia. Four species are currently categorized by the IUCN as Near Threatened.

## PLUMAGE

Species within the birds-of-paradise family are either polygynous or monogamous. In the latter group, males and females have similar plumage, with all seven species being either entirely blue-black or largely black. However, in the other, much larger group, males have far brighter, gaudier, and more magnificent plumage than females because they compete to mate with more than one female. They also sport an amazing array of dazzling colourful plumes, head or tail wires, and other adornments. Each of the 14 genera represented in the polygynous grouping has a basic male plumage that is peculiar to the species and that is manipulated in these courtship displays.



### IMPRESSIVE DISPLAY

This male Raggiana Bird-of-Paradise, a polygynous species, commences his elaborate display to the much duller female that has just arrived at its lek.

## BEHAVIOUR

Birds-of-paradise are diverse in body size and bill shape, the latter ranging from stout and crow-like to long and sickle-shaped. Some species also exhibit significant bill differences between the sexes, which prevent males and females of the same species competing for food. Most species in this family are fruit-eaters, but many also take some arthropods, leaves, and buds. Birds-of-paradise typically build open cup- or bowl-shaped nests of stems, vines, and leaves, and lay up to three eggs, which in polygynous species are incubated by the female unaided.



**LONG-BILLED FEMALE**  
The female Victoria Riflebird usually has a longer bill than the male.

### *Astrapia mayeri*

#### Ribbon-tailed Astrapia



LENGTH	32cm (12 1/2in)
WEIGHT	125–150g (4–5oz)
MIGRATION	Non-migrant

**HABITAT** Mountain forests and forest fragments, including disturbed forest

The male Ribbon-tailed Astrapia has the longest tail feathers in relation to its size of any bird – up to 1m (3 1/2ft) long, three times the length of the bird itself. Appearing black from a distance, its plumage is in fact brilliantly iridescent, with yellow, green, blue, and purple on the head, and olive-green on the back. The brown female also has iridescent head plumage.

The Ribbon-tailed Astrapia has a varied diet, including fruit, insects, spiders, reptiles, and small mammals. Its courtship display includes flicking its tail during an undulating flight, while another display involves jumping repeatedly between branches.

The Ribbon-tailed Astrapia was not discovered until 1938, making it the most recently described of all the birds-of-paradise. It is locally threatened by hunting for its tail plumes and by large-scale logging. However, in other areas it is protected by the fact that some of its range is remote and inaccessible.

### *Cicinnurus respublica*

#### Wilson's Bird-of-Paradise



LENGTH	16cm (6 1/2in)
WEIGHT	55–60g (2–2 1/2oz)
MIGRATION	Non-migrant

**HABITAT** Mostly hill forest, sometimes also found in lowland forest

This very small bird-of-paradise is also called the Bare-headed Little King Bird-of-Paradise, and is closely related to the King Bird-of-Paradise (opposite). The male Wilson's Bird-of-Paradise has

a bare blue crown with a pattern of criss-crossing lines on it. The cobalt blue of its head is said to be so vivid that it is visible at night. It has a red back and wings and yellow mantle. Its short tail is black and it has two spiral tail wires. The female also has a blue cap and black head, but the wings and back are grey-brown and the underparts are barred. However, the inconspicuous behaviour of this species means that it is more easily located by its calls.

The male chooses a display ground, usually a small clearing in dense forest, which it keeps clear of leaves and litter. The emerald green breast-shield is thrust forward, and the spiral tail feathers flicked during the display.

#### MALE WILSON'S BIRD-OF-PARADISE



### *Lophorina superba*

#### Superb Bird-of-Paradise



LENGTH	26cm (10in)
WEIGHT	65–85g (2 3/8–3oz)
MIGRATION	Non-migrant

**HABITAT** Mountain forests, including disturbed forest

The Superb Bird-of-Paradise is the sole member of its genus. When the displaying male stands fully erect, it shows gleaming black cape feathers covering its back and an iridescent greenish blue breast-shield. When at rest, the male is mostly black with a green breast-shield and crown. The female is quite different, and is largely brown with barred underparts. The male Superb Bird-of-Paradise is polygamous, mating with as many females as it can attract to its solitary territory. Other parts of the display include pushing out its breast-shield and flicking its cape over its head, without expanding it.

The Superb Bird-of-Paradise is extensively hunted for its plumage, but remains one of the most common birds-of-paradise. It is found in virtually all the upland forests of New Guinea.



ADULT VICTORIA RIFLEBIRD

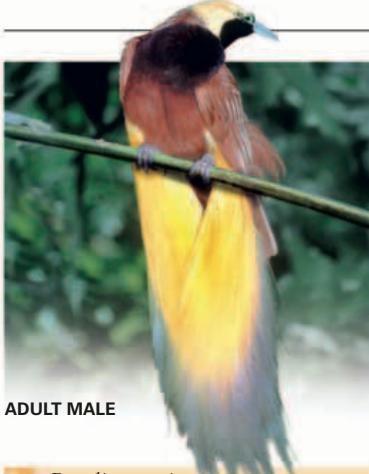
*Ptiloris victoriae*

## Victoria Riflebird

LENGTH  
25cm (10in)WEIGHT  
85–100g (3–3½oz)MIGRATION  
Non-migrant

HABITAT Lowland and hill rainforest, swamp forest

This species is named after Britain's Queen Victoria. The male is a velvet jet-black with a green head and the female is red-brown. The male Victoria Riflebird fans and raises both wings to form a complete circle, and opens its bill to display its yellow gape, while simultaneously raising and lowering itself on its legs. To attract the female, the male gives a loud call. The species eats insects, other invertebrates, fruit, and flowers.



ADULT MALE

*Paradisaea minor*

## Lesser Bird-of-Paradise

LENGTH  
32cm (12½in)WEIGHT  
150–300g (5–11oz)MIGRATION  
Non-migrant

HABITAT Island forest

The Lesser Bird-of-Paradise is widespread in the north and west of New Guinea. The elongated, yellow flank plumes and cape of the male are distinctive and are used in courtship displays. It also has two long wire-like tail feathers. The brown female is almost crow-like. Several males display together at a lekking ground, mating with as many females as they can.

*Ptiloris paradiseus*

## Paradise Riflebird

LENGTH  
30cm (12in)WEIGHT  
100–150g (3½–5oz)MIGRATION  
Non-migrant

HABITAT Subtropical and temperate rainforest



FEMALE PARADISE RIFLEBIRD

The most southerly of all the birds-of-paradise, the Paradise Riflebird is a member of the same genus as the very similar Victoria Riflebird (left). The male is black with an iridescent greenish blue crown, throat, and central tail feathers. The female is brown with black barred underparts. The courtship display of the male includes fanning and extending its wings in front of itself. The male may spend much of the day on a chosen display perch on prominent branches high above the ground. It forages rather like a treecreeper (see p.427), climbing trunks and branches in search of insects, spiders, and centipedes.

*Seleucidis melanoleucus*

## Twelve-wired Bird-of-Paradise

LENGTH  
33cm (13in)WEIGHT  
150–200g (5–7oz)MIGRATION  
Non-migrant

HABITAT Lowland forest



Six flank plumes on each side of the male Twelve-wired Bird-of-Paradise are elongated into the wires that give the bird its name, and which radiate around the bird. The display involves pushing out its breast-shield and raising its flank-plumes in a way that changes it from a mostly black bird to a mostly yellow one. The female is largely brown. The trachea includes a unique, elastic section, which enables it to make its "advertising" calls heard at a long distance. The bird is generally shy, more often heard than seen.



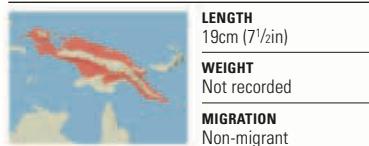
ADULT MALE



JUVENILE MALE

*Cicinnurus regius*

## King Bird-of-Paradise

LENGTH  
19cm (7½in)WEIGHT  
Not recordedMIGRATION  
Non-migrant

HABITAT Lowland forest, including disturbed areas

The smallest bird-of-paradise, this species is a mostly crimson bird, with white underparts, a green breast-shield, and bright blue feet. Two tail feathers are elongated into wires tipped with metallic green discs. The courtship display includes spreading its wings and hanging upside down from the perch, swinging its tail feathers. Despite its vivid colour the male is inconspicuous, but it can be tracked by its calls.

## FLOWER DISPLAY



In its courtship display, the male Raggiana Bird-of-Paradise turns its head downwards and fans out its wings. When it does so, the wings form a flower-like shape and the bird appears to be surrounded by "petals".

*Paradisaea raggiana*

## Raggiana Bird-of-Paradise

LENGTH  
34cm (13½in)WEIGHT  
150–275g (5–10oz)MIGRATION  
Non-migrant

HABITAT Primary and secondary forest in lowland, hills, and lower flanks of mountains; also in gardens



# AUSTRALASIAN ROBINS

**ORDER** Passeriformes  
**FAMILY** Petroicidae  
**SPECIES** 45

THIS FAMILY OF AUSTRALIAN, New Zealand, and New Guinean birds occupy a range of habitats from dry savanna to montane forests. Some have

exceptionally dull plumage, but others very bright. Most are insectivores that use a perch-and-pounce method of acquiring prey. Species within this family have high-pitched, short and staccato songs, or give drawn-out whistles or trills. Most Australian robins build small, shallow cup-shaped nests sited low in the vegetation, although some nest high in trees or on the ground. A clutch of 2 or 3 eggs is usual.



**FEEDING YOUNG**  
Here, a Rose Robin is bringing food to the young in the nest, a cup-shaped construction typical of those made by birds of this family.

*Eopsaltria australis*

## Eastern Yellow Robin



**LENGTH**  
15cm (6in)  
**WEIGHT**  
18–20g (5/8–11/16oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Wide range of coastal and sub-coastal habitats, particularly damp places or near water

One of the larger Australasian robins, the brightly coloured Eastern Yellow Robin is also one of the most easily observed birds. It has a grey back and head and striking yellow underparts. Like all Australasian robins, it is found in dark, shady places and employs a



**ADULT EASTERN YELLOW ROBIN**

perch-and-pounce hunting technique, feeding on a wide range of small invertebrates, but mostly insects. Breeding mostly takes place in the spring and is often communal. The nest is a well-finished cup, placed in a branch fork, and is neatly plastered with lichen, moss, and bits of bark.

*Petroica phoenicea*

## Flame Robin



**LENGTH**  
14cm (5 1/2in)  
**WEIGHT**  
13g (7/16oz)  
**MIGRATION**  
Partial migrant

**HABITAT** Breeds in open forest and woodland, and montane areas, dispersing to open grassy plains

Easily distinguished by its bright orange-red throat plumage, the male Flame Robin has a noticeable white forehead spot, slate-grey upperparts, and white markings on its wings and tail. The female is plain grey-brown, with paler underparts, and smaller white wing markings than the male. The Flame Robin mainly eats insects. It will remain motionless for long periods on a perch, scanning the ground for prey,



**MALE FLAME ROBIN**

*Microeca fascinans*

## Jacky Winter



**LENGTH**  
13cm (5in)  
**WEIGHT**  
16g (9/16oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Dry open forest and woodland, with bare ground, mallee scrub, farmland, and parks

A small flycatcher, the Jacky Winter has a faint pale eye-ring, grey-brown upperparts, and a white throat and belly, with white in the wings and tail. It sits upright on an exposed perch, wagging its tail from side to side, uttering its “peter-peter” call. Its feeding strategy is to dart out from a perch to catch flying insects, but it also pounces on worms and beetles on the ground. Its cup-shaped nest is often placed on an exposed dead tree branch.



**ADULT JACKY WINTER**

*Petroica australis*

## New Zealand Robin



**LENGTH**  
18cm (7in)  
**WEIGHT**  
35–40g (1 1/4–1 7/16oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Forest fringes; green belts of urban areas

The male New Zealand Robin is dark slate-grey, with a cream-white belly, while the female is a dark grey-brown. This robin eats small insects and worms found in leaf litter. The nest is built against the bole of a tree and if the young are threatened, the parents perform an extravagant distraction display, hopping about the intruder with spread wings, uttering piping notes.



**MALE NEW ZEALAND ROBIN**

# BALD CROWS

ORDER Passeriformes  
FAMILY Picathartidae  
SPECIES 2

THERE ARE TWO SPECIES of bald crows, or rockfowl, both confined to West Africa and considered vulnerable according to the IUCN. Male and female bald crows are similar and the two species mainly differ in the colour of the bald head. They feed on invertebrates, as well as frogs and lizards, found in the leaf litter as they hop through their forest habitats. Their wings are rarely used for flight, but are important for maintaining balance on vines, further aided by their long tail, which is at least twice as long as the body. Birds of this family are colonial nesters, usually on remote cliffs, rock faces, or cave roofs far from human settlements. The one or two eggs are laid in the cup-shaped mud nest during the wet season.

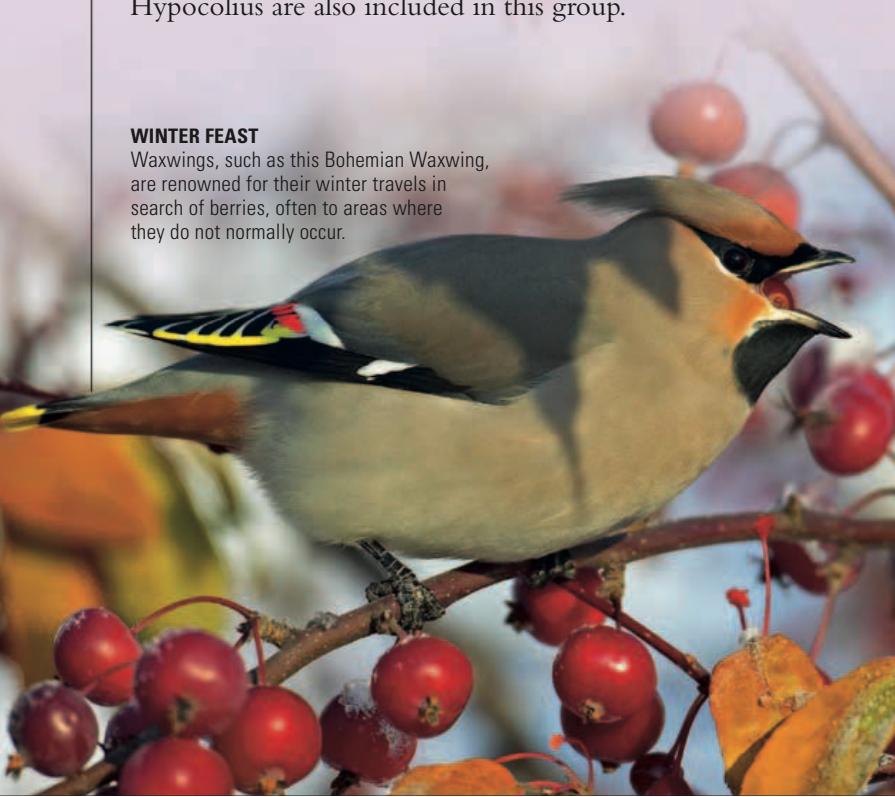
**YOUNG ROCKFOWL**  
A young Grey-necked Picathartes peeps out of its mud nest. The rufous colour of its bald head, characteristic of this species, is visible.

## WAXWINGS AND RELATIVES

ORDER Passeriformes  
FAMILY Bombycillidae  
SPECIES 8

THESE ARE SLEEK, medium-sized songbirds found across the Northern Hemisphere. The three true waxwing species (Bohemian, Cedar, and Japanese) are similar in appearance with mainly buff plumage, a fluffy crest, and black chin and face masks. They live mainly on fruit and berries, often gathering in large flocks to feed. The silky-flycatchers and the Hypocolius are also included in this group.

**WINTER FEAST**  
Waxwings, such as this Bohemian Waxwing, are renowned for their winter travels in search of berries, often to areas where they do not normally occur.



*Picathartes gymnocephalus*

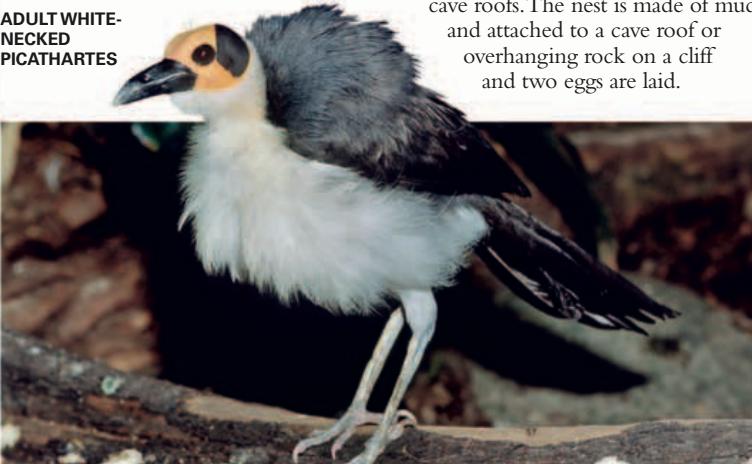
### White-necked Picathartes

	<b>LENGTH</b> 40cm (16in)
	<b>WEIGHT</b> 200g (7oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Primary and secondary forest, forest clearings, and gallery forest in rocky, hilly terrain

**RED LIST CATEGORY** Vulnerable

**ADULT WHITE-NECKED PICATHARTES**



This long-legged crow-like bird has a bright orange-yellow and black bald head, two black patches that resemble ear-muffs, and a large black bill. The neck and underparts are white, while the wings, upperparts, and tail are dark bluish grey. With its long neck, powerful legs, and strong feet, the White-necked Picathartes is well adapted to terrestrial feeding and forages for insects and molluscs in damp rocky areas. Normally silent, it occasionally makes a breathy "sshhiiss" sound and a soft "tok" call. It breeds in colonies of up to 40 pairs on rock faces, cliffs, and cave roofs. The nest is made of mud and attached to a cave roof or overhanging rock on a cliff and two eggs are laid.

*Hypocolius ampelinus*

### Hypocolius

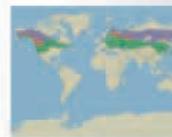
	<b>LENGTH</b> 23cm (9in)
	<b>WEIGHT</b> 50g (1 3/4 oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Breeds in lowland woodland areas, especially with fruiting trees

An unusual bird, the Hypocolius is sometimes placed in a separate family. It has a long, black-tipped tail. The male has a black mask on its face, pale blue-grey upperparts, and white tips to the wings. The female is brown in colour and much plainer, lacking the black mask. The juvenile is pale, sandy colour. The Hypocolius eats mainly fruit and berries, with fallen date palms forming an important part of its diet.

*Bombycilla garrulus*

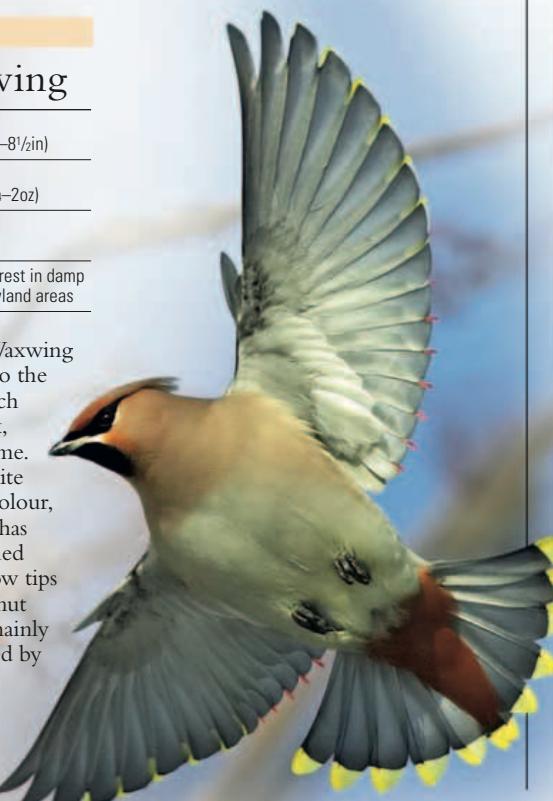
### Bohemian Waxwing

	<b>LENGTH</b> 18–21cm (7–8 1/2 in)
	<b>WEIGHT</b> 50–55g (1 3/4–2 oz)
	<b>MIGRATION</b> Migrant

**HABITAT** Breeds in mature coniferous forest in damp mossy terrain; winters in more open lowland areas

A sleek bird, the Bohemian Waxwing has bright red bead-like tips to the secondary wing feathers, which resemble drops of sealing wax, giving rise to its common name. Its wings have yellow and white markings. Pinkish brown in colour, with a wispy, upright crest, it has a narrow black mask underlined with white. It has bright yellow tips on its tail feathers, with chestnut undertail feathers. This bird mainly feeds on berries, supplemented by insects. It usually nests high up in a conifer tree.

**ADULT BOHEMIAN WAXWING**







#### BOHEMIAN WAXWINGS

Waxwings are generally sociable birds. Berries form a large part of their diet, and a feeding flock of waxwings can rapidly strip a bush or tree of its fruit.

# PALMCHAT

**ORDER** Passeriformes  
**FAMILY** Dulidae  
**SPECIES** 1

where its large repertoire of calls cannot fail to be heard. There is considerable debate as to which other bird families the Palmchat is most closely related to, with current opinion suggesting that the waxwings and silky-flycatchers (see p.399) may be its nearest relatives.

## BEHAVIOUR

The Palmchat is a highly social species throughout the year. It builds massive communal nests – sometimes reaching up to two metres (6½ft) in diameter. These vast structures are also used outside the breeding season as places to roost. The nest is constantly repaired and extended by the resident birds. Up to 50 pairs of Palmchats may occupy the structure, but 4–10 pairs is the more usual occupancy. Pairs of birds usually inhabit individual chambers accessible by their own separate entrance tunnel. Occasionally, other species of bird are permitted to build their own nests on top of the Palmchat's communal nest.

# TRUE TITS

**ORDER** Passeriformes  
**FAMILY** Paridae  
**SPECIES** 54

the family are predominantly brown with black and white head markings, but a number of species are spectacularly coloured. Some have noticeable crests.

## BEHAVIOUR

Tits are small and agile. They tend to feed quite high up in the trees on a mixed diet of insects and seeds, although increasingly in urban areas, many species now obtain much of their sustenance from bird food put out by humans. Peanuts, suet mixes, and coconuts are among the favourite high-energy foodstuffs that are used to attract these favourite visitors into the garden. Tits are tame, sociable birds. Consequently, it is often easy to observe large groups, often comprising a variety of species.

### FEEDING UPSIDE DOWN

Blue Tits are adept at hanging upside down from feeders and branches, to get food out of the reach of less agile birds.

THE PALMCHAT IS THE ONLY member of its family and is found solely on the Caribbean island of Hispaniola. It is a noisy resident, particularly when close to the nest

*Dulus dominicus*

### Palmchat



<b>LENGTH</b>	18–20cm (7–8in)
<b>WEIGHT</b>	40–50g (1⅓–1¾oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Mainly open areas of royal palm trees; also other open areas, including parks and gardens

A medium-sized songbird, the Palmchat has a mixture of olive-brown and green upperparts. It is pale below, but heavily streaked with brown. It has a noticeable red eye and a strong, ivory-coloured bill. The males and female are similar in appearance and the juvenile has a darker throat.

This bird builds a huge, domed nest high in the crown of the royal palm tree (hence the name Palmchat). These nests are usually occupied by up to ten pairs, each living in a separate chamber. The palmchat is the only member of its family and is found solely on the West Indian island of Hispaniola.



ADULT PALMCHAT



ADULT BLACK-CAPPED CHICKADEE

*Poecile atricapillus*

### Black-capped Chickadee



<b>LENGTH</b>	13cm (5in)
<b>WEIGHT</b>	11g (⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Woodland and forest, particularly deciduous and mixed; parks and gardens

*Poecile cincta*

### Grey-headed Chickadee

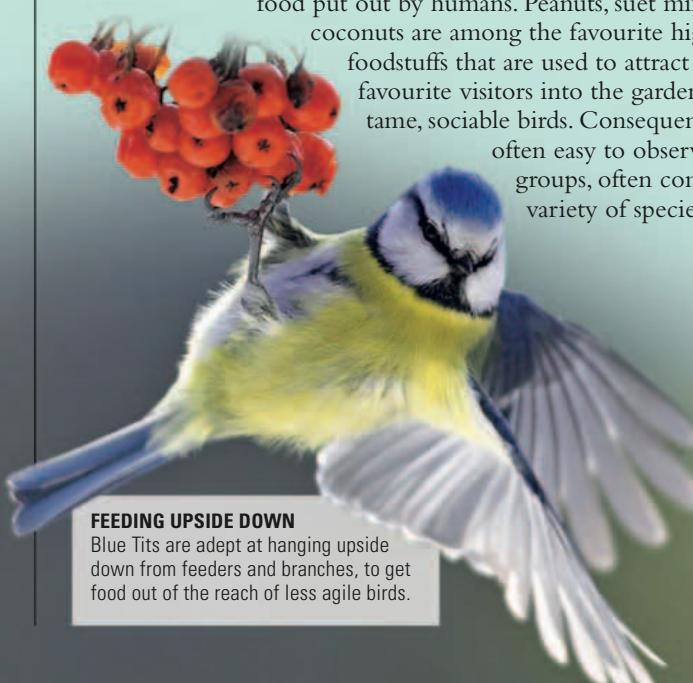


HABITAT Coniferous forest

Also known as the Siberian Tit, this species is the only tit to occur in both Europe and America. A separate population is also found in Alaska. The Grey-headed Chickadee has a short bill, grey-brown cap and back, white cheeks, dark (almost black) bib, white-edged wings, and cinnamon flanks. In Europe, there are no species that can be confused with it; in Alaska, the similar Boreal Chickadee (*P. hudsonica*) also has a brown cap, but a much smaller white cheek patch. The diet of this species consists of a range of seeds and invertebrates. The Grey-headed Chickadee stores food for the winter in crevices or cracks in trees or among lichens. It nests in cavities of trees.



PERCHING GREY-HEADED CHICKADEE





ADULT VARIED TIT

*Poecile varia***Varied Tit****HABITAT** Forest

LENGTH	10–13cm (4–5in)
WEIGHT	17g (½oz)
MIGRATION	Non-migrant

The Coal Tit is found throughout Europe and eastwards across a wide belt of Asia to Japan. It has white (or off-white) cheeks, a black cap, with a white stripe along the back of the head, a black bib, buff underparts, and a greenish olive back with two contrasting white-spotted wingbars. Birds found in the Himalayas have a noticeable black crest. The juvenile has a yellow tinge to the pale areas of its plumage.



ADULT COAL TIT

*Cyanistes caeruleus***Blue Tit****HABITAT** Wide range of habitats, including woodland, scrub, parks, and gardens

LENGTH	12cm (4½in)
WEIGHT	10g (½oz)
MIGRATION	Partial migrant

A bright and attractive bird, the Blue Tit is one of the most familiar small birds across much of Europe, although it is also found in North Africa, the Middle East, and parts of Central Asia. Although a number of quite varied subspecies occur, this is a distinct species. Blue Tits found in Europe are bright yellow below, with a distinct facial pattern: white cheeks, a blue cap, a blue band around the back of the neck, and a thin stripe through the eye. The back is greyish green, with blue tail and wings.

The juvenile lacks any blue or white, appearing dirty yellow below and greenish grey above. The birds found in North Africa and the Canary Islands are generally darker above with almost black head markings.

The Blue Tit often visits garden birdfeeders and nestboxes. Outside the breeding season, the species can usually be found foraging in large (often mixed) flocks. The Blue Tit has a large repertoire of calls including scolding alarms and high-pitched whistles, as well as a number of piping and trilling songs.

ADULT BLUE TIT

*Periparus ater***Coal Tit****HABITAT** Coniferous forest; also found in other types of woodland, parks, and gardens

LENGTH	11cm (4½in)
WEIGHT	9g (⅓oz)
MIGRATION	Non-migrant

*Lophophanes cristatus***European Crested Tit****HABITAT** Mainly coniferous forest (though other types of woodland in some parts of its range)

LENGTH	12cm (4½in)
WEIGHT	10–12g (⅓–⅔oz)
MIGRATION	Non-migrant

With its distinctive crest and pied head pattern, the European Crested Tit stands out among the European members of its family. Its black crest is neatly streaked with white,



ADULT EUROPEAN CRESTED TIT



ADULT TUFTED TITMOUSE

*Melanochlora sultanea***Sultan Tit**

LENGTH	20cm (8in)
WEIGHT	40g (1⅓oz)
MIGRATION	Non-migrant

**HABITAT** Forest, scrub, and bamboo

Not only is the striking Sultan Tit of Asia the largest member of its family, it is also quite unlike any of its relatives in its plumage. The male has a glossy blue-black bib and upperparts that contrast with its bright yellow underparts and impressive crest. The female has duller plumage. The juvenile is even more dull in coloration and has a shorter crest. The adult of the isolated subspecies found in southern Laos and central Vietnam has a dark crest that is the same colour as its upperparts. Like other members of the tit family, the Sultan Tit is an active, social species but can be inconspicuous due to its preference for canopy-feeding.



MALE SULTAN TIT

**Tufted Titmouse****HABITAT** Deciduous and mixed woodland, parks, and gardens

LENGTH	16cm (6½in)
WEIGHT	20g (⅓oz)
MIGRATION	Non-migrant

The Tufted Titmouse is the largest member of its family in the Americas. It is an attractive species with a distinct grey crest and an “open-faced” appearance. It is quite a plain bird: grey above and white below, with rufous-buff flanks. The adult has a small black area above the bill that is not present in the plainer, shorter-crested juvenile. One of the subspecies found in Texas and northeast Mexico has a distinct black crest and is often treated as a separate species: the Black-crested Titmouse.

The Tufted Titmouse has a number of high-pitched nasal calls and a clear, low-pitched song. It is often found foraging in groups with other birds.

# PENDULINE TITS

**ORDER** Passeriformes  
**FAMILY** Remizidae  
**SPECIES** 10

MOST SPECIES OF THE penduline tit family are found in Europe, Africa, and Asia although there is one from North America. The name “penduline” comes from their pendulous bag-shaped nests, which hang from trees or reeds, usually over water. All have short, rather delicate pointed bills enabling them to take insects, spiders, and small seeds.

## BEHAVIOUR

Penduline tits are constantly active, foraging over reeds, twigs, and leaves, and keeping in contact with one another with thin, sibilant calls. They are usually found in pairs or small groups. Eurasian Penduline Tits may be monogamous, or a single male may mate with more than one female, and a female with more than one male. In other species, the large numbers of eggs in one nest, suggest that more than one female may contribute.

### BAG-LIKE NEST

The tear-drop-shaped nest hangs from a single attachment to a willow twig. It has its entrance near the top.



### *Remiz pendulinus*

#### Eurasian Penduline Tit



**LENGTH**  
11cm (4½in)

**WEIGHT**  
8–13g (⁹/₁₆–⁷/₁₆oz)

**MIGRATION**  
Migrant

**HABITAT** Variety of tall wetland vegetation, including reedbeds and rushes; scrub



MALE EURASIAN PENDULINE TIT

### *Auriparus flaviceps*

#### Verdin



**LENGTH**  
10cm (4in)

**WEIGHT**  
6–9g (⁷/₃₂–¹¹/₃₂oz)

**MIGRATION**  
Non-migrant

**HABITAT** Well-vegetated desert, including dry washes and watercourses

# BUSHTITS

**ORDER** Passeriformes  
**FAMILY** Aegithalidae  
**SPECIES** 11

North America. They are sociable birds, always on the move in noisy, bounding flocks. They build intricate hanging woven nests out of grass and twigs, which are usually lined with feathers and moss. These birds have long tails in relation to the size of their bodies.

### FAMILY PARTIES

These young Long-tailed Bushtits will continue to act sociably when they are older, foraging and feeding together in noisy, restless flocks.



### *Aegithalos caudatus*

#### Long-tailed Bushtit



**LENGTH**  
13–16cm (5–6½in)

**WEIGHT**  
6–11g (⁷/₃₂–³/₈oz)

**MIGRATION**  
Non-migrant

**HABITAT** Edges of mixed and deciduous woodland, scrub, heathland, and hedgerows



ADULT BIRD (NORTHERN SUBSPECIES)

The most widespread member of its small family, the Long-tailed Bushtit has a white crown, with black and brown upperparts and dull white underparts. A gregarious species, it is often found in noisy family parties of up to 30 birds, which form the core of mixed-species feeding flocks in the winter months. The “white-headed” northern birds (shown here) sometimes wander away from their breeding areas in the winter, perhaps in response to cold weather.

A typical member of its small family, the Eurasian Penduline Tit is a diminutive, compact bird with a broad, black “bandit’s mask” (the female has a narrower mask than the male) and a short, conical bill. It has a pale grey head, red-brown back, buff underparts, and a dark tail. In flight, it shows a deep red-brown band across its wings.

During the summer, this tit feeds largely on invertebrates, which it takes while it forages in tall emergent vegetation and the outermost twigs and branches of trees and bushes. Plant material, especially reed seeds, feature in its diet during winter. Its nest, made of plant down and cobwebs, is flask-shaped, with a short entrance tube. The species breeds throughout mainland Europe, extending into southwest Siberia and northwest Kazakhstan. During the 20th century, a dramatic westerly and northerly expansion in its range occurred, enabling its colonization of southern Scandinavia and the Netherlands.

Found in the deserts of southwest USA and adjacent Mexico, the Verdin is mainly grey, with a bright yellow head and throat and chestnut shoulder patches. Like the other penduline tits, it has a sharply pointed bill. It is a shy and inconspicuous bird, but its presence at a site is revealed by its spherical nest. This large, elaborate structure is made of thorny twigs that act as the first line of defence against would-be predators. It is built by the male, well above the ground.

### *Psaltriparus minimus*

#### American Bushtit



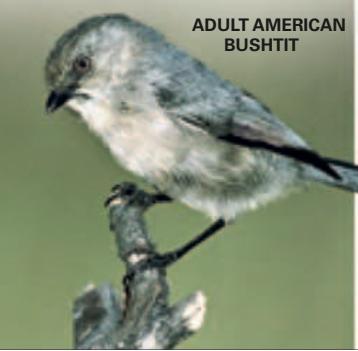
**LENGTH**  
10cm (4in)

**WEIGHT**  
5g (⁹/₁₆oz)

**MIGRATION**  
Non-migrant

**HABITAT** Open deciduous and mixed woodland

One of North America’s smallest birds, the tiny American Bushtit is grey-brown overall and has a short stubby bill and a long graduated tail. Like its close relative the Long-tailed Bushtit (left), it shows a great deal of geographical variation throughout its range. Another similarity with the Long-tailed Bushtit is its gregarious behaviour and corresponding complex social system. Flocks of up to 40 birds, consisting only of family members, are on record. These flocks vociferously defend their territories against rival groups and individuals attempting to join a group from outside are invariably driven away.



ADULT AMERICAN BUSHTIT

# SWALLOWS AND MARTINS

**ORDER** Passeriformes  
**FAMILY** Hirundinidae  
**SPECIES** 84

COLLECTIVELY KNOWN as hirundines, swallows and martins are generally quite small, long-winged birds that spend most of their time on the wing feeding on insects. They vary

in appearance, though most tend to have dark upperparts, which often contrast with paler plumage below. Many species also have a forked tail and very long tail streamers. Some swallows and martins are very sociable, nesting in large colonies such as excavated holes in cliffs or riverbanks.

## BEHAVIOUR

Most swallows and martins breed in temperate regions before migrating for the winter to warmer areas, where their insect prey will still be abundant. Birds that breed in northern Europe undertake the arduous migration to sub-Saharan Africa, with North American birds flying to South America. They usually migrate by day, often in very large, conspicuous flocks. Their arrival each spring is often taken to signal the beginning of summer.

### STREAMLINED PERFECTION

Designed for long-distance flights, the Barn Swallow is a typically elegant member of its family with its long, pointed wings and elongated tail streamers.



### WELL-EARNED REST

Swallows and martins can migrate thousands of miles, often in large flocks that frequently stop to rest and roost on prominent vantage points such as telegraph wires.

#### *Cheramoeca leucosterna*

## White-backed Swallow



<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	12–16g (7/16–9/16oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open country, usually near water

Like many swallows, the White-backed Swallow has a streamlined body, a short neck, a short broad bill, long pointed wings, short legs, and a forked tail. Found only on the island

continent of Australia, it stands out within its range because of its distinctive pied coloration.

The White-backed Swallow inhabits dry, open country throughout sub-tropical Australia. Its distribution is strongly linked to areas with suitable nesting sites, usually on sandy cliffs and riverbanks, and favourable breeding sites may encourage small colonies to develop. This swallow excavates nest burrows down to 60cm (23½in), the burrow ending in an enlarged chamber with a rudimentary nest of dried grass and leaves. Unlike some bank-nesting swallows, it seems to prefer natural breeding sites and has been slow to take advantage of artificial breeding sites.

### ADULT WHITE-BACKED SWALLOW



#### *Riparia riparia*

## Sand Martin

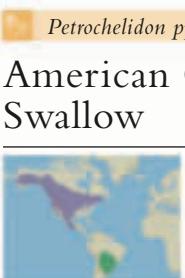
<b>LENGTH</b>	12cm (4½in)
<b>WEIGHT</b>	11–20g (3/8–11/16oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Lowland habitats near water

A common species throughout its range, the Sand Martin, or Collared Sand Martin, is one of the most widespread of the world's swallow species. It has a black bill, brown upperparts, white underparts, with a narrow brown band on the breast, and a slightly forked tail. Its choice of breeding sites is strongly linked to the availability of suitable nesting banks. In some areas, these are provided by erosion through natural

### ADULT AT NEST HOLE

river processes, but it has switched to artificial sites where floodplain management has taken place, mostly provided by the sand and gravel extraction industry. It breeds throughout temperate Eurasia and North America.


**Petrochelidon pyrrhonota**

## American Cliff Swallow



<b>LENGTH</b>	13cm (5in)
<b>WEIGHT</b>	18–25g (5½–7oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Open areas of farms and towns; also in mountainous areas

Similar to the more widespread Barn Swallow (opposite), the American Cliff Swallow has a short black bill, white forehead, and dark brown throat. A band of paler plumage at the nape separates the blue of the head and back, and it has white underparts with grey-brown flanks, blue-black wings, and a pale pink rump. However, the most notable characteristic of this

### ADULT AMERICAN CLIFF SWALLOW



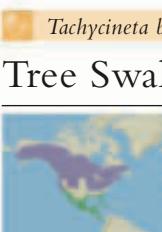
### MUD NESTS

Typically, the Cliff Swallow plasters its conical mud nests on vertical rockfaces, although most of these birds now nest on buildings. Each nest is a complex construction of mud pellets with a tubular entrance on one side. On natural rock surfaces, the nests are spaced at a discreet distance from one another and can sometimes number up to several thousand in a single colony.



swallow is the short, squared-off tail, which is completely overlapped by the wing feathers when the bird is at rest.

This species eats flying insects, catching them in flight, or occasionally, forages on the ground for berries. The American Cliff Swallow breeds in North America and has expanded its range from its natural rocky habitat in mountainous regions to farms and towns. Further expansion of its range has been facilitated by large-scale human constructions such as dams and bridges, which it uses as nesting sites, adapting remarkably well to the change in its environment. The majority of the breeding population is now found in association with human activity over much of its range. It spends the winter in South America, south of the Amazonian rainforest up to the eastern slopes of the Andes. Migrating birds have been recorded out at sea, on the Caribbean islands, and even as far south as Tierra del Fuego.


**Tachycineta bicolor**

## Tree Swallow



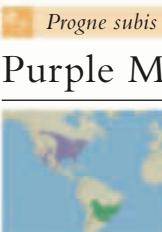
<b>LENGTH</b>	13cm (5in)
<b>WEIGHT</b>	16–25g (9/16–7/8oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Open or wooded areas, often near water

A short-tailed species, the Tree Swallow has black wings that overlap the tail when at rest. It has a white throat and chest, with the back varying from iridescent deep blue to greener colours around the wing margins.

Most of this swallow's nest sites are found close to water but occasionally in drier areas of the prairies. It shows a preference for natural nest sites such as tree cavities, although many birds now prefer to use artificial nest

### ADULT MALE



**Progne subis**

## Purple Martin



<b>LENGTH</b>	19cm (7½in)
<b>WEIGHT</b>	50–65g (1¾–2³/₈oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Open or semi-open areas, mostly near water

One of the largest swallows found in North America, the Purple Martin is uniformly dark and lacks the pale chest seen in many other swallow species. Its iridescent plumage glistens in various shades of blue, green, or purple. The Purple Martin has benefited from the provision of artificial nest boxes. It migrates to South America in the winter.

boxes, particularly on open farmland. Extremely territorial in behaviour, the male Tree Swallow has been known to eject juveniles from other nests nearby if the resident male is absent.

Nevertheless, this species is gregarious in migration and is often seen in large flocks outside the breeding season. The Tree Swallow mainly eats flying insects, but may also feed on spiders and crustaceans. In winter, this species will also eat berries.



**ADULT PURPLE MARTIN**


**Notiochelidon cyanoleuca**

## Blue-and-white Swallow



<b>LENGTH</b>	12cm (4½in)
<b>WEIGHT</b>	9–13g (1¹/₃₂–⁷/₁₆oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Open areas near water; often associated with human habitation

Similar to the Tree Swallow (above), the Blue-and-white Swallow has a more distinct fork to the tail in flight. However, it is easy to distinguish the two species because there is little, if any, overlap in their ranges. This swallow is found in the Andes and central South American pampas regions. The northern subspecies are resident but the migratory subspecies tend to move through mountainous areas rather than along coasts. Nesting takes place in small groups or in isolation, although large flocks form outside the breeding season.

**Hirundo neoxena****Welcome Swallow**

LENGTH	15cm (6in)
WEIGHT	12–17g (7/16–5/8oz)
MIGRATION	Partial migrant

**HABITAT** Mostly found close to water, including coastal caves

The Welcome Swallow of Australia is very similar to the Barn Swallow (right). However, its red facial markings extend onto the upper breast and there is no dark band separating this area of colour from the pale front. The Welcome Swallow extended its range into New Zealand during the 1950s due to its preference for artificial nest sites. There are also signs that the population of this species is increasing in the islands to the north of Australia. Nesting usually takes place in isolation or in small colonies, but the birds form communal flocks outside the breeding season.



ADULT MALE



MALE WIRE-TAILED SWALLOW

**Hirundo smithii****Wire-tailed Swallow**

LENGTH	14cm (5 1/2in)
WEIGHT	11–17g (3/8–5/8oz)
MIGRATION	Partial migrant

**HABITAT** Open areas such as grassland, usually near water

An elegant species, the Wire-tailed Swallow is notable for the long, wire-like tail feathers of the male, which gives the species its common name. It also has a striking chestnut cap, which contrasts with the unbroken bright blue of the back and wings.

The Wire-tailed Swallow is resident in much of equatorial Africa but is an irregular migrant on the Indian subcontinent and southeast Asia. Some breeding sites are found at altitudes of more than 2,000m (6,500ft) in Asia and up to 3,000m (10,000ft) in Africa. Pairs are usually solitary nesters. Most nests are now found on buildings.

**Delichon urbicum****Common House Martin**

LENGTH	13cm (5in)
WEIGHT	13–25g (7/16–7/8oz)
MIGRATION	Migrant

**HABITAT** Urban areas and open areas such as farmland

A small species, the Common House Martin has a uniformly blue back and dark wings, interrupted by a white rump. The birds are highly vocal around their nests and when feeding in large groups. Breeding birds are found through much of Europe, Asia, and North Africa. This species is vulnerable to extreme weather events, such as drought in sub-Saharan Africa. Other threats include the over-use of fungicides and pesticides on farmland, although the population as a whole is not endangered.

COMMON HOUSE MARTIN

**Hirundo rustica****Barn Swallow**

LENGTH	18cm (7in)
WEIGHT	14–25g (1/2–7/8oz)
MIGRATION	Migrant

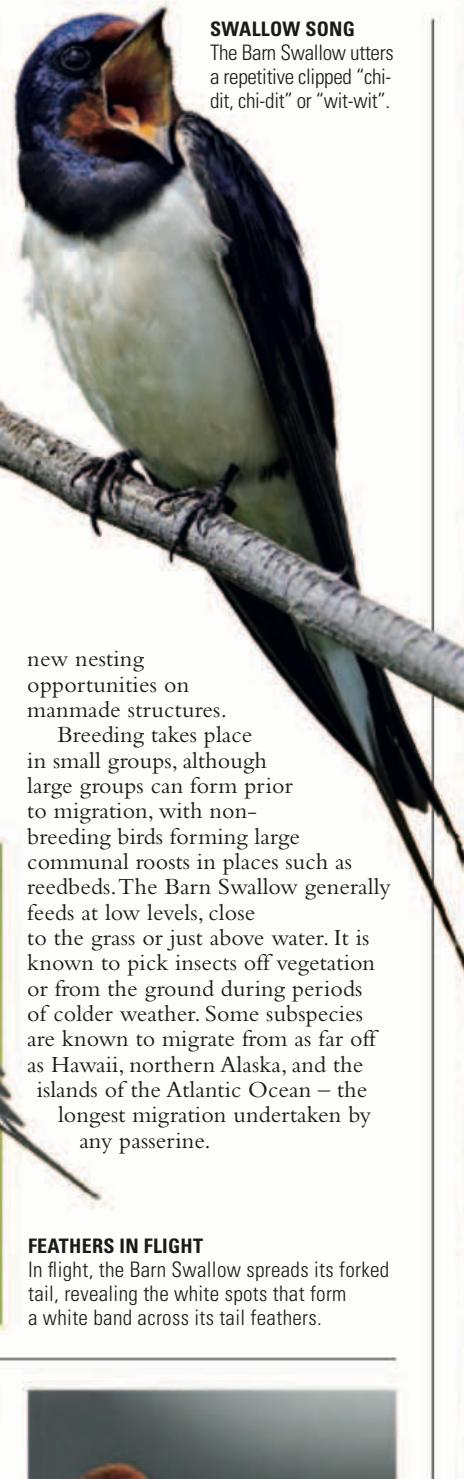
**HABITAT** Open farmland and savanna, especially near water; also urban areas

A distinctive species, the Barn Swallow has blue upperparts, with a band of blue extending beneath the throat. Its facial markings are chestnut-coloured. Long tail feathers are more pronounced in the male but can also be seen on the female. Some races have red or pink chests – instead of the white chest of most swallows – but all Barn Swallows have a dark throat-band.

The Barn Swallow population has declined in some parts of its range due to a reduction of land devoted to agriculture. However, this factor has been offset by the Barn Swallow's adaptation to

**SWALLOW SONG**

The Barn Swallow utters a repetitive clipped "chi-dit, chi-dit" or "wit-wit".



new nesting opportunities on manmade structures.

Breeding takes place in small groups, although large groups can form prior to migration, with non-breeding birds forming large communal roosts in places such as reedbeds. The Barn Swallow generally feeds at low levels, close to the grass or just above water. It is known to pick insects off vegetation or from the ground during periods of colder weather. Some subspecies are known to migrate from as far as Hawaii, northern Alaska, and the islands of the Atlantic Ocean – the longest migration undertaken by any passerine.

**FEATHERS IN FLIGHT**

In flight, the Barn Swallow spreads its forked tail, revealing the white spots that form a white band across its tail feathers.

**Cecropis cucullata****Greater Striped Swallow**

LENGTH	18–20cm (7–8in)
WEIGHT	15–20g (9/16–11/16oz)
MIGRATION	Migrant

**HABITAT** Open areas of mountainous regions; also suburban areas

The Greater Striped Swallow is a long-tailed species with a chestnut crown extending down to the nape of the neck. It has a pale red rump, but the most noticeable feature is its finely streaked chest. Nesting is usually in isolation and buildings or other manmade structures are sometimes used. The breeding season often stretches from August to March, usually with up to three broods, and about two months spent on nest construction.



MALE GREATER STRIPED SWALLOW

# LARKS

**ORDER** Passeriformes  
**FAMILY** Alaudidae  
**SPECIES** 92

farms and pastures, though many species are most at home in arid areas, including some of the world's most inhospitable deserts. Generally quite small, there is considerable variation in size within the family, with some species reaching a weight of up to 75g (2½oz). Larks have generally rather drab plumage – a mixture of pale browns and buffs, although a few species have areas of black. Their bills vary from long and thin to short and thick.

THESE BIRDS OF open country are well-represented in Europe, Africa, and Asia. In these regions they are often a familiar sight on



**SINGING ON THE WING**  
The Eurasian Skylark delivers its famous song as it ascends, hovers, and then gradually descends.



## GROUND NEST

All species of lark nest on the ground in well-concealed nests, although the number of eggs in a typical clutch varies between species.



## NESTING CAMOUFLAGE

The patterned plumage of the Horned Lark blends in with the background when the bird is on the nest.

## BEHAVIOUR

Larks are usually seen on the ground. Their generally streaky, brown plumage means that the birds are often difficult to pick out as they scurry along the ground, foraging for seeds and invertebrates, the main elements of their diet. Birds of this family are ground-nesters, often in natural grassland or areas of cultivation. The nest can vary from a shallow depression to the more elaborate domed structure built by the Clapper Lark. The preference of some species, such as the Eurasian Skylark, for farmland makes them vulnerable to the effects of intensive

agriculture, which in some areas has decimated lark populations. However, numbers of some species have actually benefited from agricultural development in the form of deforestation by increasing the area of their preferred habitat. Many larks are migrants or partial migrants, although some of the species that inhabit warm regions are sedentary.

*Mirafra apiata*

### Clapper Lark



**LENGTH** 12–15cm (4½–6in)  
**WEIGHT** 25–45g (1¾–1½oz)  
**MIGRATION** Non-migrant

**HABITAT** Well-vegetated areas, sometimes on rocks, and also in fallow fields



**ADULT CLAPPER LARK**

This lark is named for its wing-clapping flight-display, in which it flies up with a loud rattling of its wings and then dives whistling loudly. It may repeat this display every 15–30 seconds.

A solitary bird, the Clapper Lark forages for insects and seeds on the ground. It also nests on the ground, building a domed structure of grass and rootlets, with a side entrance. It breeds from October to February, after the rainy season. However, several aspects of this bird's nesting behaviour are poorly known, in spite of it being a common bird.

*Chersomanes albofasciata*

### Spike-heeled Lark



**LENGTH** 13cm (5in)  
**WEIGHT** 20–35g (1⅓–1⅓oz)  
**MIGRATION** Non-migrant

**HABITAT** Open areas, from highland grassland to lowland deserts and semi-deserts

A long-billed bird with an upright stance, the Spike-heeled Lark has orange-buff to white upperparts. Its back and wings may vary from very dark to a very pale sandy colour. Its tail

**MALE SPIKE-HEELED LARK**

has prominent white tips. The male and female are similar in their plumage. The female Spike-heeled Lark builds its nest on the ground, usually in a small shady bush. In some areas, breeding is co-operative, with birds attending each nest in threesomes, although this does not appear to influence the number of nests. The female usually lays 2–5 eggs, and the entire nesting period lasts for less than one month. Despite the general unobtrusiveness of this species, it falls prey to small mammals, such as mongooses, shrikes, and small falcons. These larks mob potential predators from the air, hovering and calling repeatedly.



**ADULT GREATER HOOPOE-LARK**

*Alaemon alaudipes*

### Greater Hoopoe-lark

**LENGTH** 19–23cm (7½–9in)  
**WEIGHT** 30–50g (1⅓–1⅔oz)  
**MIGRATION** Non-migrant

**HABITAT** Deserts and semi-deserts, often in almost wholly barren areas, typically on gravel plains

Taking its name from its long and slightly decurved bill, which resembles the Eurasian Hoopoe's (see p.312) bill, the long-legged Greater Hoopoe-lark is a common bird that feeds on insects, seeds, and small lizards. In spring, from dawn, when the desert is still cold, the male often engages in a dramatic "rolling" display, during which the white in its wings is revealed.

*Melanocorypha calandra*

## Calandra Lark



LENGTH	18–20cm (7–8in)
WEIGHT	45–75g (1½–2½oz)
MIGRATION	Partial migrant

**HABITAT** Open plains and steppes, semi-deserts and cultivated areas

The Calandra Lark is characterized by its heavy bill, white eyebrows, black markings on the sides of its neck, long broad wings, and short tail. These larks form large flocks, especially after the breeding season, but also nest in proximity to one



ADULT CALANDRA LARK

another. The male sings on the wing, displaying from great heights (almost invisible to the human eye). The female incubates the eggs, but the male also feeds the chicks.

*Alauda arvensis*

## Eurasian Skylark



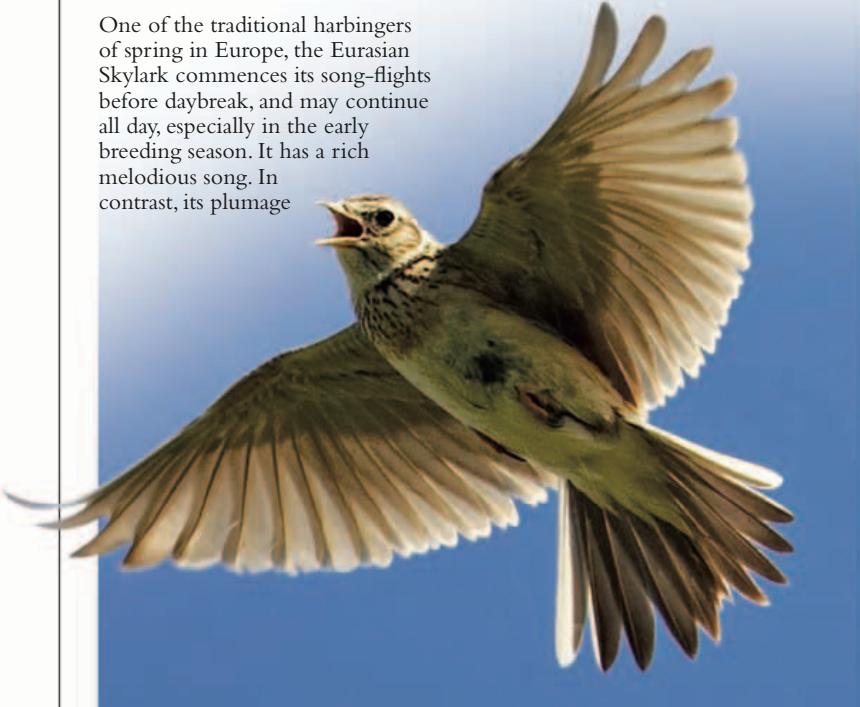
LENGTH	16–19cm (6½–7½in)
WEIGHT	25–50g (7/8–1¾oz)
MIGRATION	Partial migrant

**HABITAT** Mainly farmlands, but also occupies heaths, moors, meadows, and steppes, even forest clearings

One of the traditional harbingers of spring in Europe, the Eurasian Skylark commences its song-flights before daybreak, and may continue all day, especially in the early breeding season. It has a rich melodious song. In contrast, its plumage

looks rather similar to that of many other small larks. Like the Woodlark (right), this species switches from a mainly insectivorous diet in summer to a vegetarian one in winter. It takes food mainly on the ground, usually in pairs or alone. These larks may also form larger groups, numbering up to 1,000 in flocks mixed with other lark species, in autumn and winter.

ADULT EURASIAN SKYLARK



## HUMAN IMPACT

## AGRICULTURE

Once a very common bird, the Eurasian Skylark is now seen less often. Its population has declined massively, especially since the 1960s. This can largely be attributed to modern methods of intensive agriculture, which have reduced nesting opportunities and affected the food supplies of this species. This threat, combined with that of over-hunting in some areas, is putting the species at increased risk.

*Lullula arborea*

## Woodlark



LENGTH	14–15cm (5½–6in)
WEIGHT	25–35g (7/8–1¼oz)
MIGRATION	Partial migrant

**HABITAT** Variety of open areas, but prefers heaths, young plantations, and open woodland and scrub

The Woodlark's plumage is generally brown, with paler underparts and a streaked breast. The male and female look



ADULT AND CHICKS AT NEST

*Eremophila alpestris*

## Horned Lark



LENGTH	14–17cm (5½–6½in)
WEIGHT	30–40g (1⅓–1⅔oz)
MIGRATION	Migrant

**HABITAT** Barren land with very short vegetation, such as tundra and beaches



ADULT HORNED LARK

One of the most common birds in the lark family, the Horned Lark, like many of its relatives, displays much plumage variation across its wide range. The differences mainly involve the depth of the upperpart coloration, and the amount of yellow and black on the face. Like other larks, such variation is strongly related to the type of soils on which the different populations are found. The Horned Lark is the only lark species to have successfully colonized arctic and tundra habitats. In the breeding season it is regularly found at heights well over 5,000m (16,400ft) in the Himalayas.

very similar. The white eyebrows, which meet on the back of its neck and its rufous cheeks are among the subtle differences that distinguish this species from the more familiar, slightly larger, Eurasian Skylark (below left). The Woodlark forages on the ground, eating mainly small invertebrates during the nesting season, but vegetable matter becomes a far more important part of the diet in winter. During the breeding season, the male performs butterfly-like song-flights, while the female incubates the eggs. Although this species is not generally threatened by humans, its conservation is a concern in Europe.

*Galerida cristata*

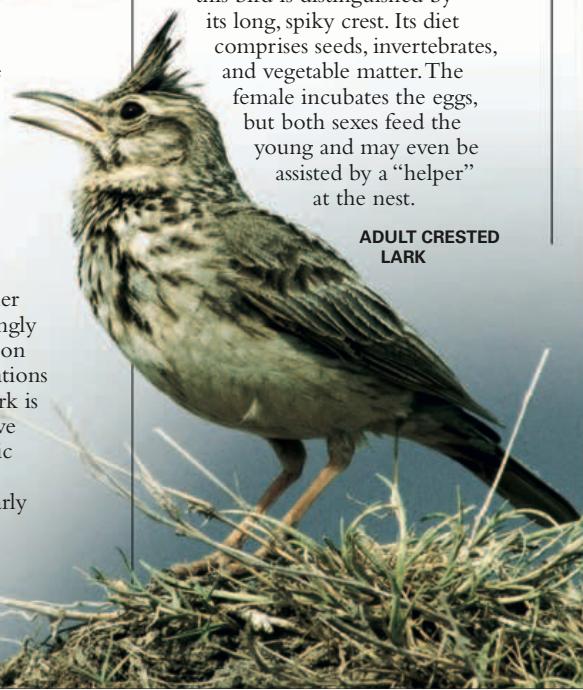
## Crested Lark



LENGTH	17–19cm (6½–7½in)
WEIGHT	35–50g (1¼–1¾oz)
MIGRATION	Non-migrant

**HABITAT** Farmland, dry plains with sparse cover, including bushes, warm semi-deserts, and steppes

Seen near roadsides in many areas, the Crested Lark is familiar in its range. Its plumage coloration can vary, chiefly due to the different soil types and humidity levels the bird encounters in its wide range. Compared to the Eurasian Skylark (above left) and the Woodlark (above), this bird is distinguished by its long, spiky crest. Its diet comprises seeds, invertebrates, and vegetable matter. The female incubates the eggs, but both sexes feed the young and may even be assisted by a "helper" at the nest.



ADULT CRESTED LARK

# CISTICOLAS

**ORDER** Passeriformes  
**FAMILY** Cisticolidae  
**SPECIES** 110

tiny birds with thin, pointed bills, relatively long tails, and a rather delicate appearance overall. Their plumage varies considerably. Grass and scrubland cisticolas are usually streaky and brown, and can be very difficult to identify – differences in calls are often the best way to distinguish these well-camouflaged birds. However, some of the forest-dwellers are more brightly coloured.

THIS WIDESPREAD FAMILY of passerines is found in southern Europe, Asia, Africa, and Australia. They are

## BEHAVIOUR

Cisticolas and their relatives feed mainly on small insects. Beetles and their larvae are thought to be one of the main items of prey, though weevils, grasshoppers, caterpillars, moths, flies, and spiders are all regularly consumed. Some cisticolas also visit flowers, possibly to feed on nectar, although it is also likely they are just there to catch the insects that have gathered at the spot.

### HEALTHY APPETITE

This Rattling Cisticola has caught itself a good meal – an insect that is relatively large in comparison to its own small size.

*Cisticola exilis*

### Golden-headed Cisticola



**LENGTH**  
10cm (4in)  
**WEIGHT**  
10g (3/8oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Wetland areas with dense vegetation

The Golden-headed Cisticola is named for the orange head that develops in the male during the breeding season. The female and non-breeding male are streaked brown, with a pale yellow nape and rump. The diet of this bird mainly consists of insects collected on the ground in dense grass, although it also eats some seeds.



#### MALE IN BREEDING PLUMAGE

It makes its nest by weaving grasses and other vegetation together, which has earned the bird the other common name of Tailorbird. The nest entrance is on the side but close to the top of the structure, which is usually lined with down. Both parents build the nest, but only the female incubates the eggs.

*Prinia gracilis*

### Graceful Prinia



**LENGTH**  
11cm (4 1/2in)  
**WEIGHT**  
7g (1/4oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Dense grassland and shrubs



#### ADULT GRACEFUL PRINIA

*Cisticola juncidis*

### Zitting Cisticola



**LENGTH**  
10cm (4in)  
**WEIGHT**  
10g (3/8oz)  
**MIGRATION**  
Partial migrant

**HABITAT** Tropical and subtropical grassland in dry and damp areas

#### ADULT ZITTING CISTICOLA

Also known as the Fan-tailed Cisticola, the Zitting Cisticola is named after the monotonous song that it utters when in flight. Both sexes are alike with heavily streaked upperparts and paler underparts. The nest is a woven cup-shaped structure and often has a canopy of leaves to camouflage it. The species has a wide distribution from southern Europe, Africa, across Asia, and northern Australia. It is difficult to distinguish the subspecies because there is little difference in plumage across the range.



*Apalis thoracica*

### Bar-throated Apalis



**LENGTH**  
13cm (5in)  
**WEIGHT**  
12g (7/16oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Mostly wooded areas, also found in gardens

Named for its black throat-band, the Bar-throated Apalis has a dark grey area surrounding its yellow eye and dark grey upperparts. The female of the species is less brightly coloured, often with a narrower throat-band. The Bar-throated Apalis mainly feeds on invertebrates taken on the ground, on the wing, or in foliage, although fruit and seeds are also eaten. It is monogamous and the oval-shaped nest is constructed in the branches of trees, with 2–4 eggs being laid. There are very few details available

The male and female Graceful Prinia are alike in plumage, the upperparts being grey, streaked with brown, while the underparts are plain. The bird has a short, black bill and the tail is long, with distinct alternating bands on the underside. It feeds on insects, often on the ground, and moves in pairs or in small groups. The woven nest is usually placed in a bush and 3–5 eggs are laid. The young are fed on insects. The global population of this species is widespread, with many subspecies, including one found in southern Turkey that is darker in plumage than the others.



#### ADULT BAR-THROATED APALIS

*Camaroptera brachyura*

## Green-backed Camaroptera



LENGTH

12cm (4½in)

WEIGHT

9–12g (1¹/₃–7/₁₆oz)

MIGRATION

Non-migrant

HABITAT Deciduous and evergreen forest with dense undergrowth

Also known as the Bleating Warbler, the Green-backed Camaroptera is predominantly grey in colour. Its most conspicuous features are its red eyes and its green back and wings. The male and female are similar in

plumage. This bird mainly feeds on insects as it forages in vegetation. It is a shy bird and more often heard than seen. It builds its nest by weaving grass and leaves together, using spider silk. The nest is usually placed in dense cover and 2–4 eggs are laid. The species is widespread throughout its range in sub-Saharan Africa.



ADULT GREEN-BACKED CAMAROPTERA

*Orthotomus sutorius*

## Common Tailorbird



LENGTH

13cm (5in)

WEIGHT

8g (⁹/₁₆oz)

MIGRATION

Non-migrant

HABITAT Open woodland, scrub, and gardens

common name of this bird comes from its nesting habit, which involves stitching leaves together to form a platform for the nest of woven grass.

## ADULT COMMON TAILORBIRD



An attractive species, the Common Tailorbird has bright green plumage and an elegant long tail that is held erect. Both sexes have a chestnut crown, but the female lacks the long central tail feathers that are a feature of the male in the breeding season. The bird mainly feeds on insects but fruit and seeds are also taken. The

## BULBULS

ORDER Passeriformes

FAMILY Pycnonotidae

SPECIES 118

BULBULS ARE FOUND throughout most of Africa, Asia, and the Middle East, and a number of introduced

species have also colonized urban areas in other parts of the world. They are medium-sized passerines with relatively long tails, short legs, rounded wings, and quite long, moderately powerful bills. Most species have rather dull plumage – mixtures of dark browns and olives – though there are exceptions. Many show a slight crest on top of the head. In some species, such as the Red-whiskered Bulbul, this crest is exaggerated, and is the bird's most noticeable feature.

## BEHAVIOUR

Many species of bulbul are common and conspicuous birds, and are consequently well known across Africa and Asia. Their calls are loud and repeatedly given, forming a near-continuous background noise in many parts of their range. Bulbuls are adaptable birds that are common in both rural and urban environments. Their behaviour is boisterous and they are relatively bold in relation to humans; some species show little fear as they scavenge around houses and people in search of stray scraps. In rural areas, some species of bulbul are considered agricultural pests as a result of their tendency to feed on fruit and other crops in large numbers.

## FAMILIAR VISITOR

The Common Bulbul is a familiar sight in most of Africa, as it has adapted to human settlements.

*Pycnonotus zeylanicus*

## Straw-headed Bulbul



LENGTH

29cm (11½in)

WEIGHT

60g (2¹/₄oz)

MIGRATION

Non-migrant

HABITAT Variety of wooded areas, close to water

RED LIST CATEGORY Vulnerable

*Pycnonotus jocosus*

## Red-whiskered Bulbul



LENGTH

20cm (8in)

WEIGHT

30g (1¹/₆oz)

MIGRATION

Non-migrant

HABITAT Lightly wooded areas, scrub, and farmland

and have dark brown upperparts with paler underparts. The main food is fruit, nectar, and insects and flocks of up to 50 birds can sometimes be seen feeding together. It produces 2 or 3 broods in the breeding season, and the nest is usually situated in a tree fork, often low down. Both adults incubate the eggs and feed the young. The Red-whiskered Bulbul is popular as a cage-bird but is not yet globally threatened.

The Red-whiskered Bulbul gets its common name from the red facial patch behind the eye. Its plumage also includes a crest on the black head, a dark collar, and a lower white facial patch and throat. The male and female are similar

ADULT RED-WHISKERED BULBUL



One of the larger species in the family of bulbuls, the Straw-headed Bulbul is named for its yellow head. The sexes are similar in plumage, which is mainly brown, with streaked underparts. There is a black stripe behind the bill. It feeds on fruit and insects and breeding takes place throughout the year. Two eggs are laid and three adults co-operatively feed the young. The species is classified as vulnerable due to habitat loss.

## HUMAN IMPACT

## TRADING IN CAGE-BIRDS

Popular as a cage-bird because of its attractive appearance and full-throated, cheerful song, the Red-whiskered Bulbul can often be seen in captivity in bird markets. As the species is captured in large numbers, this has led to a serious decline of the population and measures are being proposed for greater protection.



BIRDS FOR SALE

A common sight in Asia is a bird market with hundreds of caged birds; many species are threatened by trapping for the cage-bird trade.

*Andropadus importunus***Sombre Bulbul**

<b>LENGTH</b>	15–18cm (6–7in)
<b>WEIGHT</b>	20–40g (1 $\frac{1}{16}$ –1 $\frac{7}{16}$ oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Dense coastal scrub, inland along riverine bush, and forest up to 2,000m (6,500ft)

**ADULT SOMBRE BULBUL**

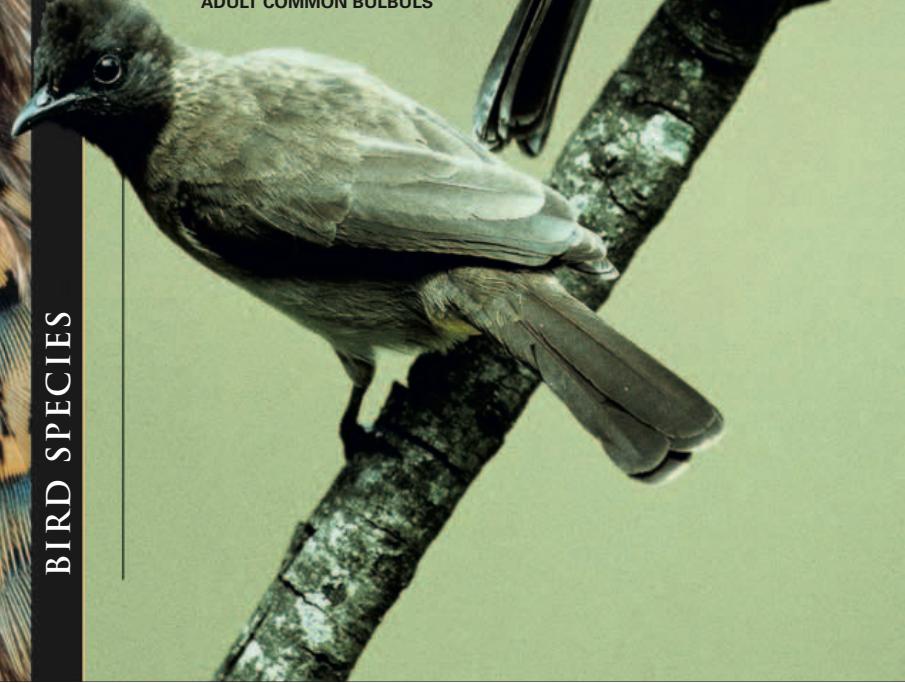
The Sombre Bulbul is plain, apart from the pale eye that stands out against its dark plumage. The sexes are alike in plumage and size, but there is a lot of variation in size in the four subspecies. It feeds mainly on fruit, including berries collected in the canopy or undergrowth, but also hawks for insects. Highly sedentary, ringed individuals have been recaptured in the same locality for up to 10 years.

*Pycnonotus barbatus***Common Bulbul**

<b>LENGTH</b>	15–20cm (6–8in)
<b>WEIGHT</b>	30–40g (1 $\frac{1}{16}$ –1 $\frac{7}{16}$ oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** All woodland types containing fruiting trees up to 2,300m (7,500ft)

Both sexes of the Common Bulbul are alike, though the female is generally smaller. Its 10 subspecies have varying intensities of black head markings. Some subspecies show yellow markings at the base and below the tail. Its main food is fruit, but it also feeds on nectar and invertebrates, such as termites and ants. Although not globally threatened, it has declined over some areas of its range due to heavy deforestation.

**ADULT COMMON BULBULS***Bernieria madagascariensis***Long-billed Bernieria**

<b>LENGTH</b>	17–20cm (6 $\frac{1}{2}$ –8in)
<b>WEIGHT</b>	20–40g (1 $\frac{1}{16}$ –1 $\frac{7}{16}$ oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Primary evergreen and dry deciduous forest to 1,300m (4,200ft)

Entirely confined to Madagascar, the Long-billed Bernieria has a long bill that is an adaptation for feeding primarily on invertebrates. Its plumage is very warbler-like – olive-green above and paler green on below. The species is not threatened but is less common in southwestern parts of its range.

*Bleda eximius***Green-tailed Bristlebill**

<b>LENGTH</b>	21–23cm (8 $\frac{1}{2}$ –9in)
<b>WEIGHT</b>	45–50g (1 $\frac{1}{8}$ –1 $\frac{3}{4}$ oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Lowland forest

**RED LIST CATEGORY** Vulnerable

The Green-tailed Bristlebill is named for the bristles at the base of its stocky bill. It is a striking bird, with bright yellow underparts. Its diet mostly comprises arthropods but small frogs are also taken close to the ground, rarely higher than 3m (10ft). The species is considered vulnerable due to its limited range and habitat preference.

*Hemixos castanonotus***Chestnut Bulbul**

<b>LENGTH</b>	22cm (8 $\frac{1}{2}$ in)
<b>WEIGHT</b>	Not known
<b>MIGRATION</b>	Non-migrant

**HABITAT** Broad-leaved evergreen forest.

A striking bird, the Chestnut Bulbul has a rich chestnut-coloured body and black cap, wings, and tail. Its diet is made up of berries and insects that are flushed from vegetation and chased in flight. Three eggs are laid in a nest built entirely by the female. Little is known about the incubation period or development of the young.

*Hypsipetes leucocephalus***Black Bulbul**

<b>LENGTH</b>	23–27cm (9–10 $\frac{1}{2}$ in)
<b>WEIGHT</b>	Not recorded
<b>MIGRATION</b>	Migrant

**HABITAT** Broad-leaved evergreen and mixed deciduous forest

This bulbul is sometimes called the Himalayan Black Bulbul to reflect its uncertain relationship with other Indian species. Ten subspecies have been recognized, each with varying amounts of white plumage on the head. Its diet comprises a wide range of berries, nectar, and invertebrates and is collected in large flocks, particularly outside the breeding season. In this season, the various subspecies often mix while feeding in the upper branches of tall trees. Some subspecies are sedentary but migration patterns in others are erratic, resembling nomadic movements that vary with changing food supplies.

**ADULT BLACK BULBUL**

# OLD WORLD WARBLERS

**ORDER** Passeriformes  
**FAMILY** Sylviidae  
**SPECIES** 280

browns being the predominate colour. There are exceptions, however, and a number of species have quite striking plumages. As their family name suggests, many species have attractive, warbling songs.

THESE SMALL, slender birds have thin bills and a variety of plumages. Most species are rather plain in appearance, with dull

Although warblers build a variety of different nests, most build open, cup-shaped structures from grasses, reeds, and small twigs. Other materials such as moss and leaves, and even artificial materials such as plastic or string are also woven into the nest by a number of species. Some nests are rather loose and precarious, whereas others resemble tightly knit bags. Many are suspended between plant or reed stems, but can also hang suspended from branches. Some species nest in natural crevices or holes in walls.



#### SHALLOW NEST

A Garden Warbler attends its brood in its nest, a typically skimpy, cup-shaped construction made from dry grasses and moss and lined with grass and hair.

#### HUMAN IMPACT

#### MIGRATION MONITORING

Around 80 species of Old World warblers undertake large-scale migrations (for example, that of Radde's Warbler between Southeast Asia and Siberia, see below). Ornithologists study these patterns of movement by trapping the birds and attaching small metal identification rings around their legs and then releasing them to continue their journey.



#### RADDE'S WARBLER "RINGED"

If this Radde's Warbler is recaptured, scientists will be able to gather information about its travels based on its number.

#### *Megalurus gramineus*

#### Little Grassbird



**LENGTH**  
13cm (5in)

**WEIGHT**  
14g (1/2oz)

**MIGRATION**  
Non-migrant

**HABITAT** Swamps and marshes



#### ADULT LITTLE GRASSBIRD

Another name for the Little Grassbird is the Striated Grassbird because of its streaked brown back. It feeds mostly on insects and other small invertebrates. It is solitary, always remaining in dense cover, and as a consequence, is difficult to see. Two subspecies are known, the western subspecies tending to be darker and more strongly streaked. The population in Tasmania is uniformly dark on the upper- and underparts. Nests have been found throughout the year. Birds of this species also take over the abandoned nests of other warblers.



#### MALE BROWN SONGLARK

#### *Cincloramphus cruralis*

#### Brown Songlark



**LENGTH**  
19–25cm (7½–10in)

**WEIGHT**  
30–75g (1⅓–2⅓oz)

**MIGRATION**  
Non-migrant

**HABITAT** Open plains, grassland, and savanna with few trees

The Brown Songlark is a plain bird with a long tail. The male is less strongly marked on the head and is significantly larger. The size difference is so great that when early specimens arrived in Europe, they were thought to belong to two separate species. It feeds mainly on insects and seeds collected from the ground. The breeding season lasts from September to February. The male performs a display flight and song. The nest is a simple hollow in the ground, lined with grass.

#### *Eremiornis carteri*

#### Spinifexbird



**LENGTH**  
15cm (6in)

**WEIGHT**  
12g (7/16oz)

**MIGRATION**  
Non-migrant

**HABITAT** Grassland, particularly along water courses

The Spinifexbird has a rich brown cap, golden brown streaked wings, and a long tail. Both sexes are alike. Its diet comprises a variety of insects and seeds collected in porcupine grass. This species flies weakly, with its tail drooping. It tends to be





ADULT CETTI'S WARBLER

*Cettia cetti*

## Cetti's Warbler



**LENGTH**  
14cm (5½in)

**WEIGHT**  
8–16g (⁹/₁₆–⁹/₁₆oz)

**MIGRATION**  
Partial migrant

**HABITAT** Reedbeds and denser trees by water, usually at low level

Nondescript in appearance, with its brown plumage and grey underparts, Cetti's Warbler is difficult to see. It has a darker eye stripe and broad tail, which is either cocked or flicked up and down. The male is slightly larger although there is considerable overlap in the size ranges of both sexes. The Cetti's Warbler song is explosive and metallic in character with rapidly delivered alternating notes. It forages in dense cover, feeding on insects, spiders, snails, and some seeds. Its nest is a deep cup of grass and leaves in vegetation and 3–5 eggs are laid.

*Sphenoeacus afer*

## Cape Grassbird

<b>LENGTH</b>	17–19cm (6½–7½in)
<b>WEIGHT</b>	30g (1⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Dry grassland in mountainous and coastal areas; fynbos (shrubland)

With its bright chestnut head, which contrasts with its striped chin, and its white underparts and wings streaked in combinations of grey and brown, the Cape Grassbird is an attractive species. Like most warblers, its main food is insects but seeds are also taken at certain times of the year. A shy bird, it is difficult to see. Nevertheless, it is extremely vocal, although its song is relatively simple for a member of the warbler family.

Found only in Cape Town, the Cape Grassbird is endemic to South Africa and inhabits a type of shrubland called "fynbos". It is one of many African warblers that has been the subject of molecular studies to determine the true family affinities of the various species. Other African species that are also called grassbirds are no longer considered to be closely related to the Cape Grassbird. Because of its limited geographical range and the non-migratory nature of its behaviour, the Cape Grassbird could be used as an indicator of the health of its environment.

ADULT CAPE GRASSBIRD

*Locustella naevia*

## Common Grasshopper Warbler



**LENGTH**  
13cm (5in)

**WEIGHT**  
11–15g (⁹/₈–⁹/₁₆oz)

**MIGRATION**  
Migrant

**HABITAT** Scrub, marshy areas, and artificial plantations

The Common Grasshopper Warbler is a green-brown bird flecked with darker colours on its upperparts and paler on the underparts. More likely to be heard than seen, this species is named after its reeling call that has been likened to that of a grasshopper or a fishing reel. The call is so high-pitched that it may be beyond the hearing range of some people. This nocturnal migrant may make very long individual flights when on the move.

COMMON GRASSHOPPER WARBLER

*Acrocephalus schoenobaenus*

## Sedge Warbler

<b>LENGTH</b>	13cm (5in)
<b>WEIGHT</b>	10–13g (³/₈–⁷/₁₆oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Reedbeds, cereal fields, and artificial plantations

A pale eyebrow stripe divides the dark crown and face of the Sedge Warbler. Its upperparts are a flat brown with the underparts shading from pale tan to white. Its loud song consists of a great deal of mimicry, and is usually delivered from a prominent plant, such as a reed. The Sedge Warbler is found throughout much of Eurasia from Scandinavia to west Asia and the Middle East. Wintering birds are found in sub-Saharan Africa. The birds cross the desert in a single flight in both directions. The Sahel region of Africa is an important feeding ground for birds preparing to cross the Sahara in spring.



ADULT SEDGE WARBLER

*Acrocephalus agricola*

## Paddyfield Warbler



LENGTH	13cm (5in)
WEIGHT	10g (3/8oz)
MIGRATION	Migrant

**HABITAT** Steppe grassland, shrubs near water, and damp agricultural land

A plain brown bird, the Paddyfield Warbler has a bold eyebrow stripe. Its bill is short with a dark tip. Its crest is raised and its tail is cocked almost always, which can be an aid to identification. It mainly feeds on insects. Although it sometimes feeds in the open, it tends to skulk in long grass and reeds, climbing stems of vegetation but often dropping back into cover. The Paddyfield Warbler lays 4 or 5 eggs in a nest in grass. Its song is smooth and soft and also includes mimicry, lacking the harsher rattling notes of many other similar species.



ADULT PADDYFIELD WARBLER

*Acrocephalus australis*

## Australian Reed Warbler



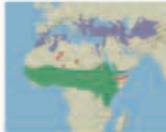
LENGTH	16cm (6 1/2in)
WEIGHT	18g (5/8oz)
MIGRATION	Non-migrant

**HABITAT** Mainly wet grassland and often in reedbeds

The Australian Reed Warbler is similar to other species in the warbler family, although its white throat is distinctive. The species is confined to Australia and is particularly notable for having been studied extensively. The Australian Reed Warbler is a suitable parasitic host for several cuckoo species. Adult birds are able to detect alien eggs by their weight and appearance. This bird is also known to build two types of nest: one is used as a demonstration or courtship structure and the other is a significantly different breeding nest.

*Iduna pallida*

## Olivaceous Warbler



LENGTH	13cm (5in)
WEIGHT	8–13g (5/16–7/16oz)
MIGRATION	Migrant

**HABITAT** Dry areas of scrub, but also in woodland and orchards close to water

purposeful manner, reaching and lunging towards food, such as insects and fruit. Its song, delivered from an exposed perch or in flight, is prolonged and includes repeated phrases and mimicry. The song flight also serves as a display, with the singing bird ascending vertically and changing direction to make a diagonal descent to a new perch.

*Acrocephalus scirpaceus*

## Eurasian Reed Warbler



LENGTH	13cm (5in)
WEIGHT	10–15g (3/8–9/16oz)
MIGRATION	Migrant

**HABITAT** Wetland areas, mainly reedbeds

The Eurasian Reed Warbler is a plain bird, with an unstreaked brown back and buff underparts. The male and female are identical, as with most warblers, but the juvenile has richer buff underparts. The dull colours of this warbler make it difficult to distinguish it visually from similar species. However, its loud song – a slow, chattering “jit-jit-jit” with whistles and a great deal of mimicry – is distinctive. The Eurasian Reed Warbler often delivers its call when moving through vegetation, rather than from a perch.

This bird is insectivorous, but will take other small food items, including seeds and berries. It lays 3–5 eggs and nests outside reedbeds tend to have a higher breeding success rate. It is a common host for cuckoos.



EURASIAN REED WARBLER SINGING

## GRASS NEST

A deep cup woven from grasses and anchored around reed stems, the nest of the Eurasian Reed Warbler is constructed over shallow water to protect it from predators. However, this is not enough protection from cuckoos, who watch out for warblers carrying nest material to a site and often check the stage of construction. The depth of the cup is an adaptation to prevent eggs and the young from being accidentally dislodged.

*Hippolais icterina*

## Icterine Warbler



LENGTH	13cm (5in)
WEIGHT	13g (7/16oz)
MIGRATION	Migrant

**HABITAT** Forest edges, orchards, and gardens

Broad-billed, slender, and square-tailed, the Icterine Warbler has plumage that varies between a colourful green to a more drab brown. The upperparts are darker and contrast with the pale underparts, which have yellow tones from the chin to the tail. Its song is melodious and prolonged, containing a great deal of repetition and mimicry and is usually delivered from a concealed place, rarely from an exposed perch. It feeds mainly on insects, catching them in flight in a similar way to flycatchers, or gleaning them from foliage. The species is found throughout much of continental Europe, including southern Scandinavia.



ICTERINE WARBLER SINGING

***Phylloscopus collybita***

**Common Chiffchaff**

**LENGTH**

11cm (4½in)

**WEIGHT**

6–9g (7/32–11/32oz)

**MIGRATION**

Partial migrant

**HABITAT** Wooded areas, but more open places outside the breeding season

**ADULT COMMON CHIFFCHAFF**

One of the earliest migrants, the Common Chiffchaff is named after its loud, even-paced song, a repetitive “chip-chap-chip-chap-chap-chup”, when it first appears from its wintering grounds. Its plumage is dull green or pale brown and varies between geographical subspecies. Several subspecies have been identified, although most are difficult to distinguish in the field other than by variations in calls. The species is insectivorous, taking insects and spiders from foliage. The male plays very little part in the breeding cycle, with nest-building, incubation, and care of the young undertaken by the female.

The species is insectivorous, taking insects and spiders from foliage. The male plays very little part in the breeding cycle, with nest-building, incubation, and care of the young undertaken by the female.

***Phylloscopus borealis***

**Arctic Warbler**

**LENGTH**

12cm (4½in)

**WEIGHT**

11g (3/8oz)

**MIGRATION**

Migrant

**HABITAT** Arctic and subarctic woodland and scrub

The Arctic Warbler is slightly duller coloured species than the similar Wood Warbler (above). It has pale yellow eyebrows extending beyond the eyes. Greyish green above and off-white below, it has a pale yellow bar across its wings.

**ADULT ARCTIC WARBLER**

The Arctic Warbler mainly feeds on insects collected in the tree canopy, although it also forages on the ground. The species is strongly territorial and small groups almost always consist of families. In the breeding season, a nest of dried grass is built by the female in dense cover, favouring mature birch forest, although some birds breed close to lakes. The female also incubates the eggs, usually up to seven in number, but both adults feed the brood. The young become independent at just two weeks as an adaptation to the short Arctic season. Arctic Warblers breed across northern Europe, northern Asia, and Alaska. The species has one of the longest migration routes of the warblers. The wintering grounds are in southeast Asia and the whole population winters in the same region.

***Phylloscopus sibilatrix***

**Wood Warbler**

**LENGTH**

13cm (5in)

**WEIGHT**

7–12g (1¼–1½oz)

**MIGRATION**

Migrant

**HABITAT** Deciduous woodland; broad-leaved woodland in the breeding season

**ADULT WOOD WARBLER**

***Phylloscopus ijimae***

**Ijima's Leaf Warbler**

**LENGTH**

10cm (4in)

**WEIGHT**

9g (1⅓oz)

**MIGRATION**

Migrant

**HABITAT** Evergreen forest, but also breeds in broad-leaved woodland

**RED LIST CATEGORY** Vulnerable

**ADULT IJIMA'S LEAF WARBLER**

Entirely confined to certain areas in the Japanese islands, this warbler has a long orange bill, a greenish grey crown, green upperparts, green wings and tail, and white underparts. The greatest threat to the species has occurred on its breeding grounds, where it is vulnerable to habitat clearance, introduced predators, and pesticides.

***Eremomela icteropygialis***

**Yellow-bellied Eremomela**

**LENGTH**

10cm (4in)

**WEIGHT**

7g (1/8oz)

**MIGRATION**

Non-migrant

**HABITAT** Woodland, forest edges, scrub, and gardens

Mainly grey across the head, back, and wings, the Yellow-bellied Eremomela has a dark eye-line and yellow underparts. It is an insectivorous species, collecting food in the tree canopy. Its nest is a deep cup, shaped from plant down and spider silk and it times its nesting to coincide with the rainy season. Both adults feed the young.

**ADULT YELLOW-BELLIED EREMOMELA**

trees, moving from tree to tree. These birds are mostly solitary or move around in pairs, but mixed-species flocks are also recorded. They are fairly common over most of their range, but are not found above 2,000m (6,500ft).

**ADULT NORTHERN CROMBEC**

**LENGTH**

8cm (3¼in)

**WEIGHT**

8g (5/16oz)

**MIGRATION**

Non-migrant

**HABITAT** Wooded areas, but also in scrub and gardens

A grey bird with a bold white eyebrow stripe and pale rufous underparts, the Northern Crombec has a very short tail, which gives it a rather stubby appearance. Its main diet consists of insects, which it gleans from the foliage of thorn

BIRD SPECIES

*Sylvia atricapilla*

## Eurasian Blackcap



LENGTH	13–15cm (5–6in)
WEIGHT	17g (½oz)
MIGRATION	Migrant

**HABITAT** Woodland, parks, and gardens.

"Blackcap", the common name of this species, refers to the characteristic black cap of the male, its black crown contrasting with its plain grey and brown plumage. Confusingly, the female has a brown cap and is sometimes mistaken for a separate species. The species mainly eats insects, but fruit and seeds are eaten during the winter. It is a short-distance migrant, breeding in much of Europe and wintering in southern Europe and North Africa.

MALE  
EURASIAN  
BLACKCAP

MALE COMMON WHITETHROAT

*Sylvia communis*Common  
Whitethroat

LENGTH	13–15cm (5–6in)
WEIGHT	15g (½oz)
MIGRATION	Migrant

**HABITAT** Low hedges, scrub, and woodland edges

The male Common Whitethroat has a distinctive combination of colours in its plumage. It has a slate-grey head in contrast to the white throat (and which gives the species its common name), dark brown back and wings, and a pink hue on its pale undersides. The female differs in that it has a dull brown head. The song of this species is scratchy and grating, but it also gives a monotonous call. It picks insects from foliage and also eats berries and some seeds. Its nest, a small cup made from grass and stems, is constructed in low-growing vegetation. The species breeds in much of Europe and western Asia, wintering in Africa, Arabia, and India.

*Sylvia rueppelli*

## Rüppell's Warbler



LENGTH	13cm (5in)
WEIGHT	11g (½oz)
MIGRATION	Migrant

**HABITAT** Dry shrub and open areasADULT RÜPPELL'S  
WARBLER

Rüppell's Warbler is one of a number of similar warbler species characterized by a black head and slate-grey body. However, Rueppell's Warbler is distinct in having a white stripe dividing its dark grey face from the black throat. The female is less striking but, like the male, has distinctly red eyes. The species breeds in Europe, where it is a summer visitor to Greece and Turkey from its wintering quarters in northeast Africa. Insects form the main diet. It is a bird of Mediterranean maquis, or dry scrub.

The total population may be as high as half a million pairs; the species is not globally threatened despite hunting pressures on other species in the region.

*Sylvia nisoria*

## Barred Warbler



LENGTH	15cm (6in)
WEIGHT	25g (1oz)
MIGRATION	Migrant

**HABITAT** Open areas containing scrub and bushes

A series of dark bars cross the pale grey chest of the Barred Warbler, which has a dark grey back and wings. Its yellow eye is accentuated by a darker area around the face. The female has less distinct bars, while the grey-brown juvenile does not have any.



MALE BARRED WARBLER FEEDING ON INSECT

*Sylvia undata*

## Dartford Warbler



LENGTH	13cm (5in)
WEIGHT	11g (½oz)
MIGRATION	Partial migrant

**HABITAT** Heathland and other areas of low-growing vegetation

Named after a part of the British Isles where the bird was first described, the Dartford Warbler, ironically, almost died out in that area in the 1960s. The male is dark grey on the upperparts and a deep chestnut to red colour from the throat to belly. The female and juvenile have less contrasting colours. Although it is difficult to see, the male appears briefly on top of vegetation when singing. It often builds a courtship nest, but the main structure is built by the female. The species is not globally threatened, but is vulnerable to habitat loss.

## MALE DARTFORD WARBLER



# BABBLERS AND RELATIVES

**ORDER** Passeriformes

**FAMILY** Timaliidae

**SPECIES** 273

debated: the family has in the past been grouped with chats and flycatchers (see p.440), and some species have been considered as Old World Warblers (see p.413) or thrushes (see p.436).

## ANATOMY

Babblers are quite varied in size with species ranging from small wren-sized birds up to others as big as small crows. Nearly all have large, strong legs and many have stout bills. Their wings tend to be short, rounded, and held close to the body. The body plumage of most species is loose and fluffy. Most babblers are muted shades of brown and grey and there is usually little difference between the sexes in size or plumage. Unlike most passerines, juveniles do not have a markedly different plumage than adults.

### LAUGHINGTHRUSH

The Streaked Laughingthrush uses a wide variety of calls to communicate with other individuals.



### *Illadopsis rufipennis*

#### Pale-breasted Illadopsis



LENGTH	15cm (6in)
WEIGHT	18–30g (5/8–1 1/16oz)
MIGRATION	Non-migrant

**HABITAT** Undergrowth in forest, coastal thickets, cocoa plantations at 500–2,500m (1,700–8,300ft)

The Pale-breasted Illadopsis belongs to a small genus of African babblers that inhabit low undergrowth. This species is often only detected by its call, a series of ascending whistled notes. There are few birds that conceal themselves more effectively or are more drab in plumage than this African babbler and its close relatives.

Mostly active at dawn and dusk, the Pale-breasted Illadopsis moves in pairs or small parties, foraging on or close to the ground, turning over dead leaves and debris in search of small insects, crickets, woodlice, spiders, and molluscs. It also joins flocks of other birds, following driver ant columns, which flush out potential prey. In the breeding season, it builds a compact, deep, cup-shaped nest on the ground, well hidden among leaves or in a small shrub or the crown of a tree-fern.

The bird lays two eggs, and the female incubates the eggs for 14 days.

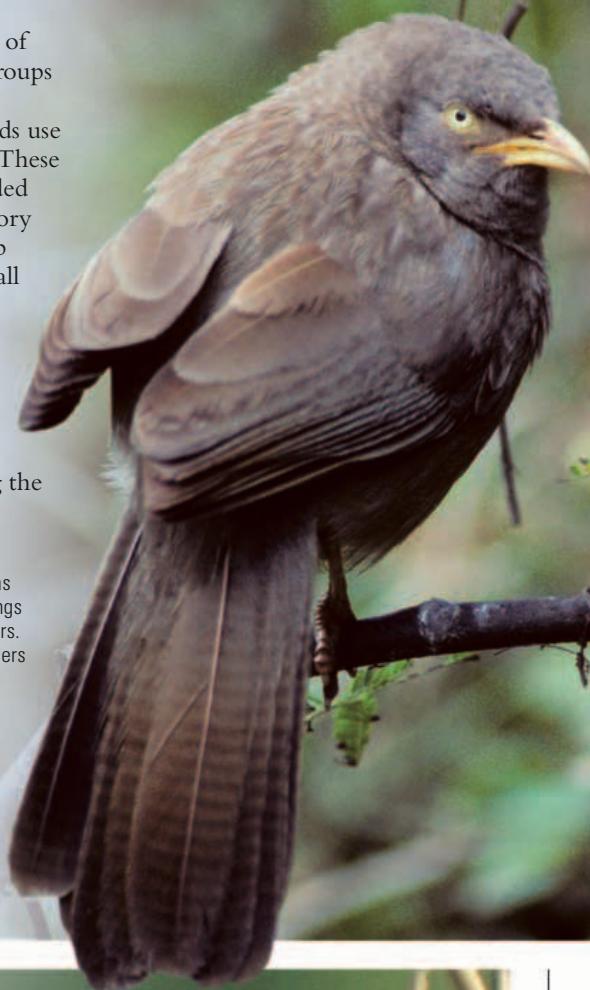
THIS IS ONE OF THE largest and most varied passerine families. Its relationship to other families is still being

## BEHAVIOUR

Among the most social and gregarious of birds, babblers usually occur in small groups of 3–30 individuals. The family's name comes from the many vocalizations birds use to maintain contact with each other. These groups tend to stay together for extended periods of time and defend their territory against other groups of babblers. Group members roost together at night in small trees and shrubs and they often preen each other. The individuals in roosting groups are so close that the birds are usually in physical contact with each other. Many babblers breed cooperatively, with the non-breeding birds assisting the parents in incubating the eggs and feeding the young.

### WING SHAPE

The Jungle Babbler has the short, rounded wings typical of most babblers. A few migratory babblers have longer wings.



### *Pomatorhinus erythrogenys*

#### Rusty-cheeked Scimitar-Babbler



LENGTH	22–26cm (9–10in)
WEIGHT	60–70g (2 1/8–2 1/2oz)
MIGRATION	Non-migrant

**HABITAT** Scrub in open forest, bush-clad hillsides, bushes bordering fields, and abandoned cultivation

Distinguished by its rufous-cheeked face, sides, and vent, the Rusty-cheeked Scimitar-Babbler has a pale bill and eyes, olive-brown upperparts, and an unspotted breast. The bird's curved bill helps it to probe into cracks and crevices in bamboo and tree branches.

It lives in pairs or small groups, and feeds on insects, larvae, and chrysalises, as well as seeds and berries. A pair sings a duet, with the male uttering a melodious "whi-u", followed by the female's "u", the combined "whi-u-u" sounding like only one bird is calling. The large, dome-shaped nest is placed on the ground or among low vegetation and 2–4 eggs are laid.

### ADULT RUSTY-CHEEKED SCIMITAR-BABBLER



*Stachyris ruficeps*

## Rufous-capped Babbler

**LENGTH**

12cm (4½in)

**WEIGHT**

7–12g (1¼–7/16oz)

**MIGRATION**

Non-migrant

**HABITAT** Understorey of broad-leaved forest and secondary growth at 460–2,900m (1,500–9,600ft)

ADULT WRENTIT

*Chamaea fasciata*

## Wrentit

**LENGTH**

14–16cm (5½–6½in)

**WEIGHT**

14g (1/2oz)

**MIGRATION**

Non-migrant

**HABITAT** Dense brushy areas, thickets along streams or on moist slopes, dense shrubs mixed with trees

ADULT RUFOUS-CAPPED BABBLER

*Leiothrix argentea*

## Silver-eared Leiothrix

**LENGTH**

18cm (7in)

**WEIGHT**

20–30g (1⅓–1⅓oz)

**MIGRATION**

Non-migrant

**HABITAT** Broad-leaved evergreen forest, pine forest, and tea plantations at 175–2,000m (600–6,600ft)*Minla cyanouroptera*

## Blue-winged Minla

**LENGTH**

14–16cm (5½–6½in)

**WEIGHT**

14–30g (1½–1⅓oz)

**MIGRATION**

Non-migrant

**HABITAT** Bushy growth and broad-leaved evergreen, pine, and mixed forest at 250–3,000m (800–10,000ft)

ADULT BLUE-WINGED MINLA



ADULT SILVER-EARED LEIOTHRUX

One of the most strikingly marked babblers, the Silver-eared Leiothrix has a yellow bill, a black head with contrasting silvery ear feathers, red and yellow wing patches, yellow legs, and a dark grey tail. Different subspecies show varying amounts of red on the neck and throat and yellow on the forehead. It has an extended, descending song and is arboreal, travelling through bushy and mid-storey vegetation in small flocks.

*Turdoides caudata*

## Common Babbler

**LENGTH**

20–26cm (8–10in)

**WEIGHT**

30–40g (1⅓–1⅔oz)

**MIGRATION**

Non-migrant

**HABITAT** Semi-desert, sandy floodplains with tamarisk clumps at 1,200m (4,000ft)

Slim, with a white throat, streaked brown upperparts and breast, and a dark graduated tail, the Common Babbler is a gregarious and noisy bird. It lives in flocks of 6–20 all year round and hops on the ground with a bouncing gait, scuttling about under vegetation. It flies low, gliding between rapid flaps of the wings. It feeds on insects, grain, berries, and also nectar. Its nest is a small, deep cup with thick walls, where it lays 3–5 eggs.

*Garrulax pectoralis*

## Greater-necklaced Laughingthrush

**LENGTH**

27–35cm (10½–14in)

**WEIGHT**

100–175g (3½–6oz)

**MIGRATION**

Non-migrant

**HABITAT** Mixed deciduous, broadleaved, and coniferous forest; bamboo; 75–1,850m (250–6,100ft)

A vocal bird, the Greater-necklaced Laughingthrush is medium-sized, with short, rounded wings and strong legs. It has brown upperparts, a broad black breast-band, deep orange underparts, and a floppy tail. It is usually found in flocks and forages through leaf-litter and low vegetation for insects. Its nest, placed on a bush or low tree, is cup-shaped and bulky.

ADULT GREATER-NECKLACED LAUGHINGTHRUSH

*Minla strigula*

## Bar-throated Minla

**LENGTH**

16–18.5cm (6½–7½in)

**WEIGHT**

14–24g (1½–7/16oz)

**MIGRATION**

Non-migrant

**HABITAT** Broad-leaved evergreen, coniferous, and open forest at 1,300–3,750m (4,300–12,400ft)

ADULT BAR-THROATED MINLA

The Bar-throated Minla has a high-domed chestnut crown, olive brown upperparts, black, white, and chestnut-patterned wings, and a chestnut-centred black tail with yellow edgings. It is an arboreal species that travels in mixed-species feeding flocks, foraging on moss- and lichen-covered branches in search of beetles, caterpillars, and other insects, as well as berries, seeds, and nectar from rhododendron flowers.

*Alcippe castaneiceps*

## Rufous-winged Fulvettta



<b>LENGTH</b>	8–10cm (3½–4in)
<b>WEIGHT</b>	13g (⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Broad-leaved evergreen forest, secondary growth, and bamboo

A distinctive olive-coloured fulvettta, the Rufous-winged Fulvettta has a streaked chestnut crown, long white eyebrow, black eye-stripe, and largely rufous wings. Typically for a fulvettta, it is most often encountered in large active flocks of up to 30 birds, which forage in forests, often joining mixed-species feeding flocks. It feeds by clinging to moss- and lichen-covered trunks while searching for food items, cheeping repeatedly all the while. It also has a three-note song.



ADULT RUFOUS-WINGED FULVETTA

*Heterophasia auricularis*

## White-eared Sibia



<b>LENGTH</b>	23cm (9in)
<b>WEIGHT</b>	35g (1¼oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Mid-elevation natural broad-leaved forest at 1,200–3,000m (4,000–10,000ft)

Found only on the island of Taiwan, the White-eared Sibia is distinguishable by the white blaze across its face that extends into long plumes projecting from the ear feathers. Its throat, breast, and upper back are grey. Its underparts are pinkish cinnamon, with an orange-rufous rump. It is largely arboreal and small flocks sometimes gather to feed in fruiting and flowering trees. The White-eared Sibia is common and easy to observe in the middle to upper levels of mid-elevation broad-leaved forests. During the winter, it may occur at lower altitudes.



ADULT WHITE-EARED SIBIA

*Yuhina castaniceps*

## Striated Yuhina



<b>LENGTH</b>	12cm (4½in)
<b>WEIGHT</b>	12g (⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Broad-leaved evergreen forest, forest edges, secondary growth, and scrub

A small babbler, the Striated Yuhina has prominent chestnut cheeks and barely discernible narrow, white streaks on its brown upperparts. It has a short crested crown, which is either chestnut or grey, depending on the subspecies. The Striated Yuhina has a smaller crest than other yuhinas, and is the only one to show white on its tail. As indicated by its alternative name, White-browed Yuhina, it has a short white eyebrow. There is some geographical variation in the plumage of this species throughout its range, but this is largely restricted to the colour of the crown. This yuhina is found in hill and mountainous forests from India into southern China and southeast Asia.

Like many other yuhinas, the Striated Yuhina is often encountered in large, noisy, active groups within mixed-species flocks. It gleans insects from the middle storey of forests or feeds on fruit and nectar.



MALE BEARDED REEDLING

*Panurus biarmicus*

## Bearded Reedling



<b>LENGTH</b>	13cm (5in)
<b>WEIGHT</b>	12–18g (⅔–5¾oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Wetlands, especially reedbeds and other emergent vegetation

A small, short-winged, long-tailed babbler, the Bearded Reedling has a stubby bill and orange-brown plumage, the spectacular black moustache of the adult male giving rise to the common name of the species. It inhabits dense reedbeds and often calls out in a metallic “ping” or in a loud, ringing chorus. During the autumn, the species gathers in small flocks, which depart from the breeding grounds noisily during the day.

in undergrowth on insects, fruit, and seeds. It constructs a deep bowl-shaped nest and 3–5 eggs are laid. Its call is a very soft chirping. The Vinous-throated Parrotbill is found in East Asia, occurring in China, North and South Korea, eastern Russia, and northern Vietnam.



ADULT VINOUS-THROATED PARROTBILL

*Paradoxornis webbianus*

## Vinous-throated Parrotbill



<b>LENGTH</b>	11–13cm (4½–5in)
<b>WEIGHT</b>	11g (⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Scrub, grassland, and bamboo thickets

A typical small parrotbill, the Vinous-throated Parrotbill has a stubby bill and long tail. The plumage is muted, with brown tones predominating, but the bird has a striking pinkish brown face and a brilliant pale pink, faintly streaked throat and upper breast. Like other parrotbills, it is often found in very active, small flocks that feed low

*Chaetops frenatus*

## Cape Rockjumper

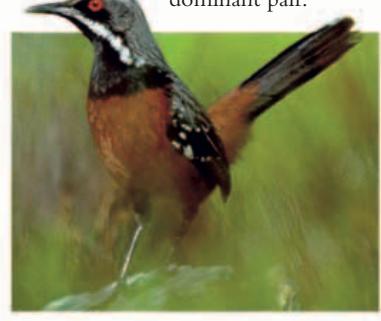


<b>LENGTH</b>	23–25cm (9–10in)
<b>WEIGHT</b>	50–60g (1¾–2¼oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rocky slopes and scree in upland areas

One of the most enigmatic of the African birds, the Cape Rockjumper’s classification has been the cause of great debate. It is currently included within the babbler family, but was, until recently, considered to be a thrush. The male has a dark grey head and a broad white moustache. Its back and wings are dark grey and the underparts and rump are rufous red. It has a long, black tail. The female and

juvenile have a duller head pattern, a paler grey head, upperparts, and wings, an orange rump, and buff underparts. The Cape Rockjumper is found only in South Africa, where it is restricted to rocky mountain slopes. It occurs in small family groups, in which the young are reared by a dominant pair.



MALE CAPE ROCKJUMPER

# WHITE-EYES

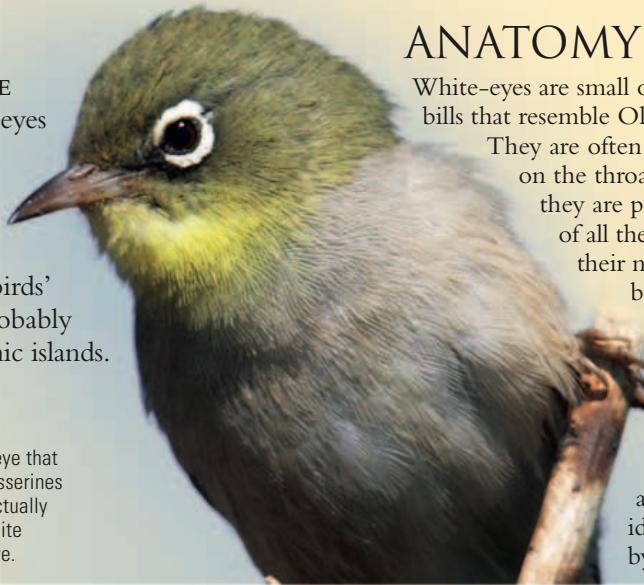
**ORDER** Passeriformes  
**FAMILY** Zosteropidae  
**SPECIES** 95

across southern Asia, and to many islands in the Pacific. Most species are non-migratory, but the birds' tendency to congregate in groups and wander probably explains the family's occurrence on so many oceanic islands. In the Pacific, many islands have endemic species and subspecies of white-eyes. In the 1850s, the Silvereye made the jump from Tasmania to New Zealand, where it is now common.

**WIDESPREAD IN THE OLD WORLD**, white-eyes are found from sub-Saharan Africa and its offshore islands,

## TYPICAL WHITE EYE

The distinctive white eye that gives this family of passerines its common name is actually formed by a ring of white feathers around the eye.



## ANATOMY

White-eyes are small olive-green birds with pointed bills that resemble Old World warblers (see p. 413).

They are often yellow underneath, particularly on the throat. In structure and appearance, they are probably the most homogeneous of all the passerine families. Contrary to their name, most species have dark eyes, but nearly all species have rings of white feathers around the eye.

This white ring, usually broken at the lores, is very prominent in some species, and absent in a few island species. The similarity in appearance often makes identification difficult except by range and voice.

*Zosterops pallidus*

### Cape White-eye



**LENGTH** 12cm (4½in)

**WEIGHT** 11g (½oz)

**MIGRATION** Non-migrant

**HABITAT** Woodland, forest, plantations, scrub, and gardens



ADULT CAPE WHITE-EYE

In common with nearly all the members of the white-eye family, the most striking feature of the Cape White-eye is its very obvious white eye-ring. It is also similar to many of the world's white eyes in its plumage, with its yellow throat, the black patch around its eye, green upperparts, grey breast and belly, and yellow rump. Within its range in southern Africa it is, however, easily distinguished from its relatives. The male and the female are alike and the juvenile resembles

*Zosterops japonicus*

### Japanese White-eye



**LENGTH** 10–12cm (4–4½in)

**WEIGHT** 11g (½oz)

**MIGRATION** Partial migrant

**HABITAT** Well-wooded areas, including gardens, parks, and cultivated land

The Japanese White-eye has a yellow throat and chin, and its cap, back, and tail are olive-green. Like other members of the family, the Japanese

#### PAIR OF JAPANESE WHITE-EYES



*Zosterops montanus*

### Mountain White-eye



**LENGTH** 12cm (4½in)

**WEIGHT** 11g (½oz)

**MIGRATION** Non-migrant

**HABITAT** Montane forest, forest edges, secondary growth, and wooded cultivation

With a plumage similar to many of the white-eyes, the Mountain White-eye is best identified by its distribution and its call. This species has a curious distribution, being found in an arc from the Philippines through the islands of Indonesia to Sumatra, without occurring on the neighbouring island of Borneo. It is found in well-wooded mountainous habitats and tends to feed in the upper levels of trees. Like many white eyes, the Mountain White-eye is



MOUNTAIN WHITE-EYE

gregarious and travels in large, noisy flocks that often form the core of even larger mixed-species feeding flocks. These huge flocks, or "bird-waves", are occasionally encountered in forests throughout the tropics.

## SEASONAL FEEDING

The diet of the Japanese White-eye changes during the year, according to seasonal abundance. In summer, it consists of insects gleaned from shrubs and low trees; in the autumn, berries and small fruit are favoured; and in winter and early spring, blossoms, particularly of camellia and cherry trees, are eaten.



FEEDING ON NECTAR

Shown above is a Japanese White-eye feeding on the nectar of a flower of an African Tulip tree.

*Zosterops palpebrosus*

### Oriental White-eye



**LENGTH** 9cm (3½in)

**WEIGHT** 9g (⅓oz)

**MIGRATION** Non-migrant

**HABITAT** Well-wooded habitats, including gardens and mangroves

Notable among a homogenous family for its small size, the Oriental White-eye is a tiny golden-olive bird. It has a broad white eye-ring, bright yellow throat and vent, and silvery grey breast and belly. Plumage variations occur throughout its range. The Oriental White-eye has a huge range, occurring from Afghanistan, through India and China, Thailand, Malaysia, and into eastern Indonesia. This obvious geographical variation is likely to attract the attention of taxonomists and many of the subspecies may be elevated to full species status.



ADULT SILVEREYE FEEDING

*Zosterops lateralis***Silvereye**

**LENGTH**  
9.5–12cm (3½–4½in)

**WEIGHT**  
13g (½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Wide variety of wooded habitats, including natural woodland, orchards, and parks

Named for the white ring surrounding its dark eye, the Silvereye has a dark green back and pale undersides. It mainly feeds on fruit, but insects and nectar also form part of its diet. The species is mostly solitary or forages in small flocks, but larger flocks have been known outside the breeding season, which stretches from August to February. It constructs a neat nest of grass and hair and lays 2 or 3 eggs. The Silvereye usually has a single brood every year, but it can make adjustments when conditions are favourable, producing up to three broods in some years. Although not migratory, there is some movement of the birds from the southern part of its range in autumn, with the birds returning in late winter.

*Woodfordia superciliosa***Bare-eyed White-eye**

<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	Not recorded
<b>MIGRATION</b>	Non-migrant

**HABITAT** Primary forest, forest edges, and secondary growth

A colourful species, the Bare-eyed White-eye has olive-green upperparts and a paler breast and belly. The face is black, emphasized by a white border. The species is endemic to Rennell Island in the Solomon Isles, but is common and widespread within its limited range. It mainly feeds on insects, but also eats some small fruit in the tree canopy or in the open.

*Chlorocarhis emiliae***Mountain Blackeye**

<b>LENGTH</b>	12cm (4½in)
<b>WEIGHT</b>	Not recorded
<b>MIGRATION</b>	Non-migrant

**HABITAT** Mountain scrub between 1,600–3,600m (5,200–12,000ft)

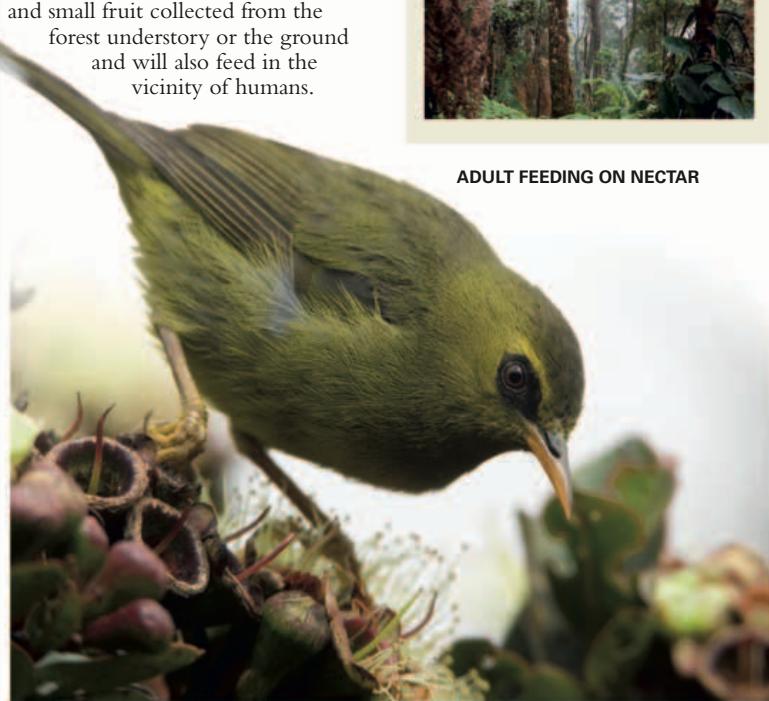
As the common name suggests, the Mountain Blackeye lacks a white eyering, even though it is part of the white-eye family. It has a pale yellow bill and its plumage is a uniform olive-green colour. It feeds on insects and small fruit collected from the forest understorey or the ground and will also feed in the vicinity of humans.

**GREAT SITES****MOUNT KINABALU NATIONAL PARK**

Set up in 1964, this National Park on the island of Borneo is important as it preserves montane habitats. The Mountain Blackeye has been studied here and found to be an important pollinator of rhododendrons, although it sometimes raids nectar from the base of the flowers.



ADULT FEEDING ON NECTAR

*Lophozosterops dohertyi***Crested Ibon**

<b>LENGTH</b>	12cm (4½in)
<b>WEIGHT</b>	Not recorded
<b>MIGRATION</b>	Non-migrant

**HABITAT** Primary forest up to 1,400m (4,500ft)

This species derives its name from its inconspicuous grey crest. The Crested Ibon has a white eye-stripe and the undersides to its face are bright yellow. The birds are mostly seen in pairs but occasionally form feeding flocks with other birds. It generally feeds in the understorey or in dense shrubs and is so quiet when feeding that it is often overlooked.

**FAIRY-BLUEBIRDS****ORDER** Passeriformes**FAMILY** Irenidae**SPECIES** 2

quietly. They eat mainly fruit, especially wild figs, and gather to feast in the crown of fruiting trees in parties of up to ten birds, often with other fruit-eating species. They also gather nectar from tree blossom, and eat a few insects. Fairy-bluebirds used to be grouped with another family unique to southern and southeast Asia – the leafbirds (see p.448).

**BREEDING PAIR**

Only the female fairy-bluebird (left in this picture) builds the nest, but both sexes feed the 2 or 3 young.

*Irena puella***Asian Fairy-bluebird**

<b>LENGTH</b>	24–27cm (9½–10½in)
<b>WEIGHT</b>	65g (2½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Broad-leaved evergreen forest

The male Asian Fairy-bluebird shows a combination of dark and bright blue plumage that has an iridescent quality. The eye is red against the dark face. The female is a dull blue-green or purple. The main diet is fruit and nectar, but a few insects are also taken. This species is particularly fond of figs, with large flocks gathering on fruiting fig trees. It feeds mainly in the canopy, with some foraging at lower levels. The birds split into pairs during the breeding season and a flimsy platform is built in a tree fork. Two or three eggs are laid, and the young are exclusively fed on insects. The species is not migratory, but there are movements to areas where fruit becomes available.

MALE ASIAN FAIRY-BLUEBIRD



# GOLDCRESTS

**ORDER** Passeriformes  
**FAMILY** Regulidae  
**SPECIES** 6

tiny birds live in the forests of North America, Europe, and Asia, especially the coniferous forests of the taiga zone in the far north and in highland regions further south. They are olive-green above and greyish-buff below, often with prominent black or white stripes on the face. Males have a bright red or yellow blaze through their crown, which is not always visible but is flared like a crest during their courtship display. This feature gives the family its name, and a duller version is also present in the females of some species.

THIS FAMILY contains two species of kinglet and four species of "crest" – including the Goldcrest itself. These



## *Regulus regulus*

### Goldcrest



**LENGTH**  
9cm (3½in)  
**WEIGHT**  
5–7g (⅓–⅔oz)  
**MIGRATION**  
Partial migrant

**HABITAT** Coniferous woodland, parks, and gardens

One of the smallest birds in Europe and Asia, the Goldcrest is remarkable for its incredible migratory movements over part of its range. Scandinavian and Siberian birds head to central Europe and the British Isles, making huge crossings of 200km (125 miles) or more in autumn and return to the

breeding grounds in spring. The Goldcrest has olive-green plumage, with a bright cap that can be raised into a crest. The crest of the female is yellow, flanked by black stripes, while the male has an orange crest that is apparent when the bird displays. It has a conspicuous black eye.

The wintering Goldcrest often joins mixed feeding flocks, although it tends to stay on the edge of the flock. The main diet is small arthropods and slow moving invertebrates picked up from the bark of trees. The Goldcrest is constantly in motion when foraging and gives out a high-pitched call to stay in contact with other birds in the flock. Seven

or eight eggs are laid in a delicate nest woven from spider webs, moss, and other soft material. As the nest is extremely fragile, it is often built in heavily armoured plants such as brambles and also dense conifers.

The Goldcrest suffers tremendous losses in cold winters, but the ability to exploit artificial conifer plantations has led to a large expansion of range. In addition to the birds ranging across Europe and Asia, there are three subspecies on five islands in the Azores.

#### MALE GOLDCREST



## BEHAVIOUR

These active insect-eaters are always on the move – they flit energetically among the foliage, hover frequently, and often hang upside-down to inspect the underside of pine cones or leaves. In cold weather, they huddle together at night in a sheltered spot to conserve valuable body heat. Northern populations migrate south to avoid harsh winter conditions, and, despite

being such small birds, they are capable of long flights across the sea. The female lays 7–12 eggs, and usually produces two clutches each breeding season.

#### GLEANING FOOD

Goldcrests use their miniature, needle-like bill to examine the surface of pine needles, pine cones, seed heads, and bark for small insects.



FEMALE GOLDEN-CROWNED KINGLET

## *Regulus satrapa*

### Golden-crowned Kinglet

**LENGTH**  
8–11cm (3¼–4½in)  
**WEIGHT**  
4–8g (⅕–⅖oz)  
**MIGRATION**  
Partial migrant

**HABITAT** Coniferous woodland; less commonly, parks and gardens

An active bird, the Golden-crowned Kinglet forages continuously and intensively throughout the day, searching for spiders and insects and their eggs and larvae. The male has a large orange patch in the centre of the crown, its upperparts are grey, and the underparts a mix of olive-green and white. The female is somewhat smaller than the male and similar in colour, except that its crown patch is canary yellow.

The Golden-crowned Kinglet actively defends its feeding and breeding places, driving away other kinglets and much larger warblers and sparrows. It makes full use of the short breeding season – immediately after the first brood of typically 8 or 9 young birds leave the nest, the female begins to lay a second clutch, leaving the care of the still-dependent fledglings to the male.

# WRENS

**ORDER** Passeriformes  
**FAMILY** Troglodytidae  
**SPECIES** 76

A FAMILY OF SMALL insect-eating birds, wrens are generally brown and streaked in appearance, often

with areas of black and white plumage. They have loud rattling songs, often consisting of extensive repertoires of sounds, which are surprisingly loud for such a small bird. Wrens are found almost exclusively in the Americas, with the exception of one species, the Winter Wren, which is widespread in Europe and Asia. Wrens inhabit a wide variety of habitats from deserts to thick woodland and are likely to be found in dark, damp places.

## ANATOMY

Usually the tail is quite short and stout, making up around a quarter of overall body length. It is often held cocked and aloft. However, in some species such as the Cactus Wren the tail can make up half its length, whereas other species, such as the ground-dwelling Nightingale Wren, appear almost entirely tailless. Another noticeable feature of wrens is the long, thin bill. This is usually fine and slightly decurved, although this can vary depending on the preferred food and lifestyle of the different species.



### CLASSIC POSE

This Winter Wren has adopted the classic wren singing pose: tail cocked upwards, wings held down, and head thrown back to produce its extraordinarily loud song.

### Campylorhynchus brunneicapillus

#### Cactus Wren



**LENGTH**

18cm (7in)

**WEIGHT**

35–45g (1½–1⁵/₈oz)

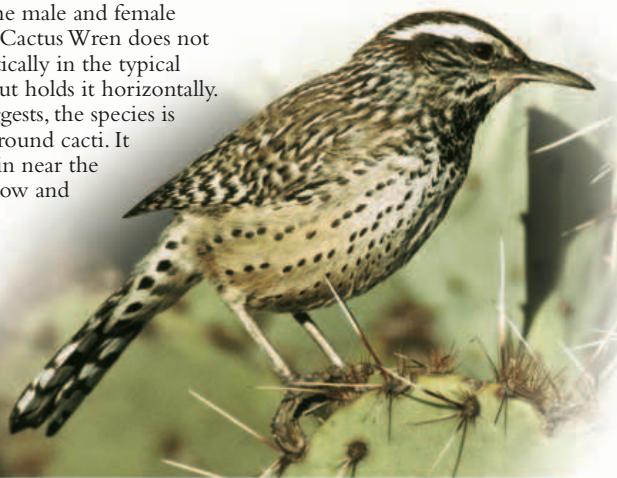
**MIGRATION**

Non-migrant

**HABITAT** Semi-desert with cacti

A large member of the wren family, the Cactus Wren has a long, pointed bill and a prominent white stripe above the eye. It has streaked upperparts and a well-spotted dull white breast. The male and female look alike. The Cactus Wren does not raise its tail vertically in the typical wren fashion, but holds it horizontally. As its name suggests, the species is usually found around cacti. It prefers to remain near the ground, flying low and

**ADULT CACTUS WREN**



**CACTUS WREN**  
The Cactus Wren makes its nest in a hole in a cactus, where it builds a large pouch-shaped structure protected by the spikes of the plant.



## BEHAVIOUR

Despite their small size, wrens are masterful and noisy songsters. Some calls consist of short, jarring “chucks”, which contrast with their longer rich, fluid songs. Most species of wren learn these remarkable songs by imitating adult birds around them. A single male can have a repertoire of more than 100 different songs. Many wren species spend much of their time close to the ground, where they forage among leaves for invertebrates. Some tropical members of the family follow swarms of army ants, feasting on any insects that are flushed out. A few wren species can also be found searching for insects high in the trees. The majority of wrens build oval-shaped nests with an entrance hole at the side, although a number of species make their nests in a cavity.

### Salpinctes obsoletus

#### Rock Wren



**LENGTH**

14–16cm (5½–6½in)

**WEIGHT**

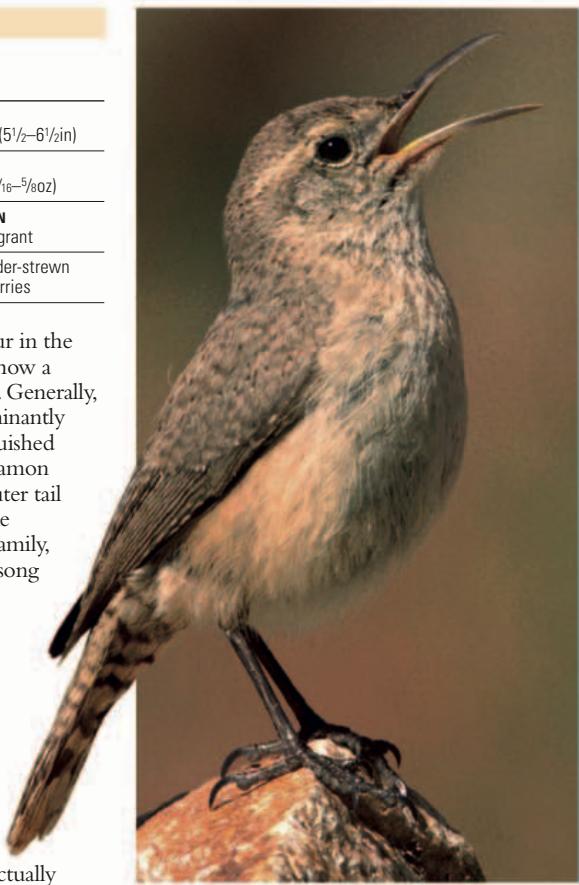
15–18g (⁹/₁₆–⁵/₈oz)

**MIGRATION**

Partial migrant

**HABITAT** Rocky terrain, including boulder-strewn slopes or manmade areas such as quarries

A number of subspecies occur in the Rock Wren species, which show a variable amount of streaking. Generally, however, it is a plain, predominantly brown bird. It can be distinguished from other wrens by its cinnamon rump and buff tips on the outer tail feathers. The Rock Wren, like many other members of its family, has a melodious voice – the song of the male is a fluid combination of a hundred different sounds, usually attracting a potential mate. One note is repeated three or four times, followed by a short pause before the song begins again with a new note. It should not be confused with the similarly named species from New Zealand, which actually belongs to a different family.



MALE ROCK WREN

*Cistothorus platensis*

## Sedge Wren



LENGTH	9–12cm (3½–4½in)
WEIGHT	8–10g (½–¾oz)
MIGRATION	Partial migrant

**HABITAT** Damp sedge meadows in North America; wider variety of habitats in South America

The tiny Sedge Wren is a buff-tinted bird that is plain below, with streaked upperparts. It has an “open-faced” appearance and a short spiky tail that is often held cocked. The most interesting aspect of the Sedge Wren’s behaviour is found in birds of the North American subspecies: the most northerly populations breed before migrating farther south to nest again.

ADULT SEDGE WREN



MALE BEWICK'S WREN

*Thryomanes bewickii*

## Bewick's Wren



LENGTH	12–14cm (4½–5½in)
WEIGHT	8–12g (½–¾oz)
MIGRATION	Non-migrant

**HABITAT** Variety of habitats from suburban areas to woods

A small species, Bewick's Wren has a prominent white stripe above the eye and is greyish brown above, with a more rufous rump. It is off-white below, with a barred tail, which it wags from side to side. This bird feeds largely on insects, but also eats a small amount of vegetable matter, particularly in winter.

It makes a stick nest in a cavity and lays 5–7 eggs. The male Bewick's Wren has a repertoire of between 10 to 20 loud, melodious songs that consist of a mixture of buzzes and repeated notes. The species is common in many parts of North and Central America.

aggressive posturing – bobbing its head with its tail cocked, delivering its loud, staccato song or churring alarm call. In winter, the species roosts communally to preserve body heat.



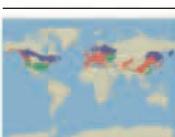
ADULT WINTER WREN

## SOAKING UP THE SUN

Although the Winter Wren is usually seen feeding low down in the undergrowth, it sunbathes whenever it can find a sunlit spot to bask in. The Winter Wren shown here has found a suitably warm place on a tree trunk. It spreads its wings and raises the feathers on its head to ensure that most of its plumage is directly exposed to sunlight.

*Troglodytes troglodytes*

## Winter Wren



LENGTH	10cm (4in)
WEIGHT	6–12g (½–¾oz)
MIGRATION	Partial migrant

**HABITAT** Variety of habitats from woodland to gardens

Also known as the Northern Wren, reflecting its distribution across the northern hemisphere, the Winter Wren is a common garden bird in some areas. Its plumage is rufous brown above, grey below, and barred with dark brown and grey. The legs are pale brown. Despite its small size, it is often seen due to its

*Thryothorus ludovicianus*

## Carolina Wren



LENGTH	12–14cm (4½–5½in)
WEIGHT	15–20g (¾–1¹/₁₆oz)
MIGRATION	Non-migrant

**HABITAT** Damp woodland; also found in a variety of other scrubby areas

Superficially similar to Bewick's Wren (left), the Carolina Wren is larger, with warmer-toned plumage, including buff underparts. It has a conspicuous white stripe above the eyes. The species is not confined to the Carolinas, but is found from southeast Canada, down the east



ADULT CAROLINA WREN

coast of the USA to northeast Mexico. It is largely sedentary, with pairs occupying the same territory throughout the year.

The different populations of the House Wren are sometimes treated as separate species – the Northern and Southern House Wrens. Both are, however, very similar: rufous-brown above with a grey face and pale black barring on the wings and tail.

The House Wren can be distinguished from Bewick's Wren (left) by the absence of a white stripe above the eye.

*Troglodytes aedon*

## House Wren



LENGTH	11–13cm (4½–5in)
WEIGHT	9–14g (¹/₃₂–¹/₈oz)
MIGRATION	Partial migrant

**HABITAT** Variety of habitats, including forest, farmland, gardens, and scrub

ADULT HOUSE WREN

*Catherpes mexicanus*

## Canyon Wren



LENGTH	13–15cm (5–6in)
WEIGHT	9–18g (¹/₃₂–⁵/₈oz)
MIGRATION	Non-migrant

**HABITAT** Rocky areas such as canyons; occasionally sea cliffs



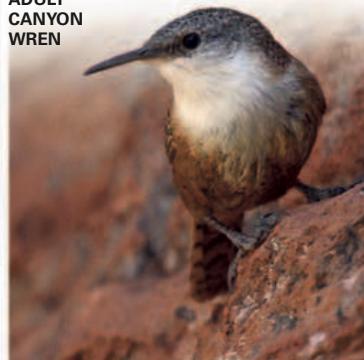
ADULT BLACK-CAPPED DONACOBIOUS

*Donacobius atricapilla*

## Black-capped Donacobius

LENGTH	22cm (8½in)
WEIGHT	30–40g (1¹/₁₆–1⁷/₁₆oz)
MIGRATION	Non-migrant

**HABITAT** Brushy areas along rivers



This large songbird is unlikely to be confused with any other wrens, with its bright yellow eyes, dark upperparts, pale buff-yellow underparts, chestnut rump, and white outer-tail feathers. The Black-capped Donacobius is a noisy bird, with pairs often singing duets in a series of whistles or performing loud, ritualized courtship displays, fanning their tails. They forage in pairs, often near water.

# GNATCATCHERS

ORDER Passeriformes

FAMILY Polioptilidae

SPECIES 14

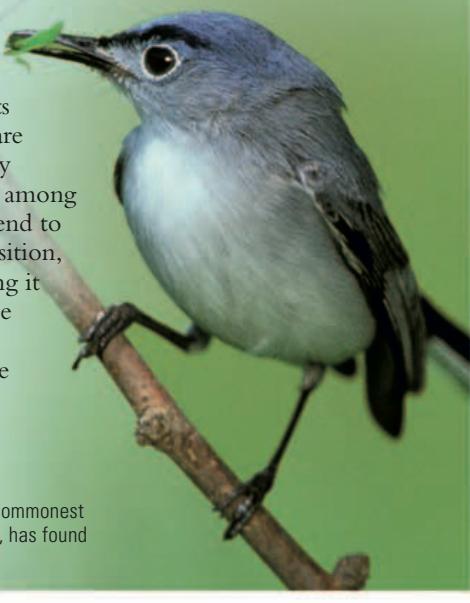
GNATCATCHERS ARE FOUND only in the Americas. They are small, predominantly grey plumaged birds with slender pointed bills and long tails. Most species tend to have some areas of black plumage on their otherwise grey heads. Three species (the gnatwrens from South America) are browner in appearance with very long bills and short, cocked tails.

## BEHAVIOUR

Despite their name, gnatcatchers rarely catch gnats or other flying insects. They are insectivorous, however, usually foraging for small arthropods among the foliage. All gnatcatchers tend to hold their tail in a cocked position, frequently fanning and flicking it from side to side, exposing the white outer tail feathers. This behaviour is thought to startle hidden prey, allowing it to be more easily caught.

### INSECT PREY

This male Blue-grey Gnatcatcher, the commonest member of its family in North America, has found a tasty insect snack.



*Polioptila caerulea*

### Blue-grey Gnatcatcher

LENGTH  
10cm (4in)WEIGHT  
6g (1/32oz)MIGRATION  
Partial migrant

HABITAT Deciduous and pine forest, orchards, swamps, and mesquite scrub

A tiny bird with a hooked bill, the Blue-grey Gnatcatcher has bluish grey plumage, with a black and white tail. It forages restlessly through leaves, feeding on small insects, caterpillars, and spiders, sometimes hovering to catch its prey. Its nest, built by both the male and female, is held together with spiders' webs and caterpillar silk, and is camouflaged with lichen. It is the most northerly species of gnatcatcher in its range.

ADULT  
BLUE-GREY  
GNATCATCHER

# NUTHATCHES

ORDER Passeriformes

FAMILY Sittidae

SPECIES 25

NUTHATCHES HAVE THE UNIQUE ability to climb down trees and rocks head first, which distinguishes them from woodpeckers and treecreepers. They have big heads, short tails, and large powerful bills and feet. Many species have a similar coloration of blue-grey backs, buff undersides with rufous flanks, and dark eye-stripes. Most are woodland birds, though some, like the rock nuthatches, are adapted to open rocky places. The Wallcreeper is entirely adapted to rocks, cliffs, and buildings.

short tails, and large powerful bills and feet. Many species have a similar coloration of blue-grey backs, buff undersides with rufous flanks, and dark eye-stripes. Most are woodland birds, though some, like the rock nuthatches, are adapted to open rocky places. The Wallcreeper is entirely adapted to rocks, cliffs, and buildings.

### EURASIAN NUTHATCH AT NEST

Nuthatches nest in holes in trees, often abandoned woodpecker holes, lined with leaves and loose bark.



*Sitta europaea*

### Eurasian Nuthatch

LENGTH  
14cm (5 1/2in)WEIGHT  
25g (1 1/8oz)MIGRATION  
Non-migrant

HABITAT Mature deciduous and mixed forest, parks, and large gardens; conifers in north of range

There are many subspecies of nuthatch across the species' vast range – some have white underparts, while others are orange-buff underneath – with many intermediate forms. The Eurasian Nuthatch has a distinctive black stripe running from the base of the bill to the sides of the head.

An excitable bird, it gives itself away with its loud, fluting calls and conspicuous jerky movements.

It walks head first down tree trunks as it probes crevices and lifts bark in search of invertebrates. Its strong bill enables it to feed easily on nuts. It stores food by hoarding seeds and other food in holes and cracks in walls and trees.

The Eurasian Nuthatch nests in holes, often taking over old woodpecker nests. The female may reduce the size of the entrance to the hole with mud. The species is often seen in pairs, which remain together in vigorously defended territories throughout the year.

EURASIAN NUTHATCH AT NEST-HOLE

*Sitta canadensis*

## Red-breasted Nuthatch

LENGTH  
12cm (4½in)WEIGHT  
10g (⅓oz)  
  
MIGRATION  
Migrant**HABITAT** Breeds in coniferous forest; in winter, also in deciduous and mixed woods, parks, and gardens

The Red-breasted Nuthatch is the most migratory nuthatch and in isolated cases, has even been known to cross the Atlantic. It has a black cap and the back, wings, and short tail are blue-grey. The underparts are rust-coloured. In summer, it forages mostly in the tree canopy in search of insects, and sometimes catches flies in flight. It is an important predator of caterpillars of the spruce budworm, a pest which can defoliate huge tracts of forest. In winter, the Red-breasted Nuthatch moves further down the trees, and to the ground in search of pine-seeds and beech nuts. It hoards food in cracks in trees, and it excavates its own nest-holes in decaying wood.

## ADULT RED-BREASTED NUTHATCH

*Tichodroma muraria*

## Wallcreeper

LENGTH 16cm (6½in)
WEIGHT 18g (⅔oz)
MIGRATION Migrant

**HABITAT** Cliffs and rocky slopes in mountainous regions; quarries, river beds, and towns in winter

Constantly flicking its wings to show red patches on an otherwise grey plumage, the Wallcreeper forages over rocks in a series of short, jerky rushes, disappearing into holes and clefts. In the air, while fluttering its long rounded wings, it can seem erratic, but it is able to manoeuvre precisely around rocky outcrops and cliff faces.

The Wallcreeper has been described as combining the characteristics of treecreepers and nuthatches. The long, slightly decurved bill resembles that of a treecreeper, but the jerky movements recall a nuthatch. Some authorities place the Wallcreeper in its own single-species family. It nests in clefts in rocks and on cliff faces, out of the reach of predators, such as stoats and martins. For the rest of the year, it is solitary, but is sometimes seen in family groups; flocks of up to 50 birds have been seen in late autumn.



## ADULT WALLCREEPER

## TREECREEPERS

ORDER Passeriformes

FAMILY Certhiidae

SPECIES 8

THE TREECREEPERS ARE small woodland birds with long, thin bills, and streaked brown plumage. Adapted for foraging over rough tree bark, they have long toes and short legs, and stiff tail feathers, which they use for support. The family includes the true treecreepers and the Spotted Creeper. The Brown Creeper is the only American species.

## BEHAVIOUR

Foraging treecreepers make their way up tree trunks and large branches in a spiral. They probe crevices and flakes of bark in search of invertebrates. After finishing with one tree, they fly to the base of another and begin again. They often build nests behind loose bark. In spring and summer, they are usually found in pairs and family groups.

## FAMILY GROUP

A Eurasian Treecreeper family huddles together on a tree trunk. Families may stay together for several weeks after the young have fledged.

*Certhia familiaris*

## Eurasian Treecreeper

LENGTH 13cm (5in)
WEIGHT 9g (⅓oz)
MIGRATION Partial migrant

**HABITAT** Deciduous, coniferous, and mixed woodland that contains trees with loose, rough bark

The Eurasian Treecreeper has a narrow, slightly decurved bill, mottled brown upperparts, and white underparts. It works its way up and around the trunks and large branches of trees in a spiral. Well before reaching the top, it flies to another tree, and begins again. It searches loose and fissured bark for insects and spiders; in winter, it looks for seeds. It nests behind flaps of bark.



## ADULT EURASIAN TREECREEPER

*Certhia americana*

## Brown Creeper

LENGTH 13cm (5in)
WEIGHT 8g (⅓oz)
MIGRATION Partial migrant

**HABITAT** Coniferous, deciduous, and mixed old-growth forest; parks and gardens with mature trees

## BROWN CREEPER AGAINST BARK

Also known as the American Treecreeper, the Brown Creeper is the only treecreeper found in the USA. Like other treecreepers, the Brown Creeper is perfectly camouflaged as it moves spirally up the trunks of trees, searching the bark for small insects and spiders with its tweezer-like bill. It will also come to feeding stations, where it feeds on fat and sometimes on seeds. It nests and roosts behind loose bark, particularly in the scales of bark on mature pines and other conifers.

# MOCKINGBIRDS AND THRASHERS

## BEHAVIOUR

**ORDER** Passeriformes  
**FAMILY** Mimidae  
**SPECIES** 34

THIS IS A FAMILY OF medium-sized, rather thin-looking birds with long, powerful bills.

Their plumage tends to

be streaky, particularly on the underparts, though they vary quite considerably in their coloration from the bright blue of the Blue Mockingbird to the rich chestnut of the Brown Thrasher.

Mockingbirds and thrashers are found only in the Americas and Caribbean (as well as the Galapagos Islands). Many species are urban birds, finding homes in parks and gardens. They are famous for their exceptional songs that are constantly varied over time and often mimic other birds in the area.

Most mockingbirds and thrashers are well adapted for life on the ground, with their long tails providing excellent balance as they run along the floor foraging for insects, seeds, and fruit.

In fact, most things will be consumed, even small vertebrates such as lizards or frogs, or the eggs of other birds. The least terrestrial members of the family are the two species of catbird, which are dark in plumage and have relatively short tails.

### A MEAL OF EGGS

Espanola Mockingbirds on the Galapagos Islands break open the eggs of seabirds with their sharp bills.



*Dumetella carolinensis*

### Grey Catbird



**LENGTH**  
23cm (9in)  
**WEIGHT**  
35g (1¼oz)  
**MIGRATION**  
Migrant

**HABITAT** Dense shrub, woodland edges, secondary growth, and well-vegetated urban areas

One of the smallest members of the mimidae family, the Grey Catbird is predominantly dark grey in colour. It has a black crown, short wings, chestnut undertail feathers, and a long, black tail. Both the sexes look alike, but the juvenile's plumage is a mottled brown-grey. Best known for its hoarse, cat-like mewing call, its song is a long series of rambling, stuttering warbles that are sometimes harsh and squeaky, but also

### ADULT GREY CATBIRD

musical and mellow. It can mimic birds, frogs, and mechanical sounds.

The Grey Catbird is an omnivore, feeding mainly on fruit and berries in late summer, when migrating, and on tropical wintering grounds. It feeds on insects at other times. Although the Grey Catbird is less terrestrial than other species of its family, it forages for insects on the ground, using its short bill to toss aside leaf litter. It constructs a bulky cup-shaped nest and usually lays 2 or 3 eggs.

This species undertakes the longest migration of the mimidae, making a "leapfrog" journey, with birds breeding in the extreme northeast of its range flying the farthest south to winter in the extreme southwest. The bird usually returns to the same wintering and breeding sites in successive years.

*Mimus polyglottos*

### Northern Mockingbird



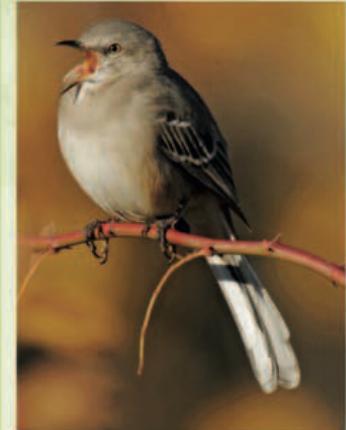
**LENGTH**  
26cm (10in)  
**WEIGHT**  
50g (1¾oz)  
**MIGRATION**  
Partial migrant

**HABITAT** Low, scrubby, and open vegetation, including suburban gardens, and thorn scrub

As its scientific name suggests, the Northern Mockingbird is one of the nature's true polyglots (*polyglottos* means "many-tongued"), with enormously varied songs and is an adept mimic of other birds' songs and calls (see panel, right). It is known for singing on moonlit nights.

The Northern Mockingbird has pale grey upperparts, dull white underparts, and a long tail. Its dark wings have two white wingbars and large white patches which, together with the white tail sides, are clearly visible when it is in flight. It feeds on insects and fruit, often jerking its wings over its back as it forages, to flush out insects. The male performs a courtship display in which it flashes its wings by repeatedly extending them.

### EXPERT MIMIC



Renowned as a mimic, the Northern Mockingbird can imitate dog barks, frog calls, bird calls, sounds of machinery, bells, and whistles. It learns sounds quickly, integrating them into its own song. So varied is its repertoire, that no two songs are the same. Mimicry is crucial for sexual selection – the larger the male's repertoire, the greater is its attractiveness to females.

ADULT NORTHERN MOCKINGBIRD



*Oreoscoptes montanus*

## Sage Thrasher



LENGTH

22cm (8½in)

WEIGHT

45g (1½oz)

MIGRATION

Migrant

**HABITAT** Dry brushland and deserts; breeds in plains with sagebrush or saltbush*Mimodes graysoni*

## Socorro Mockingbird



LENGTH

25cm (10in)

WEIGHT

65g (2½oz)

MIGRATION

Non-migrant

**HABITAT** Moist dwarf forest and ravines with shrubs and trees above 600m (2,000ft)**RED LIST CATEGORY** Critically endangered

The Socorro Mockingbird has grey-brown upperparts, slightly darker wings with two wing-bars, white underparts, and a dark brown tail. Endemic to Socorro in the Revillagigedo Islands near Mexico, this bird is the rarest member of its family. Surveys held as recently as 1994 found just 350 Socorro

Mockingbirds in the area – a catastrophic decline given that it was once the most abundant landbird on the island. This decline is thought to be primarily due to sheep-grazing.



ADULT SAGE THRASHER



ADULT BROWN THRASHER

*Toxostoma rufum*

## Brown Thrasher



LENGTH

24–31cm (9½–12in)

WEIGHT

70g (2½oz)

MIGRATION

Partial migrant

**HABITAT** Woodland edges, well-vegetated urban areas, dense shrubbery, and riparian woodland

This common yet inconspicuous bird, the official bird of the American state of Georgia often remains hidden inside dense vegetation. A large member of its family, it has a long, slightly decurved bill, long legs, and a long tail. Its face is grey, its upperparts are bright rufous brown, and its underparts are pale white, with bold black and rufous stripes. Its wings are marked by two black and white wingbars. The yellow iris lends the Brown Thrasher a penetrating gaze.

The Brown Thrasher forages on the ground, feeding on insects, fruit, and seeds. Its song is a series of loud, musical phrases, and a rather inaccurate mimicry of the calls of other birds.

*Melanotis caerulescens*

## Blue Mockingbird



LENGTH

25cm (10in)

WEIGHT

65g (2½oz)

MIGRATION

Non-migrant

**HABITAT** Lowland riverine brushland, tall thorn scrub, low tropical deciduous woodland, and forest edges

Aptly named for its deep blue plumage, the Blue Mockingbird has a black eye mask that contrasts with its vivid red eyes. Its crown, throat, and breast are streaked with pale blue.

ADULT BLUE MOCKINGBIRD

*Toxostoma curvirostre*

## Curve-billed Thrasher



LENGTH

27cm (10½in)

WEIGHT

80g (2¾oz)

MIGRATION

Non-migrant

**HABITAT** Deserts with cacti, emergent trees, dry scrubland, thorn scrub, and open woodland

Named for its long, curved bill, the Curve-billed Thrasher has sandy brown plumage that blends in well with its desert habitat. The bird's pale iris gives it a beady-eyed look. It feeds on nectar from agave plants and on the fruit of cacti, both foods being necessary to provide it with water and vital nutrients in its barren environment. It feeds mainly on the ground. A noisy bird, the Curve-billed Thrasher's song is a series of loud, melodious phrases, occasionally including mimicry of songs of other birds.



ADULT CURVE-BILLED THRASHER

*Cinclocerthia ruficauda*

## Brown Trembler



LENGTH

25cm (10in)

WEIGHT

55g (2oz)

MIGRATION

Non-migrant

**HABITAT** Humid rainforest and montane forest; occasionally plantations

The Brown Trembler is the only true denizen of humid rainforest in its family. The bird has a very long, slightly decurved bill. Its plumage is rufous brown on the upperparts, grey buff on the throat, and grey-brown on the breast. It has a short tail, which is often held cocked. In its characteristic display, the Brown Trembler keeps its wings drooped and quivers them. Both sexes display, the purpose of which may be to maintain the pair's bond.

# PHILIPPINE CREEPERS

ORDER Passeriformes

FAMILY Rhabdornithidae

SPECIES 2

p.427), they were formerly grouped with those birds. Some ornithologists suggest they may be related to the babblers (see p.418), but these small, streaked brown birds are now usually placed in their own family. The uncertainty in relationships extends to the English names of the birds, with some authors calling them creepers, while others prefer the name rhabdornis because the birds are not true creepers – the birds only occasionally creep along tree trunks. They primarily forage for insects among the leaves, flowers, and small branches of the forest canopy.

THE CLASSIFICATION OF these two species of forest birds from the Philippines is unclear. Somewhat similar in appearance to nuthatches (see p.426) and treecreepers (see

*Rhabdornis inornatus*

## Stripe-breasted Creeper

	<b>LENGTH</b> 17cm (6½in)
	<b>WEIGHT</b> 40–80g (1⅓–2⅓oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Lowland and montane forest, often over 800m (2,600ft)

As its name indicates, the Stripe-breasted Creeper has boldly streaked underparts. It has a prominent dark brown mask cutting across its white face and grey throat. Its upperparts are a uniform, rich brown colour, extending from the top of the head to the back. The sexes are alike in plumage but the male is significantly

larger than the female. The Stripe-breasted Creeper usually forages in the middle and high levels of the forest and occasionally gathers in large numbers to feed on flying ants. Otherwise, the diet consists of fruit and other insects. These birds often forage at lower altitudes in response to fruit availability. The species is gregarious and, particularly outside the breeding season, forms large roosting flocks in the tree canopy. Not much is known about the breeding ecology of the Stripe-breasted Creeper, although breeding birds have been observed in March and April. The nest is constructed in a tree-cavity.

The Stripe-breasted Creeper is found only in six island regions in the southern Philippines. The species is not globally threatened but its range is limited and it is not common on any of the islands.

# STARLINGS

ORDER Passeriformes

FAMILY Sturnidae

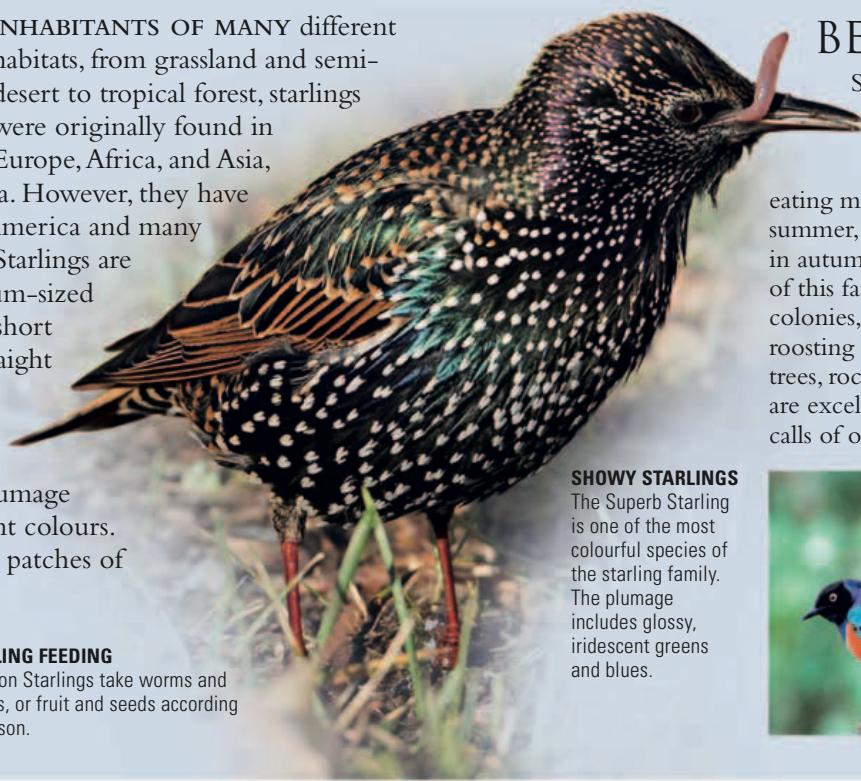
SPECIES 114

with one genus in Australasia. However, they have been introduced to North America and many Atlantic and Pacific islands. Starlings are sturdily built, small to medium-sized birds, with short wings and short tails, strong legs and long straight bills. Some are brilliantly colourful, but even the dark or black species have glossy and sometimes iridescent plumage gleaming with many different colours. Some have vividly-coloured patches of bare skin on their faces.

### STARLING FEEDING

Common Starlings take worms and insects, or fruit and seeds according to season.

INHABITANTS OF MANY different habitats, from grassland and semi-desert to tropical forest, starlings were originally found in Europe, Africa, and Asia,



### SHOWY STARLINGS

The Superb Starling is one of the most colourful species of the starling family. The plumage includes glossy, iridescent greens and blues.

*Aplonis panayensis*

## Asian Glossy Starling

**LENGTH**  
19–22cm (7½–8½in)

**WEIGHT**  
55g (2oz)

**MIGRATION**  
Non-migrant

**HABITAT** Coastal scrub, secondary growth, and cultivation, mostly in lowland areas

A slim-bodied bird, the Asian Glossy Starling is named for its spectacular glossy blue plumage, but its red eyes are equally striking. The sexes are alike in plumage, but the juvenile is heavily streaked on the underparts. The diet of this starling is mainly made up of

fruit and it seems to have a preference for figs. Most of the fruit is collected in the tree canopy, but flocks occasionally descend to the ground to pick up fallen fruit. It may also feed on insects.

The Asian Glossy Starling is a highly gregarious species, feeding and roosting in flocks that are compact and move quickly. It can mimic the calls of other birds. In the breeding season from February to August, it nests in colonies, usually in sheltered places high above the ground. The nest is built in a tree-hole or the crown of a palm but artificial sites such as buildings and pylons are also used. The female lays 3 or 4 eggs.

**ADULT ASIAN GLOSSY STARLING**





ADULT GOLDEN MYNA

*Mino anais*

## Golden Myna



**LENGTH**  
24cm (9 1/2in)

**WEIGHT**  
150g (5oz)

**MIGRATION**  
Non-migrant

**HABITAT** Open, lowland forest

The Golden Myna is a spectacular bird with a striking combination of a black face, body, and wings, contrasting with its yellow cap, neck, and undertail area. The breeding season is from February to October and a pair stays together for life. The nest is built in a tree-hole and the main food is fruit, collected from the tree canopy. The Golden Myna is bred in captivity, but does not seem to be threatened and is not considered to be globally at risk.



ADULT COMMON MYNA

*Acridotheres tristis*

## Common Myna



**LENGTH**  
25cm (10in)

**WEIGHT**  
125g (4oz)

**MIGRATION**  
Non-migrant

**HABITAT** Dry and grassy areas up to 1,500m (5,000ft)

A dark bird overall, the Common Myna has a yellow mask and a pale yellow bill. The species is naturally found in India and southeast Asia but has been widely introduced in other regions across the world. The diet consists of insects and fruit collected in the tree canopy. The nest is an untidy platform built in a tree crown and 4–6 eggs are laid.

*Gracula religiosa*

## Common Hill Myna



**LENGTH**  
27–31cm (10 1/2–12in)

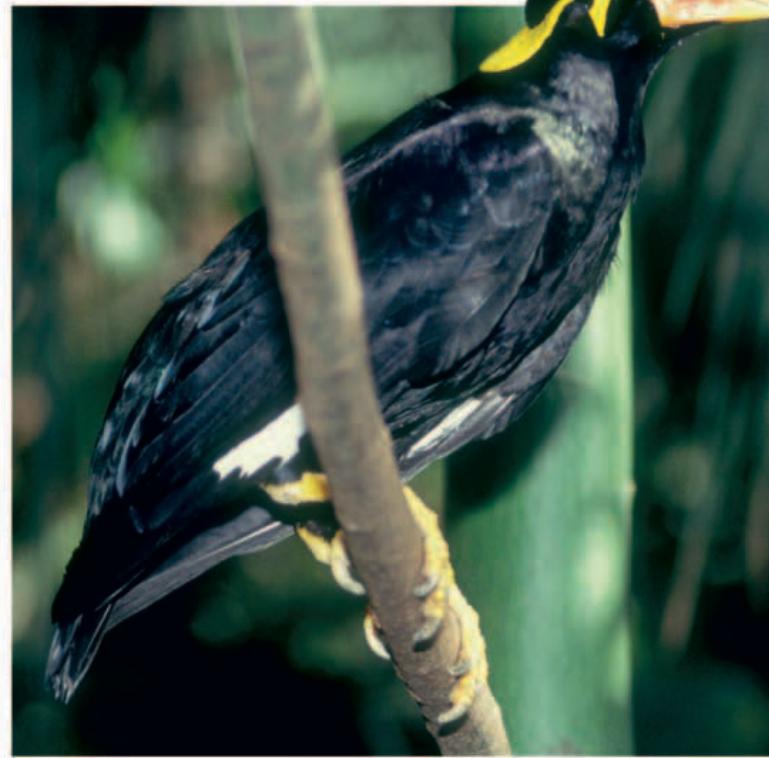
**WEIGHT**  
200g (7oz)

**MIGRATION**  
Non-migrant

**HABITAT** Broad-leaved evergreen and deciduous forest, usually below 600m (2,000ft)

The Common Hill Myna has black plumage contrasted by yellow facial stripes and a white or yellow undertail area. Its natural food consists of fruit, nectar, and insects collected in the tree canopy. The breeding season is from September to June and 3 or 4 eggs are laid in a tree-hole that is often used year after year. The species is well known for its ability to mimic various sounds, including human speech. A familiar cage-bird, the Common Hill Myna has a long association with humans, although for many years it was mainly a hunted bird.

## ADULT COMMON HILL MYNA

*Leucopsar rothschildi*

## Bali Myna



**LENGTH**  
25cm (10in)

**WEIGHT**  
85–90g (3–3 1/4oz)

**MIGRATION**  
Non-migrant

**HABITAT** Dry lowland forest**RED LIST CATEGORY** Critically endangered

The long head plumes and white plumage make the Bali Myna an attractive bird. It has a bright blue face stripe and the bill is pale yellow. Fruit, seeds, and insects make up the bulk of its diet and the nest is normally built in an abandoned woodpecker hole. The breeding season is from January to March and although 2 or 3 eggs are produced, it is common for only a single chick to survive to fledging. The species was never very widely distributed and habitat destruction has further reduced its range. However, it is now protected under Indonesian law to arrest the losses to the illegal bird trade. It has also been widely bred in various zoos around the world.



ADULT BALI MYNA

*Lamprotornis superbus*

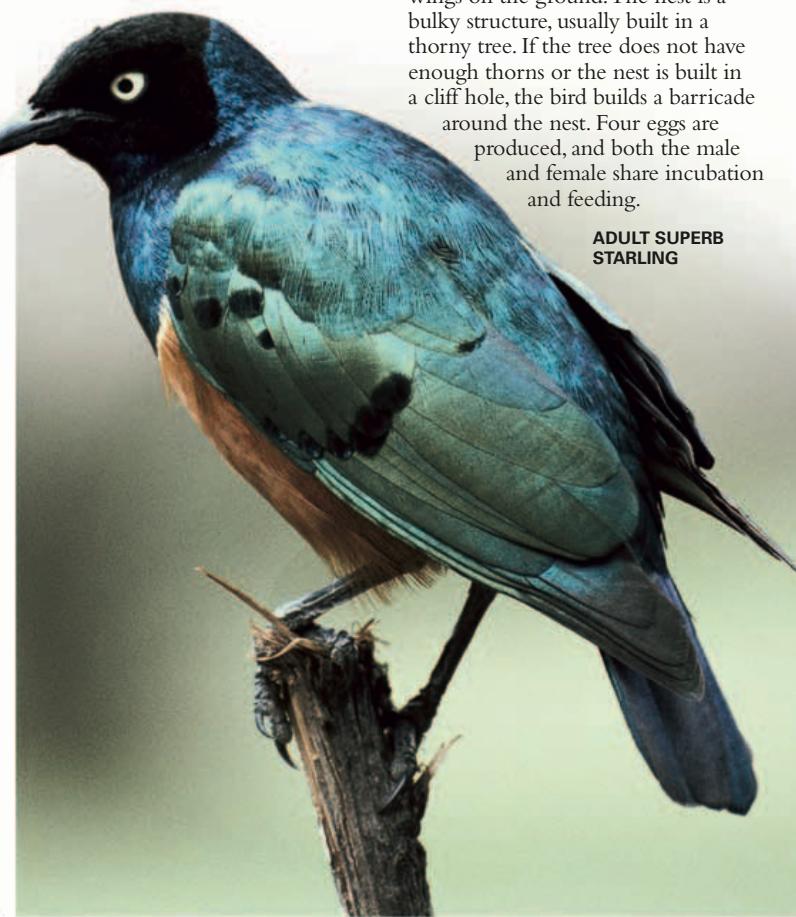
## Superb Starling



**LENGTH**  
19cm (7 1/2in)

**WEIGHT**  
65g (2 3/4oz)

**MIGRATION**  
Non-migrant

**HABITAT** Semi-arid open woodland and grassland; also towns

ADULT SUPERB STARLING

Aptly named, the Superb Starling has an iridescent blue back, green wings, and bright orange underparts. It has a black face that is emphasized by its white eyes. It usually feeds on insects and berries collected in vegetation or on the ground. This bird is able to run or hop when moving on the ground. The breeding season varies across the range and begins with the male Superb Starling making a hopping display, with the neck outstretched, and trailing the wings on the ground. The nest is a bulky structure, usually built in a thorny tree. If the tree does not have enough thorns or the nest is built in a cliff hole, the bird builds a barricade around the nest. Four eggs are produced, and both the male and female share incubation and feeding.

*Sturnus philippensis*

## Chestnut-cheeked Starling



**LENGTH**  
18cm (7in)  
**WEIGHT**  
75g (2 $\frac{5}{8}$ oz)  
**MIGRATION**  
Migrant

**HABITAT** Open deciduous and mixed woodland; winters in gardens and wooded cultivation

Bright and colourful, the male Chestnut-cheeked or Violet-backed Starling has a white or buff head, chestnut cheeks that extend to the side of the throat and breast, a violet back, and a white wing patch. The female is different, with a head mottled with brown or white and a greyish brown back and rump. This bird moves in small flocks and eats fruit and insects. Larger flocks congregate in its wintering grounds.



ADULT ROSY STARLING

*Sturnus roseus*

## Rosy Starling



**LENGTH**  
22cm (9in)  
**WEIGHT**  
65–90g (2 $\frac{3}{8}$ –3 $\frac{1}{4}$ oz)  
**MIGRATION**  
Migrant

**HABITAT** Steppes, semi-desert, and dry grassland

The beautiful Rosy Starling has pink plumage and a glossy black head, wings, and tail. However, it turns dusky in winter. Its bill and legs are also pink. The juvenile can be distinguished by its short yellow bill and paler plumage. Highly gregarious, this starling breeds in large, noisy, and often erratically occupied colonies that resemble those of cliff-nesting seabirds. Nest sites include cliff faces, gorges, and manmade structures with cavities. It feeds on seeds, fruit, and nectar. In the breeding period, its diet consists of locusts and grasshoppers, and adults fly up to 10km (6 miles) to feed on swarms of these insects.

*Sturnus vulgaris*

## Common Starling



**LENGTH**  
21–22cm (8 $\frac{1}{2}$ –9in)  
**WEIGHT**  
60–90g (2 $\frac{1}{8}$ –3 $\frac{1}{4}$ oz)  
**MIGRATION**  
Migrant

**HABITAT** Open habitats and areas of fruit-bearing shrubs and trees

The Common Starling with its shiny black, white-spotted plumage is a familiar bird to many as it has adapted readily to manmade structures and habitats. This starling feeds on a variety of animal and plant material. Its diet changes seasonally according to the abundance of different food – invertebrates and their larvae are important in spring and form the high-protein core of the nestlings' diet. The Common Starling mostly forages on the ground in open areas with short turf by probing for food on, or just below, the surface or among grass roots. Plant material, especially seeds, becomes important during the autumn and winter, when this starling's gut actually elongates to accommodate the change in diet. Introductions have extended its natural range to North America.

ADULT FEEDING ITS YOUNG



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*Creatophora cinerea*

## Wattled Starling



**LENGTH**  
19–21cm (7 $\frac{1}{2}$ –8 $\frac{1}{2}$ in)  
**WEIGHT**  
70–75g (2 $\frac{1}{2}$ –2 $\frac{3}{4}$ oz)  
**MIGRATION**  
Partial migrant

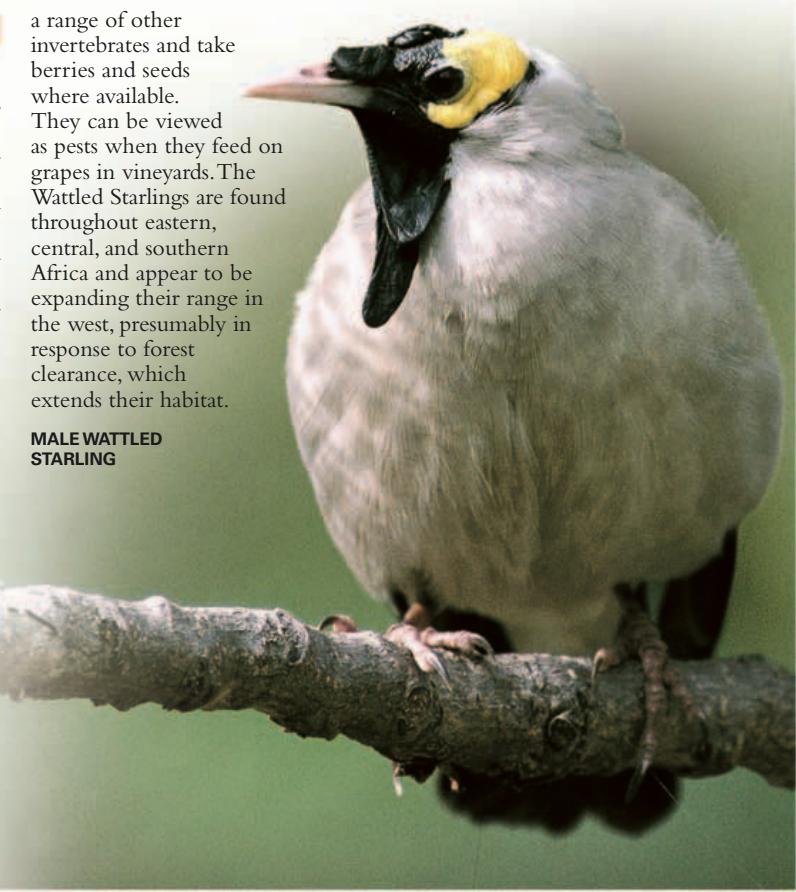
**HABITAT** Grassland, savanna, and open, broad-leaved woodland

The Wattled Starling has a pale grey bill and legs and a white rump. The male has a patch of bare yellow skin behind and below the eye and bare black patches on the throat. In the breeding season, the male may lose all its head and neck feathers and develop pendulous black wattles from the bare skin on the throat; sometimes smaller wattles form above the bill too, with a range of individual variations occurring in the shape and size of these wattles. The female largely resembles a non-breeding male.

The Wattled Starlings are omnivorous and appear to feed opportunistically on a range of food items. In some areas, they prey on locusts and other swarming grasshopper species. They also eat

a range of other invertebrates and take berries and seeds where available. They can be viewed as pests when they feed on grapes in vineyards. The Wattled Starlings are found throughout eastern, central, and southern Africa and appear to be expanding their range in the west, presumably in response to forest clearance, which extends their habitat.

MALE WATTLED STARLING





### *Onychognathus tristramii*

#### Tristram's Starling



LENGTH  
25cm (10in)

WEIGHT  
125g (4oz)

MIGRATION  
Non-migrant

HABITAT Arid rocky areas with cliffs and ravines, increasingly in urban areas in parts of range

A sturdy glossy black bird, Tristram's Starling has striking chestnut patches on the wing. Its repeated loud musical whistles often give this bird's presence away. It is the only "red-winged" starling that is found outside Africa and is common throughout its small range, which covers the western Arabian peninsula from Yemen to Israel. Population increases have been noted in Israel in response to the cultivation of arid desert areas. A growing dependence on humans and an associated tameness has also been noted. Tristram's Starling has a varied diet, feeding mainly on fruit and invertebrates.



### *Lamprotornis nitens*

#### Cape Starling



LENGTH  
25cm (10in)

WEIGHT  
85g (3oz)

MIGRATION  
Non-migrant

HABITAT Savanna and riverine bush, forest edges, plantations, parks, and gardens

The Cape Starling, also known as the Red-shouldered Starling, has glossy blue-green plumage with few obvious markings. Its bill, legs, and feet are black. The identifying features, however, are two rows of dark spots on the wing feathers and the small bronze-purple epaulette. Young birds have some amount of gloss on their feathers. This bird nests in natural or manmade cavities, such as tree-holes and pipes, and under roofs. The Cape Starling's nest, lined with materials such as snakeskins and feathers, is made of animal dung and dry grass. The young birds from earlier broods often help to feed the young.

### ADULT CAPE STARLING



### *Buphagus africanus*

#### Yellow-billed Oxpecker



LENGTH  
19–22cm (7½–9in)

WEIGHT  
55–70g (2–2½oz)

MIGRATION  
Non-migrant

HABITAT Thorn scrub and broad-leaved woodland, often near water; often in association with game

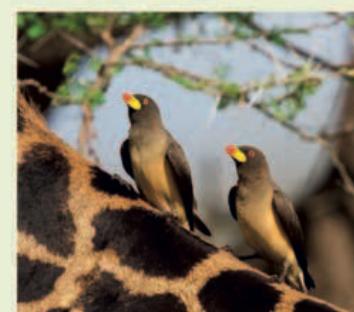
### ADULT YELLOW-BILLED OXPECKER



As indicated by its name, this starling has a striking yellow bill, ending in a stout, bright red tip. It has red eyes, grey-brown upperparts, and a contrasting pale buff lower back and rump that are distinctive. It feeds mainly on parasites, especially ticks, and on the wounded tissue of host animals (see panel, below), a strong association that extends to the oxpeckers' choice of roost sites, many spending the night perched on a large mammal.

#### PICKING OUT PARASITES

Feeding almost exclusively on external parasites found on large mammals, the Yellow-billed Oxpecker is often found perched on a cow or a wild herbivorous animal, such as a giraffe (pictured right). In this mutually beneficial association, host animals generally tolerate these birds as they remove troublesome ticks, lice, and fleas from their hair.





**COMMON STARLINGS**

In open country, typically just before sunset, Common Starlings can form huge flocks of up to a million birds. They fly in tight formation with no apparent leader.

# THRUSHES

**ORDER** Passeriformes  
**FAMILY** Turdidae  
**SPECIES** 175

THRUSHES ARE A VERY variable family with a widespread global distribution. Generally they are small to medium-sized with quite long tails and a wide variety of plumages. Most thrushes are predominantly brown; many are streaked and spotted, often showing quite detailed patterning. Other members of the family display a fantastic array of bright colours ranging from electric blue to vivid orange. Thrushes are famous for their songs, including a number of species regarded as among the most beautiful songsters in the bird world.



**IN FLIGHT**  
 Like a number of its relatives, the Eastern Bluebird has a rich warbling song. This is often delivered by the male while in flight, a characteristic shared by many members of the family that inhabit open countryside.

## NESTING

The majority of thrushes are territorial and monogamous, with each sex having a clearly defined role. First, the male bird finds and establishes a territory (which varies in size between species). Once a suitable area has been found, the male sings to attract a mate. The female bird then builds a nest and sits on the eggs while the male defends the territory. Nests vary in location (some are on the ground, others in trees) and structure, though most are cup-shaped and made out of dead leaves and twigs (some smaller species nest in holes in trees or in nest boxes).



**AMERICAN ROBIN FEEDING YOUNG**  
 Earthworms are a staple food of adult thrushes, which feed smaller worms to their offspring, often gathering up a beak-full before returning to the nest.



**TYPICAL CLUTCH**  
 Typical of its family, the Redwing usually lays 4–6 pale greenish blue eggs with fine brown speckling. The nest is usually on the ground or low down in a bush.

## FEEDING

Thrushes employ a variety of tactics to find food, but most species within this stout-legged family can usually be found running, walking, and hopping along the ground in search of invertebrates and other favourite foods, from berries and seeds to small reptiles. Worms are particularly sought-after by many species such as the Common Blackbird of Europe and the American Robin of the Americas. Others, such as the European Song Thrush, have a fondness for snails, breaking open their shells on rocks or “anvils”. Some species, such as the Redwing and Fieldfare, gather in loose flocks to feed, especially during autumn when berries are plentiful in hedges.

## ANATOMY

Most thrushes have no spectacular features that mark them out for a particular lifestyle. Although the majority spend most of their time feeding on the ground, they are also quite at home among the trees. Equally, although invertebrates form the staple diet, most thrushes also eat large quantities of fruits and berries. Variations in anatomy between different species reflect differences in habitat and behaviour. For example, migratory species have longer, more pointed wings than more sedentary species; and the Long-billed Thrush has a longer bill than its relatives, an adaptation to its diet of earthworms.



**THE EARLY BIRD**  
 The speckle-breasted Fieldfare is a familiar sight in many towns and cities in Russia and Scandinavia, where it can often be observed pulling worms from the lawn of a garden or park.

*Sialia sialis***Eastern Bluebird**

**HABITAT** Open woodland, including orchards, plains, pastures, pine forests, and swampy ground

Like many thrushes, the male and female Eastern Bluebirds have different plumage, the male being more brightly coloured than the drab female. It has a brilliant blue head and upperparts, and chestnut-orange underparts that turn white on the abdomen, while the female has a grey head, much paler blue wings, and dull orange underparts.

This species mainly feeds on beetles, spiders, and caterpillars in spring and summer, but switches to a fruit-based diet in autumn and winter. An adaptable bird, it also takes small snakes, shrews, and lizards. Many of these birds move south in winter, migrating in small flocks, but also in larger groups of up to 100 birds.

**MALE EASTERN BLUEBIRD****ADULT BLUE WHISTLING THRUSH***Myophonus caeruleus***Blue Whistling Thrush**

**HABITAT** Forested highland, usually in undergrowth and near water, occasionally in lowland in winter

Far more easily heard than seen, the Blue Whistling Thrush is a large thrush with very deep blue-black plumage that is spotted grey and white, red eyes, and a black or yellow bill, the colours of the bill varying in the subspecies. As its name indicates, its song is a fluid whistle. Most Blue Whistling Thrushes have two broods a year, except those that inhabit the highest altitudes. The nest is a bulky cup of moss and roots woven with grass and leaves, – it is occasionally reused in consecutive years and up to five eggs are laid.

*Zoothera citrina***Orange-headed Thrush**

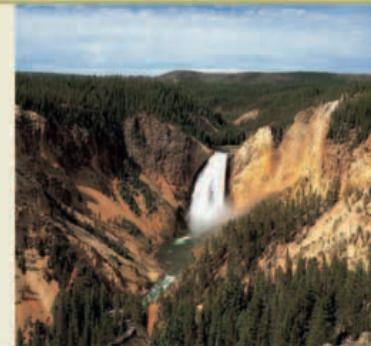
**HABITAT** Forest, especially dense understorey, often in bamboo thickets and near running water

The Orange-headed Thrush shows a great deal of plumage variation across its range. Some subspecies have black vertical lines through the eye and cheeks or white on the face. The orange tone to the head and underparts also vary. The Orange-headed Thrush shown here has a brick-red head and underparts. The female differs from the male in its matt brown, rather than grey-blue, back.

**ADULT ORANGE-HEADED THRUSH***Sialia currucoides***Mountain Bluebird**

**HABITAT** Breeds at the tree line in open areas; winters in farmland and lowland areas

The male Mountain Bluebird is truly the bluest of its genus, being pale blue below and a deeper skyblue on the upperparts. The female is largely grey-brown with a white eye-ring and an ultramarine tail. This bird feeds on insects and takes berries in autumn and through the winter. It often chooses an elevated lookout as a song-perch and sings for long periods.

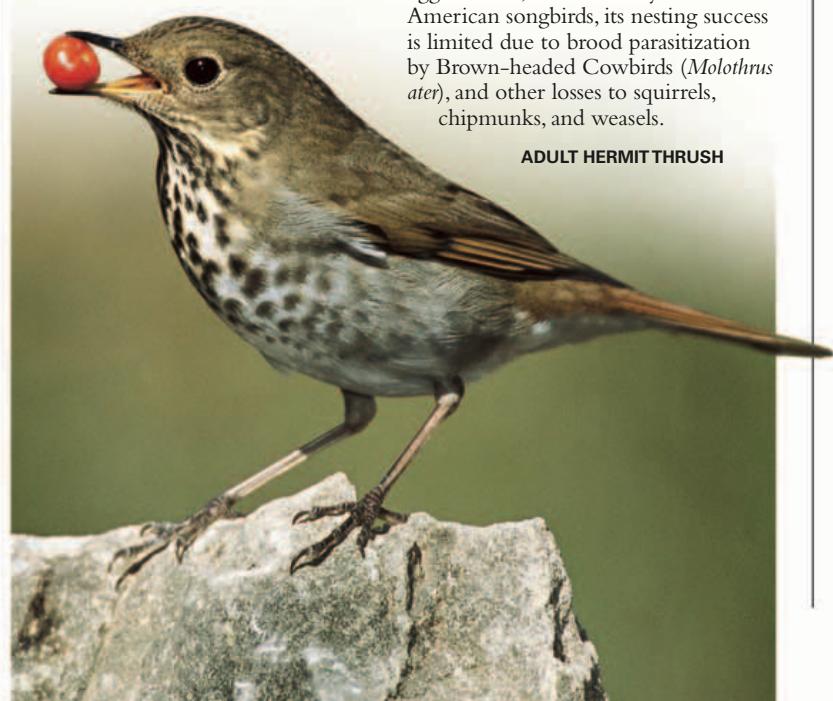
**MALE MOUNTAIN BLUEBIRD****GREAT SITES****YELLOWSTONE NATIONAL PARK**

Situated in northwest Montana, in the heart of the Rocky Mountains, are the rugged highlands of the Yellowstone National Park. The extensive forest and grassland offer a haven for the Mountain Bluebird and many other birds of the hills and mountains of western USA. This famous park is the centre of the Greater Yellowstone Ecosystem, the largest intact ecosystem in the northern temperate zone.

Like several other North American thrushes, the Hermit Thrush has predominantly olive-brown upperparts, dark-spotted underparts, and a rufous tail. The male and female are similar in their plumage. This thrush mainly feeds on berries. Although the male may sing from a tall conifer treetop, the Hermit Thrush is principally a ground-dweller, favouring the understorey and well-vegetated areas. Even the bulky nest of grass and leaves is placed on the ground. Usually 4–6, eggs are laid, but like many North American songbirds, its nesting success is limited due to brood parasitism by Brown-headed Cowbirds (*Molothrus ater*), and other losses to squirrels, chipmunks, and weasels.

**ADULT HERMIT THRUSH***Catharus guttatus***Hermit Thrush**

**HABITAT** Boreal forest and parkland; the understorey of open woodland in winter





ADULT WOOD THRUSH

*Hylocichla mustelina*

## Wood Thrush

<b>LENGTH</b>	13–20cm (5–8in)
<b>WEIGHT</b>	50g (1½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in broad-leaved woodland; winters in humid forests

Larger, and with more boldly spotted underparts than other North American thrushes, the short-tailed Wood Thrush has a white eye-ring, black streaking on its white face, and reddish brown upperparts. Its song, one of the most melodious thrush songs, sounds like a flute, with the middle note lower than the first and the last note a high trill. It feeds on the ground, eating insects, spiders, and fruit. The Wood Thrush is a common summer migrant to much of southeast Canada and the eastern USA and spends its winters in Central America from Mexico to Panama.



MALE RING OUZEL

*Turdus torquatus*

## Ring Ouzel

<b>LENGTH</b>	24cm (9½in)
<b>WEIGHT</b>	100g (3½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Rocky upland and moorland

An upland relative of the Common Blackbird (below), the Ring Ouzel has pale edges to its flight feathers and underparts. The male can be identified by its broad white breast-band, a feature that is less noticeable in the female and entirely lacking in the juvenile. The species breeds largely in northern and eastern Europe.

*Turdus cardis*

## Japanese Thrush

<b>LENGTH</b>	21–23cm (8½–9in)
<b>WEIGHT</b>	60g (2½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Dense upland forest

The male Japanese Thrush is rather like a cross between a blackbird and a song thrush. Its upperparts are jet-black, contrasting vividly with its spotted white belly. It has a yellow bill. Young males are similar, but usually have slightly paler or slate-grey wings, back, and tail. The female is plain in comparison to the male, and is a typical streaked, brown thrush. The Japanese Thrush has a rich, clear song that consists of a series of musical, flute-like trills and whistles. This species is widely distributed and breeds in Japan and central China before spending the winter in southern China and Vietnam.

*Turdus merula*

## Common Blackbird

<b>LENGTH</b>	24–29cm (9½–11½in)
<b>WEIGHT</b>	125g (4oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Deciduous woodland, scrub, parks, and gardens

A familiar bird throughout most of Europe, as well as parts of Asia and north Africa, the Common Blackbird is also quite common in southeast Australia and New Zealand, where it was introduced in the 19th century by

colonists. The male has an unmistakable all-black plumage, with an orange beak, eye-ring, and legs. The female is a uniform dark brown, with dark streaks on the throat and mottled underparts. The Common Blackbird's song is a very musical, full-throated warbling and as it roosts it makes loud, sharp "chak-chak" calls. It noisily explores leaf litter for worms and insects and also feeds on fruit and berries. Its nest is a grass and mud cup, lined with grass.

## MALE IN SONG

*Turdus philomelos*

## Song Thrush

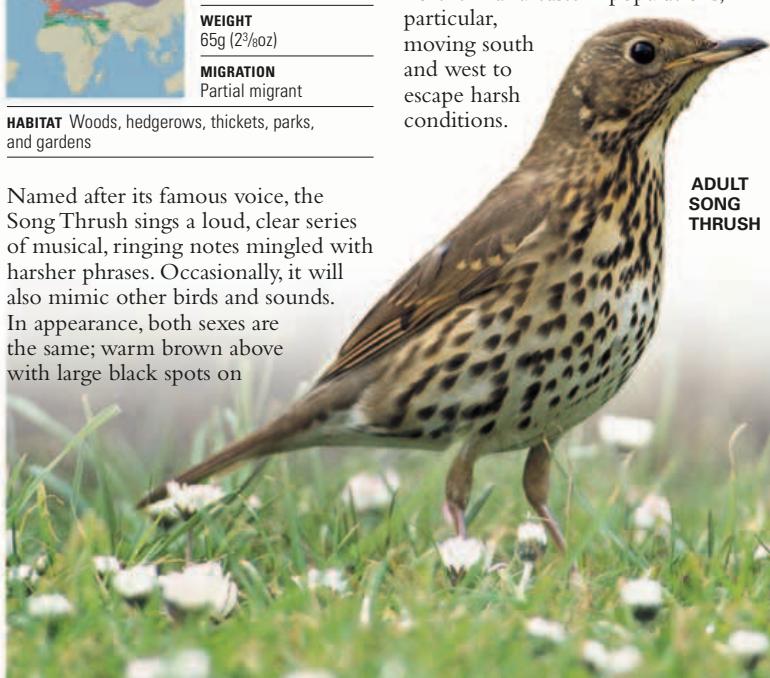
<b>LENGTH</b>	20–24cm (8–9½in)
<b>WEIGHT</b>	65g (2½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Woods, hedgerows, thickets, parks, and gardens

Named after its famous voice, the Song Thrush sings a loud, clear series of musical, ringing notes mingled with harsher phrases. Occasionally, it will also mimic other birds and sounds. In appearance, both sexes are the same; warm brown above with large black spots on

the underparts. The species is smaller and darker than the similar Mistle Thrush (right). In flight, its orange underwing is noticeable. The Song Thrush is partially migratory, with northern and eastern populations, in particular, moving south and west to escape harsh conditions.

ADULT SONG THRUSH



## EATING SNAILS

The Song Thrush is omnivorous and feeds out in the open on a wide range of insects, worms, snails, and also on berries. Since it cannot crush the snail shells with its bill or swallow them whole, it has learned how to smash them open (see below) to get at the flesh within. It usually feeds on the banded snail of the *Cepaea* genus.



SNAIL-SMASHING TECHNIQUE

The Song Thrush picks up a shell with its bill and repeatedly smashes it on an "anvil" such as a stone, wall, or path to break it open.

*Turdus viscivorus*

## Mistle Thrush

<b>LENGTH</b>	28cm (11in)
<b>WEIGHT</b>	100–125g (3½–4oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Woodland, farmland, orchards, parks, and gardens

Larger and a paler brown colour than the similar Song Thrush (left), the Mistle Thrush has a pattern of spots on its breast that is also subtly different from that of the Song Thrush, with larger, less regular black marks, a distinct wing pattern, and an obvious grey rump. Its undulating flight is distinct and much heavier than that of the Song Thrush.

One of the first indications of the species' presence is its harsh, rattling call. Its melancholy song is a flute-like series of whistles, resembling the song of the Common Blackbird (left), but with a more limited repertoire of phrases. It is not particularly sociable and is usually seen singly or in pairs.

## ADULT MISTLE THRUSH



*Turdus pilaris*

## Fieldfare



<b>LENGTH</b>	25–27cm (10–10½in)
<b>WEIGHT</b>	100g (3½oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in woodland, parks, and gardens; winters in more open areas

A large and striking thrush, the Fieldfare has a grey head, a black mask, and wing markings that contrast with its mainly brown upperparts and

speckled belly. In flight, it displays a large white patch on the underwing, a useful feature for identification. The sexes are virtually alike. The Fieldfare is a noisy bird, often emitting a scolding “chuck” or cackling “chack-chack”. In the summer, its song is reminiscent of the Common Blackbird (opposite), but is far less melodious. The male sometimes performs a song flight as a part of the courtship ritual.

The Fieldfare is a common breeding bird in much of northern Europe, often found in city centre parks in Scandinavian towns and cities and in wooded areas. In winter, large

flocks (sometimes numbering thousands of birds) move south and west to feed on agricultural land or berry bushes. These flocks are often accompanied by the noticeably smaller Redwing (*T. iliacus*). Flocks in flight keep together, but drift along in irregular lines and shapeless, uncoordinated packs. When the weather is severe, the Fieldfare visits gardens. The breeding season is in May and June, and the nest is a cup of grass and twigs, in bushes or trees, and often in loose colonies.

## ADULT FEEDING

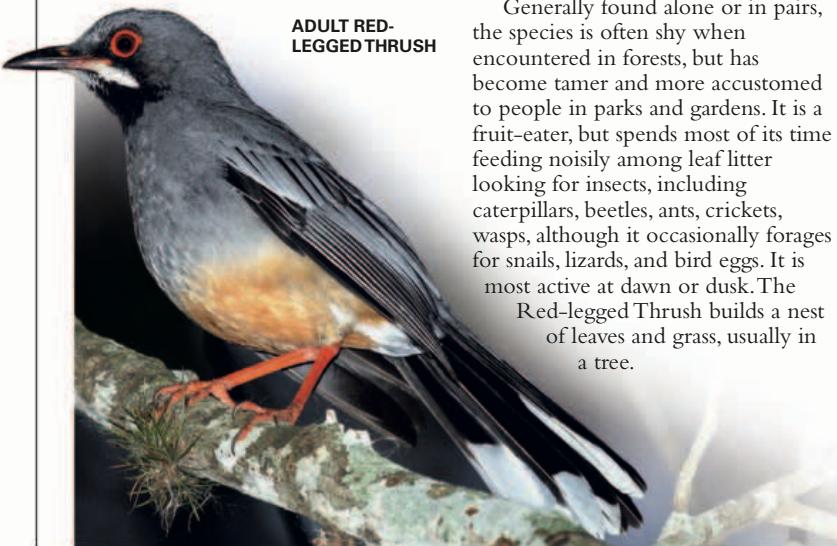
*Turdus plumbeus*

## Red-legged Thrush



<b>LENGTH</b>	26cm (10in)
<b>WEIGHT</b>	75g (2½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rainforest edges, coastal woodland, scrub, mangroves, pinewoods, plantations, and parks



ADULT RED-LEGGED THRUSH

A Caribbean species, found in most of the West Indies from Dominica to Cuba and the Bahamas (though not Jamaica), the Red-legged Thrush is large and distinctly marked with black and white streaks on the throat. There is some variation between the different island forms, although all are generally slate-grey in colour with a noticeable red bill, eye-ring, and legs. The male's bill changes from red to black in the breeding season.

Generally found alone or in pairs, the species is often shy when encountered in forests, but has become tamer and more accustomed to people in parks and gardens. It is a fruit-eater, but spends most of its time feeding noisily among leaf litter looking for insects, including caterpillars, beetles, ants, crickets, wasps, although it occasionally forages for snails, lizards, and bird eggs. It is most active at dawn or dusk. The Red-legged Thrush builds a nest of leaves and grass, usually in a tree.

*Turdus falcklandii*

## Austral Thrush



<b>LENGTH</b>	23–27cm (9–10½in)
<b>WEIGHT</b>	95g (3½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Tussock-grass near rocky beaches (Falklands race); woodland (South American race)

Two main races occur of the medium-sized Austral Thrush – *T. f. falklandii* is found in the Falkland Islands, the only resident thrush there, and *T. f. magellanicus* in Chile and Argentina. The birds on the South American mainland have paler, more orange underparts and a more heavily streaked throat than the Falkland Island birds. Both races have black heads, yellow bills, and olive-brown backs, wings, and tails. The females of both races are generally similar to the males, but sometimes have browner heads. Juveniles of both races are brown and spotted. Both races are also rather different in behaviour – mainland birds are usually found in woodland and forests, and even in gardens,

whereas those on the Falklands favour areas of tussock-grass and beaches, often feeding around rotting seaweed. The diet of the Austral Thrush consists mostly of worms, larvae, insects, and snails, although it will also sometimes feed on berries and fruit. It has learned to visit bird tables in parts of its range. The call of this species is a melodious, whistled song.

## ADULT AUSTRAL THRUSH



*Turdus migratorius*

## American Robin



LENGTH	25–28cm (10–11in)
WEIGHT	75g (2½oz)
MIGRATION	Partial migrant

**HABITAT** Forest, wooded swamps, farmland, parks, urban and suburban gardens

## MALE IN BREEDING PLUMAGE



The most common and widespread large thrush of North America, the American Robin shares only a red breast with its European namesake. In build and movements, it most closely resembles the Common Blackbird (see p.438). The sexes are similar, although the male acquires a black head during breeding, and the female is generally paler, with an orange breast rather than the male's deep brick red.

Not all American Robins migrate, despite the scientific name. Even those that breed in Canada and Alaska may stay on through the winter, when berries and other fruit are in plentiful supply. They use garden nest boxes and shelves. During breeding, the male may roost communally while the female remains at the nest.

*Cochoa viridis*

## Green Cochoa



LENGTH	25–28cm (10–11in)
WEIGHT	90–125g (3¼–4oz)
MIGRATION	Non-migrant

**HABITAT** Dense broad-leaf evergreen forest, often near trees

The Green Cochoa is vivid green with a blue head. It perches motionless for long periods in the middle storey of its dense forest home. Fruit makes up a good proportion of the Green Cochoa's diet, and its wide gape enables it to eat large berries whole. It has also been seen foraging for insects. When sighted, it is often in pairs or small family groups. Its distinctive call is very thin and high-pitched. The nest is a shallow cup of green moss, leaves, and fibres in a tree.

*Brachypteryx montana*

## White-browed Shortwing



LENGTH	13cm (5in)
WEIGHT	17g (½oz)
MIGRATION	Non-migrant

**HABITAT** On mountains in dense undergrowth, bamboo thickets, oak, fir, and rhododendron forest

Unlike most of the thrush family, shortwings run rather than hop. The 14 subspecies vary greatly in plumage. The male has grey-blue plumage with distinctive white eyebrows. Most females are rufous-brown with pale underparts, but the female of the north Borneo subspecies has a blue back and reddish chestnut face and underparts. The species hunts for small insects and their larvae, and snails and worms.



MALE WHITE-BROWED SHORTWING

## ADULT RED-THROATED ALETHE

*Alethe poliophrys*

## Red-throated Alethe



LENGTH	15cm (6in)
WEIGHT	35g (1¼oz)
MIGRATION	Non-migrant

**HABITAT** Mountain forest and wooded ravines

One of the restricted-range species confined to the Albertine Rift Mountains Endemic Bird Area, the Red-throated Alethe is locally common. Both sexes have a red throat. The Red-throated Alethe hunts by rushing at insects, worms, and snails, mainly on the ground. Sometimes it tosses fallen leaves aside in search of prey. It also follows and feeds on columns of soldier ants.

## CHATS AND FLYCATCHERS

ORDER Passeriformes

FAMILY Muscicapidae

SPECIES 275

THIS LARGE GROUP of small songbirds is found in Europe, Africa, and Asia. The family includes the chats, previously classified

with the thrushes (see p.436). This varied group of small songbirds includes such well-recognized and tame species as the European Robin and the very plain Common Nightingale, which is renowned for its beautiful song.

## ANATOMY

Chats and flycatchers are characterized by their short bills. Most flycatchers have quite dull plumage, although there are a number of vibrantly coloured exceptions. Males and females of the Muscicapidae family are often differently plumaged, and some species have different summer and winter plumages. Many species are agile in flight as they dart through the air after their flying insect prey. The method of hunting favoured by many species is to wait on a prominent lookout perch before undertaking circular flights, which usually culminate back on the same perch, often accompanied by the sound of the bird's bill snapping shut on its insect prey.

## SWALLOWING A FLY

A Spotted Flycatcher rests on its perch to consume the insect that it has just caught during one of its short sallies.

## BEHAVIOUR

Birds of this family nest in a variety of locations. Some nest in holes in trees and walls, while others build a cup-shaped nest in a tree or hedge. Some members of this family build a nest of twigs and leaves on the ground, hidden by the surrounding leaf litter. The family includes many migrants and partial migrants.

## EUROPEAN ROBIN

A typical European Robin's nest is hidden in a hedge, camouflaged by the surrounding vegetation.



*Erithacus rubecula*

## European Robin



<b>LENGTH</b>	14cm (5½in)
<b>WEIGHT</b>	15–20g (⁹/₁₆–¹¹/₁₆oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Deciduous, mixed, and coniferous woodland, parks, and gardens

The plump breast – orange rather than red – round head, and confiding manner have made the European Robin a favourite bird of many bird-lovers. The sexes are very similar in appearance. Juvenile robins are brown and speckled, and without the red breast. Despite its friendly image, the European Robin is solitary, territorial, and very aggressive. The orange-coloured breast is used in a threat display and boundary disputes can end in injury. In autumn, the female sings in defence of its territory.

The European Robin eats invertebrates such as beetles and ants, which it picks from the ground, or hunts from perches. It does not turn over leaves or the soil by itself, which is why it perches expectantly near human gardeners or large woodland mammals. Gardens are favoured because they provide the European Robin's preferred mixture of habitats – shade and cover, moist ground, and open areas. It uses holes in buildings and trees for nesting.

## ADULT EUROPEAN ROBIN



## COURTSHIP FEEDING



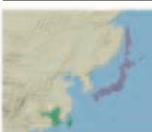
Playing an important part in strengthening pair bonds and reducing aggression between birds, courtship feeding is a ritual practised by European Robins. Such feeding begins during nest-building and continues through egg-laying.

The provision of food for the female during

incubation of the eggs provides her with nourishment when demands on her are heavy. It ends only after the brooding process is over. The female begs from the male, adopting the posture of a chick begging its parents for food.

*Erithacus akahige*

## Japanese Robin

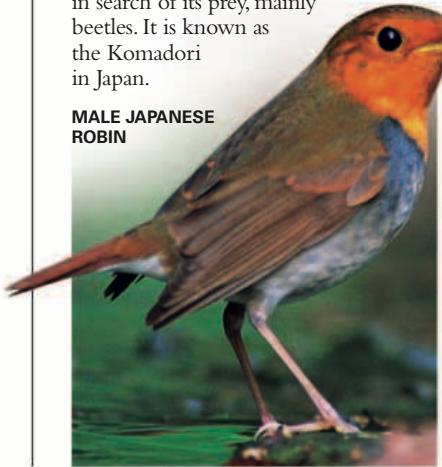


<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	17g (⁹/₁₆oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Undergrowth, broad-leaf evergreen, mixed and deciduous mountain forest, parks, and gardens

Once a popular cage-bird, the Japanese Robin is still locally common in Japan, mostly in mountains. The male has an orange-red face and upper breast with a black breast-band. The female is similar to the male, but its face and breast are a duller orange-red. It forages on ground in search of its prey, mainly beetles. It is known as the Komadori in Japan.

## MALE JAPANESE ROBIN

*Luscinia megarhynchos*

## Common Nightingale



<b>LENGTH</b>	17cm (6½in)
<b>WEIGHT</b>	17–25g (⁹/₈–⁷/₈oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Thickets, scrub, and coppiced woodland offering cover and open ground, often near water

Larger than the European Robin (above), the Common Nightingale is more thrush-like in shape, with a smaller head and longer tail. It has brownish buff upperparts and a rusty red tail. It is more often heard than seen, skulking and singing from damp undergrowth, riverside thickets, tangled bushes, and densely packed stems of coppiced woodland, where it breeds.

It feeds on the ground, moving in a series of long and short hops, with a thrush-like, upright stance. It will also hunt by dropping from perches on its prey, generally insects such as ants and beetles and other invertebrates, although in autumn it also eats fruit. Normally solitary, the Common Nightingale is territorial. The male remains faithful to the same sites year after year. These birds also sing to establish their winter territories.

## PAIR OF COMMON NIGHTINGALES

## SWEET SONG

The song of the Common Nightingale is richly varied and powerful, a mixture of melody, chuckling, and occasional harsh notes, with sequences of slowly repeated notes that build in volume. Studies suggest that the male sings during the day to communicate with rival males, and at night to attract females.



*Luscinia svecica*

## Bluethroat



LENGTH	15cm (6in)
WEIGHT	18g (1/8oz)
MIGRATION	Migrant

**HABITAT** Damp upland forest; bushes, reeds, and grass near water

A distinctive bird, the male Bluethroat has a blue bib bordered below by bands of black, white, and orange across the breast. The upperparts are

## MALE BLUETHROAT



plain brown except for the black tail, which has a conspicuous rufous edge at the base. The female has a dark breast-band. Ten subspecies of the Bluethroat are recognized. In some of the subspecies, known as Red-spotted Bluethroats, the breeding male has a red spot in the middle of the blue throat (as shown below), while in other subspecies, the breeding male has a white spot – these are therefore called White-spotted Bluethroats.

*Irania gutturalis*

## White-throated Robin



LENGTH	18cm (7in)
WEIGHT	20g (11/16oz)
MIGRATION	Migrant

**HABITAT** Stony hillsides and scrub

The male White-throated Robin has bluish grey upperparts, bright rusty-red underparts, and a black tail that is often cocked. The sides of the face are black, contrasting strongly with a bold white stripe down the centre of the throat. A delicate white eyebrow completes the head pattern. The female of the species is similar, but has more subdued colours and diffuse patterns, the

upperparts and face being brownish grey and only the sides of the belly and breast tinged orange.

The White-throated Robin feeds on insects gathered mainly on the ground, but also from bushes and trees. It breeds on open stony hillsides and valleys with scattered bushes up to an altitude of about 2,000m (6,500ft) in the Middle East and western Central Asia. The nest is a cup woven from grass, twigs, and leaves, lined with hair, down and feathers, paper, rags, and other scraps. It is usually built in a bush, shrub, or low tree, with the female laying 4 or 5 eggs. The female does most of the incubating, though the male may take over when the female leaves the nest. At the end of the summer, the species migrates to eastern Africa, where it winters in thick scrub and undergrowth.



## ADULT RUFOUS-TAILED SCRUB ROBIN

*Cercotrichas galactotes*

## Rufous-tailed Scrub Robin



LENGTH	17cm (6 1/2in)
WEIGHT	20g (1 1/16oz)
MIGRATION	Partial migrant

**HABITAT** Variety of habitats, including dry scrub, stony ground, parks, gardens, and vineyards

The most striking feature of this small bird of dry scrubby areas is its long, slightly fan-shaped rufous tail, with white tips and dark bars on the feathers. It frequently cocks its tail in a vertical position or tilts it so far back that it almost touches the rear of its head, revealing the white feathers of the undertail. The Rufous-tailed Scrub Robin runs and hops beneath bushes, searching for insects and may also perch out in the open, looking for prey.

*Copsychus saularis*

## Oriental Magpie-Robin

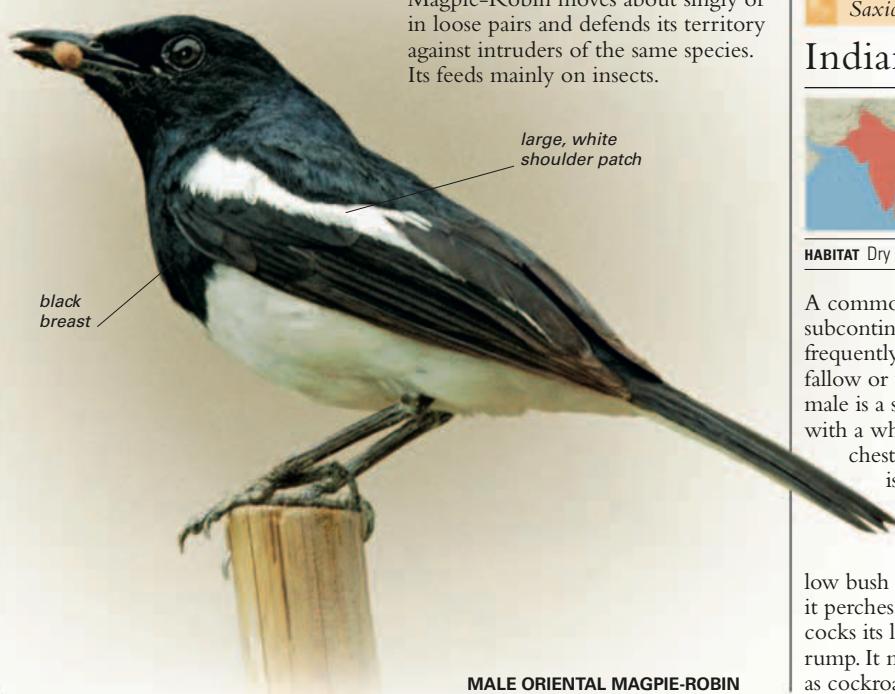


LENGTH	20cm (8in)
WEIGHT	25g (1 1/16oz)
MIGRATION	Non-migrant

**HABITAT** Parks, gardens, scrub, and forest

Also known as the Dayal, or Dial Bird, the Oriental Magpie-Robin is a common bird throughout much of tropical Asia. The male (shown below) has a black head, throat, and upperparts, with a white shoulder patch. The female is similarly patterned to the male, but its upperparts and underparts are grey. It is much shyer than the bold male and seen much less often. The male has a melodious song, its musical notes often heard as it sings on a perch in the breeding season.

A pugnacious bird, the Oriental Magpie-Robin moves about singly or in loose pairs and defends its territory against intruders of the same species. Its feeds mainly on insects.



MALE ORIENTAL MAGPIE-ROBIN



## MALE INDIAN ROBIN

*Saxicoloides fulicatus*

## Indian Robin



LENGTH	16cm (6 1/2in)
WEIGHT	17g (1 1/16oz)
MIGRATION	Non-migrant

**HABITAT** Dry scrubland

A common bird in the Indian subcontinent, the Indian Robin is frequently seen around villages and in fallow or waste ground in towns. The male is a shiny black and brown bird with a white patch on its wing and a chestnut rump, while the female is brownish grey. This robin tends to run along the ground in short spurts or fly short distances from one low bush to another. Sometimes, it perches on a rock or tree, where it cocks its long tail to reveal its chestnut rump. It mainly feeds on insects such as cockroaches and beetles.

*Phoenicurus ochruros***Black Redstart**

<b>LENGTH</b>	14cm (5½in)
<b>WEIGHT</b>	17g (½oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Breeds in open montane habitats and towns and industrial areas; winters in coastal areas

The Black Redstart belongs to the genus *Phoenicurus*, all species of which have the characteristic rufous tail (the word "start" is an old English

**HUMAN IMPACT****BREEDING IN URBAN AREAS IN EUROPE**

Although cliffs and rocky mountainous areas comprise the natural breeding habitat of the Black Redstart, this bird has now taken to breeding in urban areas. In much of Europe, manmade constructions serve as nesting sites and the nests of Black Redstarts are now commonly seen on the rooftops of houses and in industrial complexes, the nest usually being placed in a niche or hole in the building.

*Chaimarrornis leucocephalus***White-capped Redstart**

<b>LENGTH</b>	19cm (7½in)
<b>WEIGHT</b>	20g (1⅓oz)
<b>MIGRATION</b>	Partial migrant

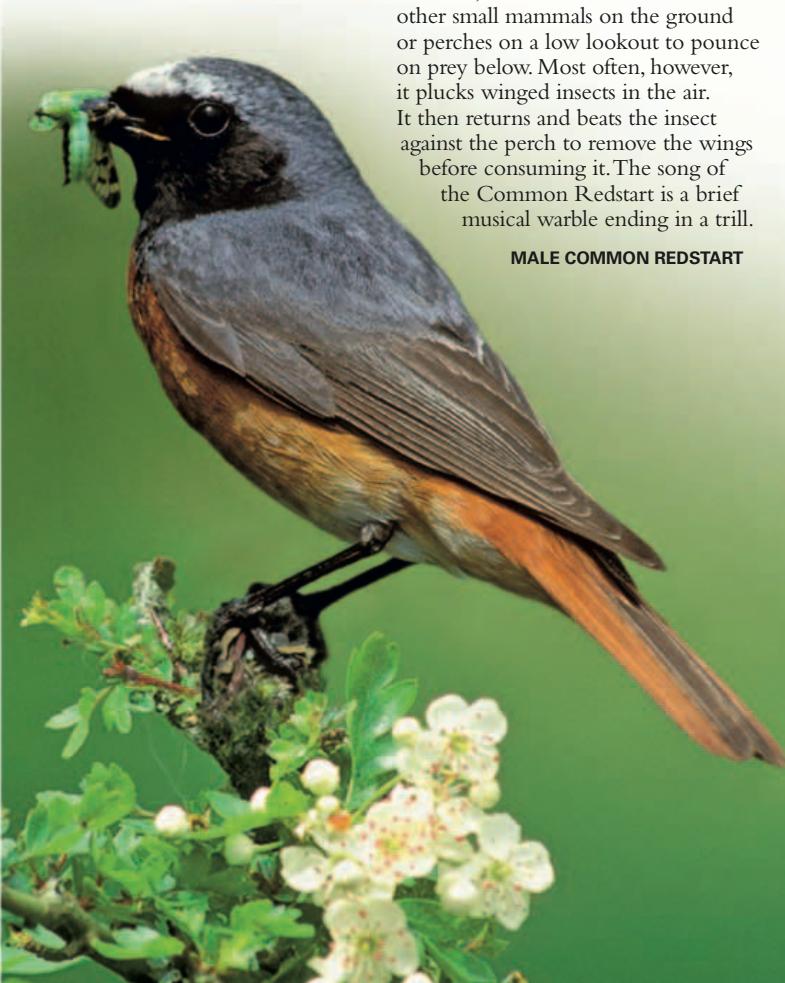
**HABITAT** Mountains, near streams and rivers

Also known as the River Chat, this colourful bird is well-known to all those familiar with the mountains of Central Asia, the Himalayas, and northeast China. It has a white crown, black back, wings, and breast with rufous underparts and a black-tipped rufous tail. It sallies forth from its perch to twist and turn, chasing after an insect borne along by the swirling air currents above streams and rivers.

*Phoenicurus phoenicurus***Common Redstart**

<b>LENGTH</b>	14cm (5½in)
<b>WEIGHT</b>	15g (⅓oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in woodland, forest, parks, and gardens; winters in open savanna and scrub



Superficially similar to the Black Redstart (left), the male Common Redstart is distinguishable by its white forecrown and orange breast. The female is browner overall, and unlike the male, lacks the bluish grey tones of the Black Redstart. The bill of the Common Redstart is short and slim, a general-purpose tool for preying on insects. The bird has several methods of foraging – it may glean insects from tree foliage or out of bark crevices. At times, it hunts for beetles and other small mammals on the ground or perches on a low lookout to pounce on prey below. Most often, however, it plucks winged insects in the air. It then returns and beats the insect against the perch to remove the wings before consuming it. The song of the Common Redstart is a brief musical warble ending in a trill.

**MALE COMMON REDSTART***Myiomela leucura***White-tailed Robin**

<b>LENGTH</b>	17cm (6½in)
<b>WEIGHT</b>	20g (1⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Damp gullies, ravines, and undergrowth in montane, broad-leaved evergreen forest



The White-tailed Robin is a shy and secretive denizen of undergrowth in damp ravines and gullies, often near water. The male is blue-black in colour, the blue of the forehead and shoulder patches being clearly visible in bright sunlight. Its eyes and bill are also black. The white in the tail, which gives the bird its name, only becomes apparent when the bird spreads its long, broad, black tail, perhaps to display the fan to a female or to startle an insect into movement. The female has the same tail pattern as the male, but is brown, with a thin white band across the throat and a brown breast-band.

Found singly or in pairs, the White-tailed Robin forages on the ground, feeding on insects and berries, and flies up into trees if disturbed. Its calls are a low, quiet "tuk" and a thin whistle, while its song is an undulating and rapid series of notes.

**ADULT WHITE-TAILED ROBIN**



ADULT MALE

*Enicurus leschenaulti*

### White-crowned Forktail



<b>LENGTH</b>	25–28cm (10–11in)
<b>WEIGHT</b>	35g (1¼oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Near fast-flowing rivers and streams

This elegant bird has a black mantle and breast and its tail is banded black and white. It has pink legs and a black bill. The White-crowned Forktail feeds along rivers and streams, searching for insects and larvae. It nests in crevices or hollows in trees and rocks. Its nest is built of moss and leaves and both the male and the female incubate the eggs.



MALE EURASIAN STONECHAT

*Saxicola torquatus*

### Eurasian Stonechat

**LENGTH**

13cm (5in)

**WEIGHT**

11–15g (3⅔–9⅓oz)

**MIGRATION**

Partial migrant

**HABITAT** Open, often barren habitats, such as heathland and mountain

Also known as the Common Stonechat, the Eurasian Stonechat is found from Ireland to Japan and Siberia to South Africa. Within this huge range, there are many distinctive subspecies, some of which are often treated as separate species. The male and female are quite distinct in appearance: the male has a dark hood, generally a rufous front, a dark brown back, and varying amounts of white on the wings and collar, while the female has fewer white markings and a browner head. Pairs are often seen together, prominently perched on bushes and other lookouts.

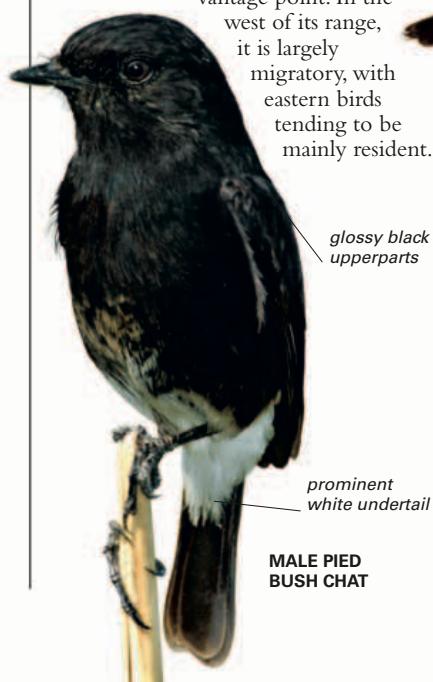
Some European populations (such as those in Britain) are largely sedentary, but many birds move south for the winter, particularly to North Africa. Many Asian populations also tend to move long distances, while southern African ones tend to be non-migratory.

*Saxicola caprata*

### Pied Bush Chat



<b>LENGTH</b>	14cm (5½in)
<b>WEIGHT</b>	15g (9/16oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open terrain such as scrub, grassland, and steppes

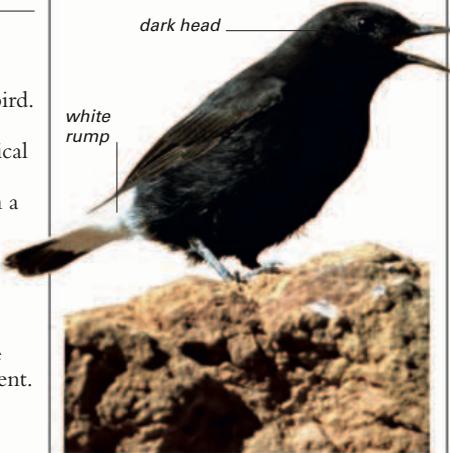
Mainly black, apart from the white wing-bar, rump, and undertail, the male Pied Bush Chat is a striking bird. The female is much plainer and browner. The species feeds in a typical chat fashion, flying down to the ground to take insects spotted from a vantage point. In the west of its range, it is largely migratory, with eastern birds tending to be mainly resident.

*Oenanthe leucura*

### Black Wheatear



<b>LENGTH</b>	18cm (7in)
<b>WEIGHT</b>	40g (1⅓oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Steep rocky hillsides, cliffs, ravines, and ruins

ADULT BLACK WHEATEAR

An upland bird, the Black Wheatear has taken its love of rocks to extremes. The male often fetches and arranges large numbers of pebbles near the entrance to its nest as a demonstration to the female of its suitability as a mate. At one nest, more than 9,000 stones were counted, including one weighing more than half the bird's own weight. Unlike other wheatears, the male and female are similar in appearance, but the male is glossier, while the female is duller and browner.

*Oenanthe oenanthe*

### Northern Wheatear



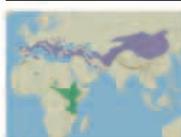
<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	20–30g (1⅓–1⅓oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in open ground, including heathland and rocky hillsides; winters in a range of habitats

world's great migrants. It breeds in inhospitable places such as Greenland, Alaska, and northern Siberia, before moving south to spend the winter in sub-Saharan Africa.

*Monticola saxatilis*

### Rufous-tailed Rock Thrush



<b>LENGTH</b>	16–19cm (6½–7½in)
<b>WEIGHT</b>	50g (1¾oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds on rocky slopes and hillsides; occurs more widely in winter, usually in wooded savanna

MALE RUFOUS-TAILED ROCK THRUSH



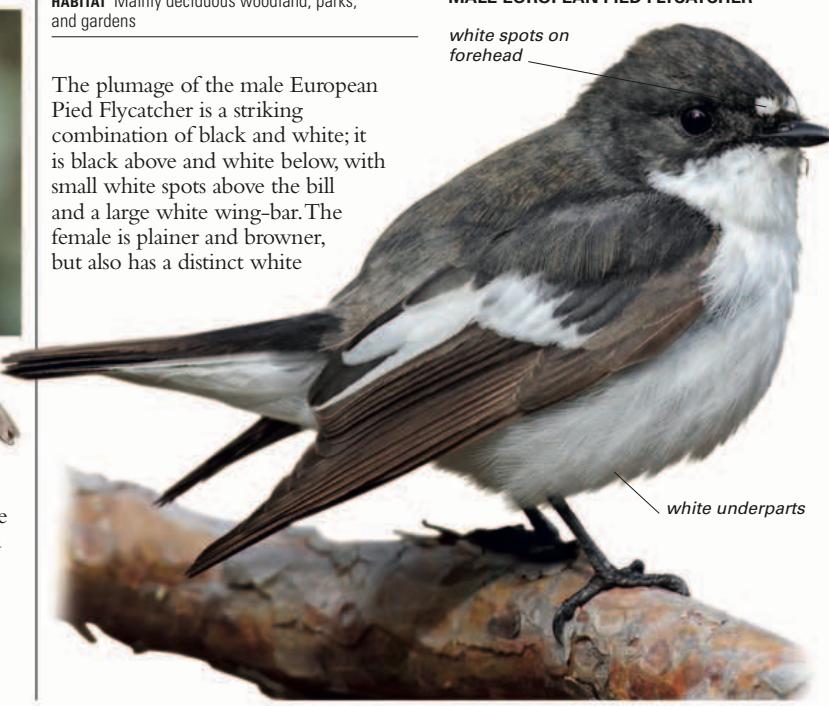
The male Rufous-tailed Rock Thrush has a combination of blue-grey upperparts (with a white patch on the back) and orange underparts, while the female is brown and has a scaled appearance. The species breeds in southern Europe and eastern China, with most birds migrating to sub-Saharan Africa for the winter.

*Muscicapa striata***Spotted Flycatcher****LENGTH**  
70–90cm (28–35in)**WEIGHT**  
16g (½oz)**MIGRATION**  
Migrant**HABITAT** Deciduous woodland, parks, and gardens**ADULT SPOTTED FLYCATCHER**

An elegant, but rather plain bird, the Spotted Flycatcher has a subtly streaked head, a brown back, with a noticeable pale wing-bar, and creamy white underparts. It might be more appropriately named “Streaked Flycatcher”, since the markings on its breast are vertical streaks rather than spots. Its tail is long and points downwards. The species is the most common and widespread flycatcher throughout Europe.

*Ficedula hypoleuca***European Pied Flycatcher****LENGTH**  
13cm (5in)**WEIGHT**  
12–15g (⅓–⅔oz)**MIGRATION**  
Migrant**HABITAT** Mainly deciduous woodland, parks, and gardens

The plumage of the male European Pied Flycatcher is a striking combination of black and white; it is black above and white below, with small white spots above the bill and a large white wing-bar. The female is plainer and browner, but also has a distinct white



wing-bar that distinguishes it from the Spotted Flycatcher (left). The female makes a loose nest of moss, roots, and strips of bark, lined with feathers. It lays about 1–11 pale blue eggs with red speckles. Like other flycatchers, the species performs a circular sally for insects from its perch, its bill clicking as it snaps shut on its prey. A long-distance migrant, it winters south of the Sahara in West Africa.

**MALE EUROPEAN PIED FLYCATCHER***white spots on forehead**white underparts***NESTING**

A hole-nesting species, the European Pied Flycatcher likes tree-holes made by woodpeckers or crevices that are created when rotten branches fall away from the trunk. It often takes over abandoned Willow-Tit nest sites, particularly in Scandinavia, probably because they are just the right size. Nest boxes, however, are increasingly favoured, even over natural sites.

**FEMALE BRINGING FOOD**

This female European Pied Flycatcher is feeding its young, which are safely ensconced in a nest inside an old woodpecker hole.

*Ficedula parva***Red-breasted Flycatcher****LENGTH**  
11cm (4½in)**WEIGHT**  
10g (⅓oz)**MIGRATION**  
Migrant**HABITAT** Mainly deciduous woodland; breeds in tall deciduous or mixed forest**MALE RED-BREASTED FLYCATCHER**

The Red-breasted Flycatcher is the smallest flycatcher found in Europe. It frequently pumps and spreads its tail to reveal a distinct pattern of bold white patches that contrast with the dark centre and tip. Only the mature adult male has a striking red throat; the female and juvenile have pale underparts. A very mobile species, it flits around tree canopies.

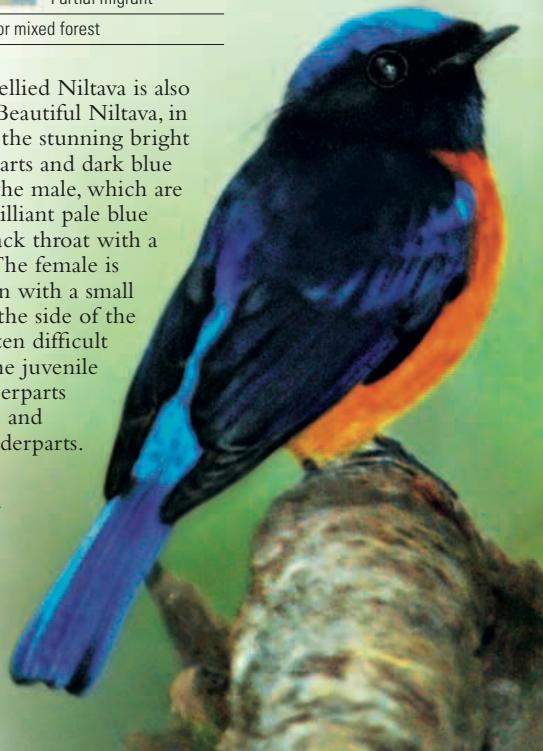
*Cyanoptila cyanomelana***Blue-and-white Flycatcher****LENGTH**  
17cm (6½in)**WEIGHT**  
25g (⅔oz)**MIGRATION**  
Migrant**HABITAT** Deciduous and mixed forests, near streams

Glossy blue upperparts and a black face and breast, which contrast spectacularly with its bright white underparts, make up the distinctive plumage of the male Blue-and-white Flycatcher. The female is mainly brown, with a white throat and belly and a distinct pale eye-ring.

The call of the Blue-and-white Flycatcher is a melodious warble.

**ADULT MALE***Niltava sundara***Rufous-bellied Niltava****LENGTH**  
18cm (7in)**WEIGHT**  
20g (⅔oz)**MIGRATION**  
Partial migrant**HABITAT** Deciduous or mixed forest

The Rufous-bellied Niltava is also known as the Beautiful Niltava, in recognition of the stunning bright orange underparts and dark blue upperparts of the male, which are topped by a brilliant pale blue cap. It has a black throat with a tinge of blue. The female is drab and brown with a small blue patch on the side of the neck that is often difficult to see, while the juvenile has brown upperparts with buff spots and buff-brown underparts.

**MALE RUFOUS-BELLIED NILTAVA**

**NORTHERN WHEATEARS**

Northern Wheatears arrive in northern Europe (these birds were photographed in Finland) in summer, having spent the winter in Africa.





# DIPPERS

**ORDER** Passeriformes  
**FAMILY** Cinclidae  
**SPECIES** 5

THE FIVE SPECIES OF dipper have a wide, but patchy, global distribution, being found in much of Europe and Asia, some western areas of North and South America, and small areas of

North Africa and the Middle East. They are medium-sized, stocky birds, with short, cocked tails and mainly dark plumage. All dippers are highly adapted for life in and near fast-flowing water.

## BEHAVIOUR

Birds of this family spend their entire lives around clear, fast-flowing rivers and streams. They dive under the water and swim around in search of invertebrate prey such as larvae and insect nymphs that can be found among the rocks and stones. Dippers have many special adaptations to this lifestyle. Their squat shape and short, powerful wings are ideally suited to swimming, and they have a dense covering of well-oiled and waterproof feathers.

### DIPPER DIVING

A White-throated Dipper swims along a riverbed looking for insects and larvae among the rocks and stones.



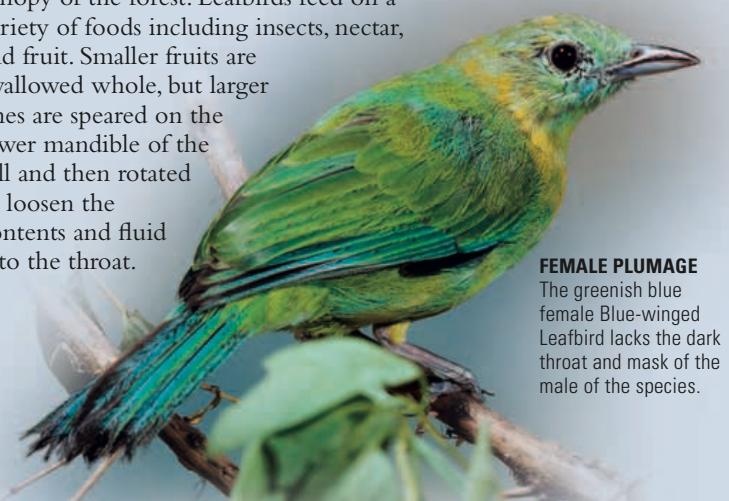
# LEAFBIRDS

**ORDER** Passeriformes  
**FAMILY** Chloropseidae  
**SPECIES** 8

upright stance. In the majority of leafbird species the male has a dark face and throat. Females and juveniles are usually a uniform green in coloration.

## BEHAVIOUR

The bright green plumage that is shared by the various leafbirds affords them excellent camouflage as they move through the leafy canopy of the forest. Leafbirds feed on a variety of foods including insects, nectar, and fruit. Smaller fruits are swallowed whole, but larger ones are speared on the lower mandible of the bill and then rotated to loosen the contents and fluid into the throat.



### BRUSH-SHAPED TONGUE

The tongue of this Golden-fronted Leafbird is a useful adaptation for feeding on nectar-rich flowers.



**FEMALE PLUMAGE**  
The greenish blue female Blue-winged Leafbird lacks the dark throat and mask of the male of the species.

### *Cinclus mexicanus*

## American Dipper

<b>LENGTH</b>	19cm (7½in)
<b>WEIGHT</b>	55–60g (2–2½oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Rocky streams in mountainous areas

Closely resembling its European counterpart, the White-throated Dipper (right) in behaviour, the American Dipper differs in its plumage, which is a uniform grey. It has a straight black bill and pink legs. It feeds on aquatic insects and their larvae, and may also take tiny fish. Between feeding bouts, it can be seen perching on rocks, bobbing its whole body up and down. Its nest, built by the female, is a large ball with a side entrance, often situated behind a waterfall or under a bridge.



ADULT AMERICAN DIPPER



ADULT FEEDING ON AN INSECT

### *Cinclus cinclus*

## White-throated Dipper

<b>LENGTH</b>	19–21cm (7½–8½in)
<b>WEIGHT</b>	55–65g (2–2¾oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Rivers and streams in or near woodland or forest, from sea-level to high mountain areas

Like other dippers, this plump, short-tailed bird is equipped with an extra eyelid called a nictitating membrane, which allows it to see under water, and scales that close its nostrils when it is submerged. The adult White-throated Dipper is dark brown and slate-grey, with a white throat and breast. The juvenile is a more uniform grey, apart from pale feather tips.

### *Chloropsis aurifrons*

## Golden-fronted Leafbird

<b>LENGTH</b>	18cm (7in)
<b>WEIGHT</b>	30–35g (1⅓–1⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Canopy of deciduous, broad-leaved, evergreen and mixed forests, and secondary growth



Predominantly green in colour, both sexes of the Golden-fronted Leafbird are alike, with a purple-blue throat encircled by black, and a pronounced orange forehead. This leafbird can be found searching for insects and fruit in pairs or small groups and often joins mixed-species feeding flocks. It builds a simple cup-shaped nest in a tree, and lays 2 or 3 cream to buff eggs with pale red markings. The male and the female take turns in incubating the eggs until they are hatched, which is usually after two weeks of incubation.

ADULT GOLDEN-FRONTED LEAFBIRD

# FLOWERPECKERS

**ORDER** Passeriformes  
**FAMILY** Dicaeidae  
**SPECIES** 44

Mistletoebird, occurs in Australia. The rarest member of the family is the Cebu Flowerpecker, a critically endangered black, white and red species that is found only on the island of Cebu in the Philippines, and numbers only around 100 individuals. Birds of this family are generally brightly coloured, although some (such as the aptly named Plain Flowerpecker) are rather dull in appearance. Males and females usually have similar plumage.

**FLOWERPECKERS OCCUR** mainly in Asia, from India to the Philippines.

One species, the

## ANATOMY

Although these small, and short-tailed birds feed on berries and insects, nectar from flowers forms an important part of the diet in many species, hence the family name. This dietary preference is aided by the short, fine bill, which can easily probe inside flowers, and the split, tubular-shaped tongue. The design of the tongue of this family of birds is invaluable when feeding on nectar by helping to channel the sticky fluid into the bird's throat. The sharp bill is also an effective tool for piercing fruit, allowing the bird to extract the sweet juices.

### CONTRASTING COLOURS

The male Crimson-breasted Flowerpecker has yellow underparts and a contrasting scarlet breast patch.

*Dicaeum percussum*

### Crimson-breasted Flowerpecker



**LENGTH**  
10cm (4in)  
**WEIGHT**  
9g (1 1/32oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Canopy of broad-leaved evergreen forest, forest edges, forest gaps, up to 1,200m (4,000ft)

With its dark blue and yellow plumage, and bright red crown and breast patches, the Crimson-breasted Flowerpecker is one of the most striking southeast Asian flowerpeckers. The female is greenish olive above, with a fainter red crown patch, and duller below, without the red breast patch. This flowerpecker is mostly seen feeding on small fruit in the canopy, giving high-pitched chipping calls. The nest is oval and is suspended from the twigs of a tree branch.



ADULT MALE



*Dicaeum hirundinaceum*

### Mistletoebird



**LENGTH**  
10cm (4in)  
**WEIGHT**  
9g (1 1/32oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Various types of forest and woodland and other vegetation supporting mistletoe

The Mistletoebird is the only species of flowerpecker in Australia. The male is blue-black with a red throat, upper breast, and vent, and shows a vertical black stripe on the centre of its pale grey abdomen. Very different from the male, the female Mistletoebird is mostly grey, with a contrasting orange vent and a white instead of red throat. It is a restless bird that moves quickly about the tree-tops, uttering its sharp "dzee" call-note.

The nest is a pear-shaped purse with a slit-like entrance on one side, and is suspended from leafy twigs. It is constructed solely by the female; 3 or 4 white eggs are laid and the female incubates them alone for about two weeks. However, both parents feed the young for a further two weeks.

MALE MISTLETOEBIRD

### FEEDING HABITS

As the common name suggests, the Mistletoebird eats a variety of mistletoe-like berries. The seeds pass through its tiny body quickly and fall off in sticky droppings that are wiped onto the branches of trees. The seeds then germinate and form new mistletoe plants.

#### FEMALE EATING BERRY

Adapted to a diet of mistletoe berries, the species lacks a muscular gizzard (food-grinding organ), allowing whole seeds to come out in droppings.



# SUNBIRDS

ORDER Passeriformes

FAMILY Nectariniidae

SPECIES 127

FOUNDED IN FORESTS and gardens in Africa, southern and southeast Asia, and northernmost Australia, sunbirds are the Old World equivalent of hummingbirds in the New World, but evolved entirely separately from them. Like hummingbirds, these are small, fast-moving birds with long, decurved bills and long tongues suited to feeding on flower nectar, spiders, and insects. The spiderhunters have much longer bills for picking prey from spiders' webs. Most male sunbirds are brightly coloured, often with iridescent areas of plumage on the head, throat, and back, whereas the females are typically dull green, brown, or grey.

**PROTEIN-RICH DIET**

A Purple-rumped Sunbird gives a caterpillar to its chicks. Sunbirds feed their nestlings entirely on invertebrates.

*Hedydipna platura***Pygmy Sunbird**

	<b>LENGTH</b> 9–17cm (3½–6½in)
	<b>WEIGHT</b> 7g (⅓oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Arid savanna, riverine scrub, and gardens

Although a very small bird, the Pygmy Sunbird is noticeable because of its extremely long tail streamers, which are up to 7cm (3in) long. The male's plumage is two-toned, with a green throat and upperparts and golden-yellow underparts, while the female has drabber plumage, with grey-brown upperparts and yellow underparts. It also has a faint yellow eyebrow.

**MALE PYGMY SUNBIRD***Leptocoma zeylonica***Purple-rumped Sunbird**

	<b>LENGTH</b> 8cm (3¼in)
	<b>WEIGHT</b> 8g (⅓oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Open deciduous woodland, secondary woodland and well-wooded cultivation, and gardens

The distinguishing features of this medium-sized sunbird include the pale yellow underparts and white flanks and undertail feathers, which are shown by both sexes. The male Purple-rumped Sunbird has bright iridescent feathering in its plumage. It is dark maroon above, with a thin maroon breast-band. The crown is glossy blue-green as is the bend

**MALE PURPLE-RUMPED SUNBIRD**

in the wing and it has violet patches on the throat and rump. The female is dull brown above, and has a white throat, which contrasts strongly with the yellow underparts. These birds feed on insects and fruit and are considered pests in grape-growing regions. They are usually encountered in pairs and breed during the wet season or monsoon.

*Chalcomitra balfouri***Socotra Sunbird**

	<b>LENGTH</b> 15cm (6in)
	<b>WEIGHT</b> 15 (⅔oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Arid wooded hillsides

Named after the small island of Socotra off the Horn of Africa, to which it is endemic, the Socotra Sunbird is a large, drab-coloured sunbird. This sunbird has red eyes and a black chin. Its breast is barred in black and it has grey-brown, streaked upperparts and white underparts. Both sexes are similar, except for the yellow tufts on the male's chest, which remain hidden under the wings unless the bird is displaying. Although much of its primary habitat on Socotra has been drastically modified by clearance and over-grazing, this species appears to be faring well and is not currently considered to be threatened.

**ADULT SOCOTRA SUNBIRD**

*Nectarinia kilimensis*

## Bronzy Sunbird



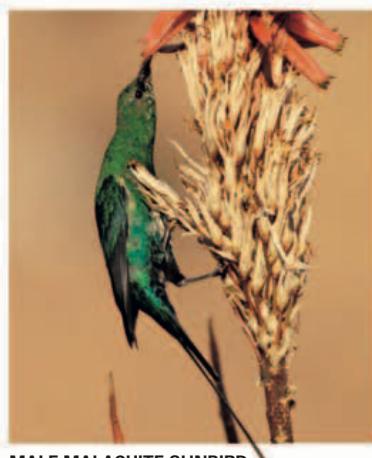
LENGTH	12–22cm (4½–8½in)
WEIGHT	14–17g (½–5/8oz)
MIGRATION	Non-migrant

**HABITAT** Upland grassland, heaths, forest edges, clearings, and gardens



FEMALE BRONZY SUNBIRD

A familiar upland bird throughout its range, the Bronzy Sunbird is frequently seen feeding in gardens. The male is largely black, with a gold, bronze, and green sheen on the head, throat, and mantle. The female is brown-green above, with a dark mask and pale eyebrow and throat. The underparts are yellow, with brown streaks. Feeding largely on nectar, the Bronzy Sunbird favours tubular flowers, such as the red-hot poker, but also frequents sugar-water feeders.



MALE MALACHITE SUNBIRD

*Nectarinia famosa*

## Malachite Sunbird



LENGTH	15–24cm (6–9in)
WEIGHT	14–18g (½–5/8oz)
MIGRATION	Non-migrant

**HABITAT** Upland grassland, scrub, and forest edges; lower in cool, wet months

The Malachite Sunbird is a large, long-tailed mountain species. The breeding male is bright emerald green, with darker flight feathers and elongated central tail feathers. It has bright yellow breast tufts but these are usually hidden, except during display. Like the Bronzy Sunbird (left), this species favours plants with tubular flowers.

*Cinnyris jugularis*

## Olive-backed Sunbird



LENGTH	12cm (4½in)
WEIGHT	8–10g (½–3/8oz)
MIGRATION	Non-migrant

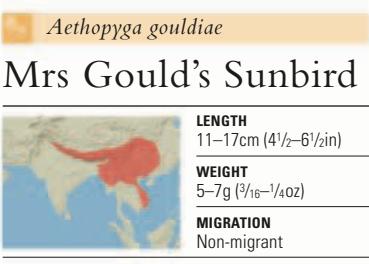
**HABITAT** Lowland open deciduous woodland, mangroves, coastal scrub, and cultivated land

Named for the olive upperparts, other features of the male Olive-backed Sunbird include yellow underparts. The male also has metallic blue coloration on its forehead, throat, and upper breast. The female lacks the blue coloration, which is replaced by yellow. This sunbird mainly feeds on nectar, extracting it from flowers with its long, slender, decurved bill and deeply cleft tongue.

MALE OLIVE-BACKED SUNBIRD



ADULT MALE (A.G. ISOLATA)



**HABITAT** Mid-montane broad-leaved evergreen forest, forest edges, and secondary growth

This shy species shows marked variations across its large range. The male (shown here) is of the subspecies *A.g. isolata*, found in northeast India, Bangladesh, and Myanmar (Burma). It differs from the other three subspecies in its very narrow red breast-band and violet-blue, instead of glossy blue, tail streamers. Otherwise, the males are similar, with small patches of violet on the crown, throat, and cheeks, rich red upperparts, and bright, iridescent rumps and tails. Largely insectivorous, this species also feeds on parasitic plants.

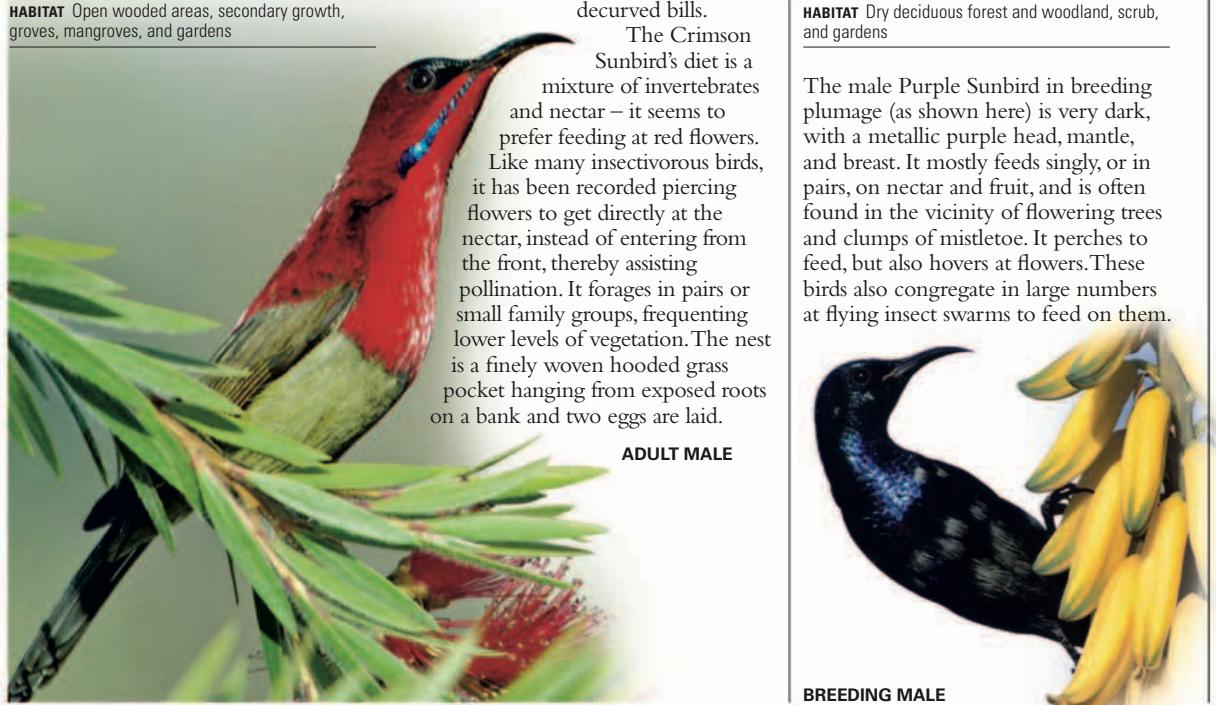
*Aethopyga siparaja*

## Crimson Sunbird



LENGTH	10–12cm (4–4½in)
WEIGHT	6–8g (⅓–5/16oz)
MIGRATION	Non-migrant

**HABITAT** Open wooded areas, secondary growth, groves, mangroves, and gardens

*Cinnyris asiatica*

## Purple Sunbird



LENGTH	7–9cm (2¾–3½in)
WEIGHT	9g (1¹/₃₂oz)
MIGRATION	Non-migrant

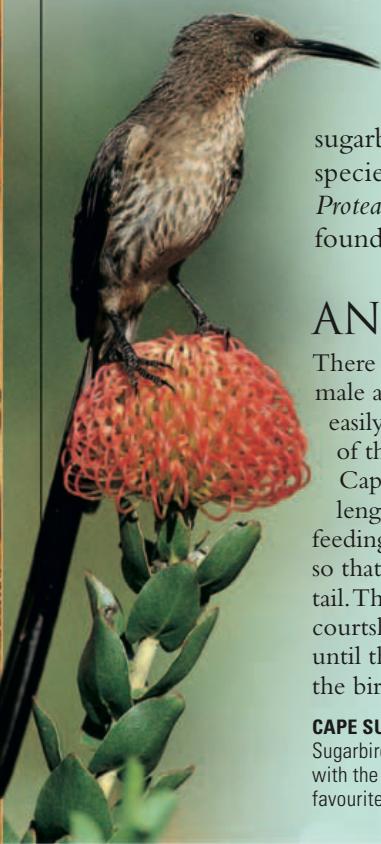
**HABITAT** Dry deciduous forest and woodland, scrub, and gardens

The male Purple Sunbird in breeding plumage (as shown here) is very dark, with a metallic purple head, mantle, and breast. It mostly feeds singly, or in pairs, on nectar and fruit, and is often found in the vicinity of flowering trees and clumps of mistletoe. It perches to feed, but also hovers at flowers. These birds also congregate in large numbers at flying insect swarms to feed on them.



# SUGARBIRDS

**ORDER** Passeriformes  
**FAMILY** Promeropidae  
**SPECIES** 2



SUGARBIRDS ARE FOUND only in South Africa. They have been classified with such diverse families as honeyeaters (see p.362), starlings (see p.430) and thrushes (see p.436), but recent DNA evidence suggests they are most closely related to the sunbirds (see p.450). The habits of sugarbirds are closely tied to the various species of the African shrubs of the genus *Protea* since their main food is the nectar found in the flowers.

## ANATOMY

There is little difference in coloration between male and female sugarbirds but the sexes are easily distinguished by the much longer tails of the males. The length of tail alone of a male Cape Sugarbird can be greater than the entire length of a female of the same species. When feeding, the sugarbird often faces into the wind so that the breeze does not blow around its long tail. The male displays his tail prominently in courtship flights, jerking it rapidly up and down until the long feathers whip above and below the bird's body.

### CAPE SUGARBIRD

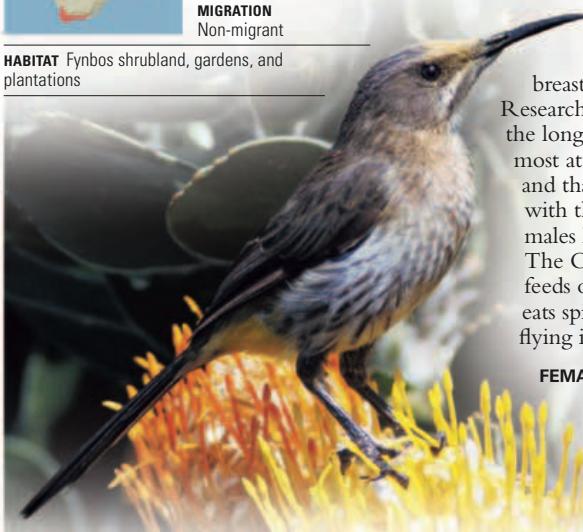
Sugarbirds time their nesting to coincide with the peak flowering season of their favourite flowers.

*Promerops cafer*

### Cape Sugarbird

	<b>LENGTH</b> 28–43cm (11–17in)
	<b>WEIGHT</b> 35g (1¼oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Fynbos shrubland, gardens, and plantations



Its extraordinarily long tail distinguishes the male Cape Sugarbird from other birds, except the closely related, and shorter-tailed, Gurney's Sugarbird (*P. gurneyi*). The male Cape Sugarbird has a brown head and back and a brown stripe on the white throat. It has a yellow vent and the long tail is dark brown. The female has a white breast and shorter tail. Researchers have found that the longest-tailed males are most attractive to females and that females that mate with the longest-tailed males lay the most eggs. The Cape Sugarbird feeds on flowers but also eats spiders, beetles, and flying insects.

FEMALE CAPE SUGARBIRD



### IMPORTANT POLLINATOR

With its long curved bill and even longer brush-tipped tongue, the Cape Sugarbird is perfectly adapted to extracting nectar from the tube-shaped florets that make up the flowers of *Protea* ("sugarbush") shrubs. As they move from plant to plant, they transfer pollen from the flowers.

# OLD WORLD SPARROWS AND SNOWFINCHES

**ORDER** Passeriformes  
**FAMILY** Passeridae  
**SPECIES** 40



THESE ARE BIRDS OF OPEN country, including savanna, semi-desert, grassland, and farmland. The family was originally confined to Eurasia and Africa, but House and Tree Sparrows have been introduced to every continent except Antarctica. With their short, strong conical beaks, they are adapted to a diet of seeds; several species have extended their ranges following human cultivation of cereal crops. Sparrows feed and roost in large flocks, and nest in colonies.

### SNOWFINCHES FEEDING

These White-winged Snowfinches feed on insects and seeds, including pine nuts. This alpine species is often found around mountain villages and ski resorts.

*Philetairus socius*

### Sociable Weaver

	<b>LENGTH</b> 14cm (5½in)
	<b>WEIGHT</b> 25g (⅞oz)
	<b>MIGRATION</b> Non-migrant

**HABITAT** Open savanna and grassland, with large trees for nesting



The Sociable Weaver has a brown body, black face mask, a patterned back and wings, and black speckled sides. It forages in groups for seeds and insects. Up to 500 birds may be involved in building the huge haystack-like nests, some of which have been in use for over 100 years. These nests maintain a constant temperature, even when night-time temperatures outside drop to freezing. This thermal efficiency cuts food needs and, in arid regions, water consumption. Living up to its name, the Sociable Weaver often plays host to other small birds.

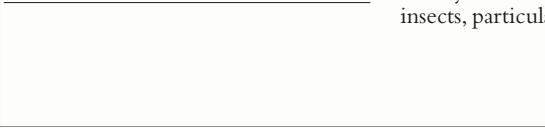
ADULT SOCIALE WEAVER

*Passer moabiticus*

### Dead Sea Sparrow

	<b>LENGTH</b> 12cm (4½in)
	<b>WEIGHT</b> 15g (⅔oz)
	<b>MIGRATION</b> Partial migrant

**HABITAT** Scrub, especially with tamarisk, usually near water; also cultivated land



The smallest and most colourful of the *Passer* genus, the Dead Sea Sparrow has extended its range in recent decades. The male has a grey crown, cheeks, neck, and back and a small black bib. Its upperparts are reddish brown, with dark streaks, and the underparts are grey-white. The female is like a House Sparrow (opposite), but has a smaller bill and paler plumage. Like other sparrows, this sparrow is mainly a seed-eater, and also takes insects, particularly when breeding.

 *Passer domesticus*

## House Sparrow



LENGTH	15cm (6in)
WEIGHT	30g (1 1/16oz)
MIGRATION	Non-migrant

**HABITAT** Wide variety of habitats; tolerates extremes of climate and altitude

The House Sparrow has followed human settlement around much of the world and has been introduced in the Americas and Australia. Grain and food scraps supplement or even replace its natural diet of grass and weed seeds, and it readily adapts to nesting in holes in buildings and nest boxes instead of cavities in trees and rocks. Sturdy and aggressive, it can evict other hole-nesting species. It has one of the shortest incubation periods of any bird, and can produce 3–4 broods, each of up to seven young, in a season. The male House Sparrow is rufous-brown at the back of the head,

## MALE HOUSE SPARROW



with a grey crown. A black bib extends over the chest and the underparts are grey. The female is browner overall with a pale stripe behind each eye.

While it has become a major agricultural pest in the USA, eating and spoiling grain and animal feed, the House Sparrow has declined sharply in much of western Europe. Although intensive farming has reduced its winter feeding opportunities, the reason for its sudden decline in Europe is not yet known.

 *Passer montanus*

## Eurasian Tree Sparrow



LENGTH	14cm (5 1/2in)
WEIGHT	25g (7/8oz)
MIGRATION	Partial migrant

**HABITAT** Farmland and woodland in open country with scattered trees

Outside the breeding season, the Eurasian Tree Sparrow mixes with the House Sparrow (above) in foraging flocks on farmland. It is easily told apart as it is more slender and “neater” in appearance, with a chestnut cap, characteristic black cheek patches on a white face, dark streaks on the back, and a plain brown tail. The male and the female are similar.

The Eurasian Tree Sparrow nests colonially in holes in trees, cliff faces, and old buildings, and sometimes among twigs forming the nests of larger birds like crows and herons. The rounded nest is made of straw and grass. Introduced by settlers to the USA, it has also extended its range to northern Europe, the Mediterranean islands, and new areas in the Middle East. However, its numbers are declining in western Europe.

 *Petronia petronia*

## Rock Sparrow



LENGTH	14cm (5 1/2in)
WEIGHT	30g (1 1/16oz)
MIGRATION	Partial migrant

**HABITAT** Rocky hills and mountains and the fringes of deserts; on farmland in winter

The Rock Sparrow is similar in size to a House Sparrow (above), but with a longer, more stout bill and larger head. Its face and crown have lined markings. It is also a more powerful flier, with wings that are strikingly longer than the House Sparrow's. It subsists on grass and weed seeds,

supplemented by berries in the autumn and insects in spring, and while breeding. The young are fed on insects. Many sparrow species are promiscuous, with both sexes mating outside the pair. But the Rock Sparrow is polygynous, and the male mates with a second and even third female after the first has begun nesting. The female builds the nest by herself. These sparrows breed in scattered colonies, sometimes sharing suitable sites with House Sparrows and other hole-nesting species. The Rock Sparrow is often seen on the ground, where it runs as well as hops. Its call is nasal and repetitive.

## ADULT PROVISIONING A NEST

 *Montifringilla nivalis*

## White-winged Snowfinch



LENGTH	17cm (6 1/2in)
WEIGHT	30g (1 1/16oz)
MIGRATION	Non-migrant

**HABITAT** Mountains, in rocky and grassy areas between the tree line and the snow line



## ADULT WHITE-WINGED SNOWFINCH

The highly variegated plumage of the White-winged Snowfinch is mainly grey-brown in colour. Its white wings are black-tipped and its tail is white with narrow black centre. It is similar to the Snow Bunting (see p.475) but lives so high in the alpine regions of Europe and Asia that the two species are unlikely to be seen together.

The White-winged Snowfinch has been described as an alpine counterpart of the House Sparrow (above), because of its successful exploitation of human changes to its habitat. It is often found near mountain villages and ski resorts and readily takes food put out for it. It nests on rock faces, often alongside swifts, but also takes readily to the roof cavities of occupied buildings. After breeding, the birds form flocks that can number 100 or more.

# WEAVERS

**ORDER** Passeriformes  
**FAMILY** Ploceidae  
**SPECIES** 108

WEAVERS OCCUR IN both open country and forests across sub-Saharan Africa, with a handful of species in Madagascar and southern Asia.

They are related to the

Old World sparrows (see p.452), waxbills (see p.458), and whydahs (see p.462), all of which were formerly placed in the same family.

## ANATOMY

Most weavers are sparrow-like in size and shape. Their bills vary from small and thick in the seed-eating, open country species to more slender and pointed in the insectivorous, forest dwelling birds. Some show extreme sexual dimorphism with the breeding males brightly coloured while the females are a muted brown.



### SEXUAL DIMORPHISM

The male Southern Red Bishop is a stunning crimson and black, while the female is a muted brown. Outside the breeding season, males resemble females.



## BEHAVIOUR

True to their name, weavers build their nests by weaving together strips of plant material into elaborate, covered nests. After bridging the space between two supports, the bird will stand on this structure and weave the bowl of the nest.

The entrance is a tunnel woven to the side or underneath. Some species of buffalo weaver build large communal nests with multiple nesting chambers in trees, while others nest singly. Weavers are often found in mixed species flocks with starlings and other weavers.

### NEST BUILDING

Southern Masked Weavers build oval nests by weaving together strips of grass that they attach to vertical reeds, shrubs, or papyrus stalks. The floor of the nest is cushioned with plant down.

### Bubalornis albirostris

#### White-billed Buffalo Weaver



	LENGTH
	23cm (9in)
	WEIGHT
	70g (2½oz)
	MIGRATION
	Non-migrant

**HABITAT** Mainly dry savanna, but also on farmland or near villages

Its thick white bill gives the White-billed Buffalo Weaver its name. The undertail and rump feathers are black, with white flecks on the back and wings. The species is highly colonial and a nest structure can contain up to 10 separate chambers woven within it.

Its main food is seeds, mostly cereals such as millets, but juveniles feed only on insects.



### Sporopipes frontalis

#### Speckle-fronted Weaver



	LENGTH
	12cm (4¾in)
	WEIGHT
	15–20g (½–1⅓oz)
	MIGRATION
	Non-migrant

**HABITAT** Dry bush and open thorn-scrub; also found around villages

The Speckle-fronted Weaver has a distinct orange-brown hood with a black forehead. The underparts are flat grey with brown variegated wings. The sexes are alike, although juveniles tend to be paler. This bird mainly feeds on seeds from the ground and insects. This is mostly a solitary nesting species although small colonies are also seen. The nest is an untidy ball-shaped structure with a long side entrance.

### Dinemellia dinemelli

#### White-headed Buffalo Weaver



	LENGTH
	18cm (7in)
	WEIGHT
	60–80g (2¼–2½oz)
	MIGRATION
	Non-migrant

**HABITAT** Mainly dry bush and open acacia savanna

Although mostly white, the White-headed Buffalo Weaver has a contrasting black facial mask, wings, and tail. The undertail and rump feathers are orange or red in the male but often paler in the juvenile. The nesting behaviour of this species is complex, and co-operative breeding has been recorded in captive birds. The dome-shaped nest is built

### ADULT WHITE-HEADED BUFFALO WEAVER



ADULT WHITE-BILLED BUFFALO WEAVER

*Ploceus capensis*

## Cape Weaver



LENGTH	18cm (7in)
WEIGHT	35–55g (1¼–2oz)
MIGRATION	Non-migrant

**HABITAT** Open country with trees, mostly near water

The male Cape Weaver has dark-streaked wings, yellow underparts, an orange tinge to the face and white eyes. The female and the juvenile, however, have an olive-yellow head and breast, shading to pale yellow on the lower belly, and brown eyes. The bill of the Cape Weaver is long and conical, helping it to feed on a variety of seeds, grains, and insects.

The Cape Weaver is a colonial nesting bird, and up to seven females have been recorded breeding with a



## MALE CAPE WEAVER

single male. The male is strongly territorial around the nest, despite the tendency of the species to build nests close to other birds. The nest is a kidney-shaped structure built from woven grass and reeds, with an entrance on the underside. The chamber is lined with finer grass and down, usually taken from neighbouring nests. The population of this species has increased in its range as a result of human activity, but the range has not expanded.



## ADULT SPECTACLED WEAVER

*Ploceus ocularis*

## Spectacled Weaver



LENGTH	16cm (6½in)
WEIGHT	25g (7/8oz)
MIGRATION	Non-migrant

**HABITAT** Open woodland and forest margins, but also in more open areas and gardens

A mainly yellow bird, the Spectacled Weaver has a contrasting black bib and black eye-rings that give the species its common name. Its nest is built of woven grass and consists of a side chamber adjoining a long downward-facing entrance tube. Its food is mostly insects, but it has been known to take chicken feed on the ground and termites in flight.

*Ploceus velatus*

## Southern Masked Weaver



LENGTH	15–16cm (6–6½in)
WEIGHT	30–35g (1⅓–1⅔oz)
MIGRATION	Non-migrant

**HABITAT** Dry savanna woodland and scrub with mature trees

The Southern Masked Weaver is a striking bird, with a sharply contrasting yellow and black face mask. The wings and back are also streaked black or dark green. The female has no face mask and has paler,

## ADULT MALE

olive-green plumage. The species is gregarious, often building clusters of nests at the ends of branches. The nest is a woven gourd-shaped structure, with the entrance on the underside, which makes it difficult for nest predators to reach.

*Quelea quelea*

## Red-billed Quelea



LENGTH	12cm (4¾in)
WEIGHT	15–30g (½–1⅓oz)
MIGRATION	Partial migrant

**HABITAT** Semi-arid zones but also wet and dry habitats on rare occasions

Named for its prominent and thick red bill, the Red-billed Quelea has a plumage that is mainly brown. The undersides are plain and the wings are variegated with a darker brown.

Its diet consists of insects and seeds, but it is also considered an agriculture pest. The behaviour of the Red-billed Quelea is influenced by food levels that are in turn, influenced by the weather. This results in unpredictable and large-scale movements of these birds.

The species has been studied in detail due to its adverse

effects on human agriculture. In the breeding season the Red-billed Quelea builds a grass-woven nest, which is a ball-shaped structure with an entrance on the upper side, under a porch.

## RED-BILLED QUELEA

*Euplectes jacksoni*

## Jackson's Widowbird

LENGTH	14–30cm (5½–12in)
WEIGHT	30–45g (1⅓–1⅔oz)
MIGRATION	Non-migrant

**HABITAT** Open grassland, typically at an altitude of 1,500–3,000m (5,000–10,000ft)

During its courtship flight, the male Jackson's Widowbird raises and displays its decorative tail feathers. It also performs a display on the ground in which it jumps up in the air and then falls back again, rattling its wings and swaying. The male is territorial and will mate with several females. The spherical nest is built of woven grass, with a side entrance, close to the ground.

## LARGE FEEDING FLOCKS

The Red-billed Quelea is usually found in large numbers. Feeding flocks can devastate large areas of cultivated crops, which has led to its unofficial name of Locust Bird or Feathered Locust. Large numbers are culled annually without much impact on the overall population. Problems occur when they move in response to weather patterns.







#### SOUTHERN MASKED WEAVERS

The Southern Masked Weaver builds nests in colonies of up to 100 pairs. The nests are sometimes positioned over water to discourage some predators.

# WAXBILLS AND RELATIVES

**ORDER** Passeriformes  
**FAMILY** Estrildidae  
**SPECIES** 130

THEIR BRIGHT COLOURS and the ease with which they breed in captivity have made many species of this family popular cage-birds. Native to warmer regions, there are three

main groups: the waxbills of Africa and Asia, the grass finches of Australia, and the munias and mannikins of southern Asia and the southwest Pacific. The latter are not to be confused with the unrelated New World manakins (see p.337).

## ANATOMY

All members of the family are small birds, nearly all with thick, finchlike bills used for cracking open seeds. Most of the birds known as waxbills have bright red bills, while many other members of the family display striking crimson patterns, especially on the head. Nestlings have distinctive patterns of coloured lines and dots in their mouths specific to each species.

### CLOSE PAIR BOND

Many waxbills, such as these colourful Orange-cheeked Waxbills, make a lifelong pair bond.



**NEST CONSTRUCTION**  
A Blue Waxbill works on its elaborate nest made of twigs and other plant material. The nest has a domed roof and an entrance on the side.



## BEHAVIOUR

Waxbills and their relatives form very stable pairs, many species probably mating for life. Males engage in a courtship display in front of the females, in which they bob up and down, sometimes jumping up off the branch before returning to the same spot. Often the male will hold a piece of nest-building material in his bill during the display and will sing while performing. Displays also occur outside the mating season and seem to strengthen the pair bond. These displays have added to the popularity of the birds as pets. Nests are dome-shaped masses of twigs. Often a smaller, incomplete version of the nest is built over the real nest. Sometimes a dead nestling or insect is placed at the entrance of the false nest, perhaps to distract predators from the real nest.

### *Pytilia melba*

#### Green-winged Pytilia



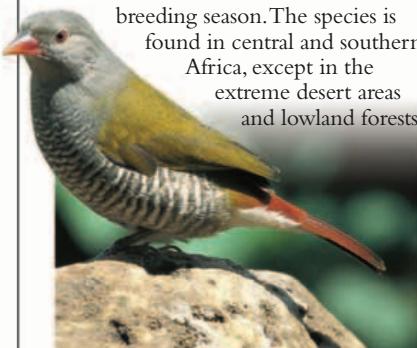
**LENGTH**  
12–13cm (4¾–5in)

**WEIGHT**  
15g (½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Open and dry areas, including grassland, savanna, and semi-desert

The male Green-winged Pytilia has a red bill and face, bright green wings, grey barred underparts, and a red upper tail. The female lacks the red face of the male, while the juvenile is a duller version of the female. The diet of the Green-winged Pytilia mainly consists of small seeds, but some insects are also taken from the ground. It feeds in pairs or small family groups that seldom fly more than a few metres between bouts of feeding. It is not migratory, but there is nomadic movement outside the breeding season. The species is found in central and southern Africa, except in the extreme desert areas and lowland forests.



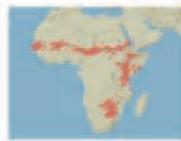
FEMALE GREEN-WINGED PYTILIA

broken  
throat band  
(female)

bright red  
throat band  
(male)

### *Amadina fasciata*

#### Cut-throat Finch



**LENGTH**  
12cm (4¾in)

**WEIGHT**  
18g (½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Dry bush and acacia savanna; also in villages

The male Cut-throat Finch has a bright red throat set against a barred head and back, a sand-coloured chest, and dark underparts. The female is similar, but has a mottled grey throat. Both sexes have a large, pale bill. The juvenile is similar to the adults, but the red throat of the juvenile male is patchy

### FEMALE AND MALE ADULTS

and the plumage of the juvenile female is more delicately barred. The song of the species is a low buzz or hum, often delivered continuously. These birds forage in groups and make frequent visits to water when feeding on seeds and termites. Large mixed-species feeding flocks are sometimes formed with other finches, weavers, and queleas. The pair bond between the male and the female is strong and the two sexes are seldom far apart.

The Cut-throat Finch is found in a belt to the south of Sahara and in eastern and southeastern Africa. It is not migratory, but results from ringing these birds show that long-distance movement takes place outside the breeding season.

### *Hypargos margaritatus*

#### Pink-throated Twinspot

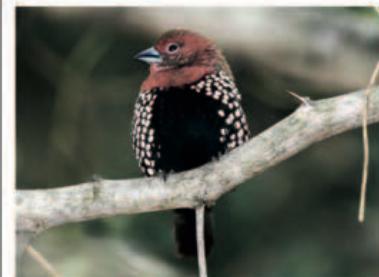


**LENGTH**  
13cm (5in)

**WEIGHT**  
15g (½oz)

**MIGRATION**  
Non-migrant

**HABITAT** Thorny scrub, dry savanna, and tangled forest edges



ADULT PINK-THROATED TWINSOTP

It is the male Pink-throated Twinspot that gives the species its common name, as the female has a grey throat. The male has a dark belly, with white spots, while the female has a pale belly with heavily outlined spots. Both the male and female have brown upperparts and a pink tail. This species feeds mainly on seeds, although young birds are fed on insects. The breeding season begins in January. Its nest, an oval structure made mostly of leaves, is lined with feathers, and the usual clutch size is three eggs.

*Spermophaga haematina*

## Western Bluebill



LENGTH

15cm (6in)

WEIGHT

23g (1/2oz)

MIGRATION

Non-migrant

HABITAT Forest edges or secondary forest



MALE WESTERN BLUEBILL

*Uraeginthus ianthinogaster*

## Purple Grenadier



LENGTH

14cm (5 1/2in)

WEIGHT

14g (1/2oz)

MIGRATION

Non-migrant

HABITAT Dense, thorny bush and dry scrub



ADULT MALE PURPLE GRENADEIER

The male Purple Grenadier has a blue face, with a red eye-ring that extends onto the bill, and a chestnut head and throat. Its upperparts and wings are brown and its chest and underparts are bright blue. The female is uniformly brown with a barred belly. These birds feed on the ground in pairs or small parties, and occasionally as solitary birds. Their main food is seeds, particularly of grasses, although insects are also eaten. The Purple Grenadier is shy of humans, but can be tame when familiar with people. The species is widespread in east Africa.

*Estrilda troglodytes*

## Black-rumped Waxbill



LENGTH

10cm (4in)

WEIGHT

8g (5/16oz)

MIGRATION

Non-migrant

HABITAT Savanna and dry, open areas

The Black-rumped Waxbill is named for the black uppertail and rump area contrasting with its pale brown wings. The underparts are white, extending to the lower face and the belly, while the chest of the male is lightly streaked with pale pink. The bill is sometimes pink and paler than the prominent red eye-stripe. The Black-rumped Waxbill feeds mainly on small seeds such as millet, but will also take smaller insects and ant pupae. The pair bond is strong, although the birds tend to be more loosely associated outside the breeding season. The nest is an elongated structure made of grass and contains a compartment used by the non-incubating partner.



PAIR OF BLACK-RUMPED WAXBILLS

*Lagonosticta senegalensis*

## Red-billed Firefinch



LENGTH

10cm (4in)

WEIGHT

8g (5/16oz)

MIGRATION

Non-migrant

HABITAT Acacia grassland, but often in association with human habitation

A striking red bird, the male Red-billed Firefinch has dark wings. The female is olive-green with a small red face and red uppertail. This species feeds on smaller seeds and sometimes on insects. The Red-billed Firefinch travels in pairs or small parties, together with other species. It is often found close to human settlements and in suburban gardens and its range stretches throughout sub-Saharan central and southern Africa.



MALE RED-BILLED FIREFINCH

## NESTING

A characteristic bulky structure, the nest of the Red-billed Firefinch is usually built in a bush or a wall. Made of dried woven grass, it has a thatched domed roof that serves as protection from rain and a side entrance to keep off predators. However, the nest is often parasitized by the Village Indigobird (*Vidua chalybeata*). It deposits its egg, adding to the clutch of the host birds' 3–6 eggs.

*Amandava subflava*

## Orange-breasted Waxbill



LENGTH

9–10cm (3 1/2–4in)

WEIGHT

7g (1/2oz)

MIGRATION

Partial migrant

HABITAT Tall grassland, swamps and marshes, including rice fields

FEMALE AND MALE ORANGE-BREASTED WAXBILLS





MALE PAINTED FINCH

*Emblema pictum*

## Painted Finch



LENGTH	11cm (4½in)
WEIGHT	10g (⅓oz)
MIGRATION	Non-migrant

**HABITAT** Dry rocky country, including stone deserts, gorges, acacia scrub, and spinifex

Both sexes of the Painted Finch have red faces, although the female has a smaller face. A glowing red rump contrasts with the white-spotted black breast and flanks. They are hard to see until disturbed, which is when the red rump is distinctive. Usually seen in pairs or small flocks outside the breeding season, the Painted Finch is locally common. It is very selective about its habitat, being absent from apparently suitable areas within its range. This species spends much of its time on the ground, feeding on the seeds of spinifex grass and other small seeds.

*Neochmia temporalis*

## Red-browed Finch



LENGTH	11cm (4½in)
WEIGHT	11g (⅔oz)
MIGRATION	Non-migrant

**HABITAT** Woodland with clearings, gardens, eucalyptus forest near water, and mangroves

Different features of this bird have led to it having different names— it is also known as the Red-browed Firetail and the Red-browed Waxbill. Despite its brilliant red brow, bill, and tail, the otherwise olive-green and grey colouring of the Red-browed Finch helps it to go unnoticed among vegetation, until it flies. A bold and

confident bird, it has moved easily into the gardens of towns and cities in Eastern Australia.

The Red-browed Finch is seen in pairs, family groups, and small flocks, which stay loyal to the same areas throughout the year. In winter, these flocks gather together, often mixed with other finches, around good feeding sites where grass and other small seeds are abundant. Feeding mostly on the ground or clinging to the stalks of grasses and weeds, it also approaches bird tables and feeders. It is seldom seen far from cover, and when disturbed, makes for the nearest bush with a bouncing flight.

Popular aviary birds in their homeland, escaped Red-browed Finches have become common in other parts of Australia, and have been introduced to Tahiti and the Marquesas.



ADULT RED-BROWED FINCH

*Taeniopygia guttata*

## Zebra Finch

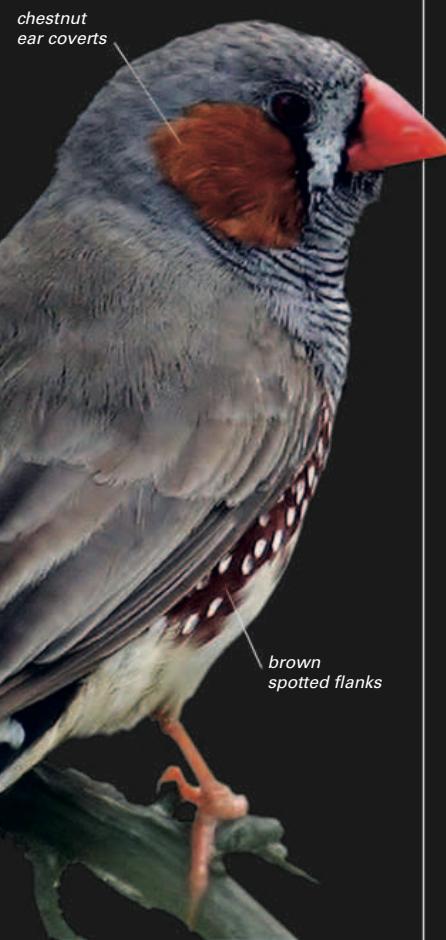


LENGTH	10cm (4in)
WEIGHT	12g (⅕oz)
MIGRATION	Non-migrant

**HABITAT** Scrub, open woodland, cultivated land, orchards, and gardens

The most common of Australia's "grass finches", the Zebra Finch is used by researchers to study bird physiology, reproduction, and behaviour. Unlike most other birds, it drinks by sucking rather than scooping water up with its bill. It can, however, go without water for several days. Although its bill is adapted for seed-eating, it also feeds on insects, catching termites on the wing. A noisy and sociable bird that

breeds after the rains, the Zebra Finch nests in shrubs and branches, holes in trees and rocks, rabbit burrows, termite mounds, and even the ground. Its shrill, buzzing call has been the subject of much research into birdsong.



MALE ZEBRA FINCH

*Erythrura trichroa*

## Blue-faced Parrot-Finch



LENGTH	12cm (4½in)
WEIGHT	14g (⅖oz)
MIGRATION	Non-migrant

**HABITAT** Rainforest, mangroves, and eucalyptus forest, also grassland and cultivated land

There are ten species of parrot-finch that share the same green body colour. Several have blue faces, and in some, the blue extends to the breast or the entire underside. Others have red faces or a combination of blue and red. The red tail of the Blue-faced Parrot-Finch is shared by many species. Despite these vivid colours, the Blue-faced Parrot-Finch is an inconspicuous bird, and mist-nesting sometimes reveals larger numbers than expected. It feeds on grass seeds, including bamboo, flocking together when seeds are abundant.

ADULT BLUE-FACED PARROT-FINCH



*Erythrura gouldiae*

## Gouldian Finch



LENGTH

13cm (5in)

WEIGHT

14g (1/2oz)

MIGRATION

Partial migrant

**HABITAT** Grassy plains with trees, woods and scrub, and spinifex

**RED LIST CATEGORY** Endangered

## HUMAN IMPACT

## IN RAPID DECLINE

From millions of birds in the 1950s, the Gouldian Finch has declined steadily. Loss of feeding habitat due to inappropriate development, cattle-grazing, and unfavourable fire regimes have deprived it of its primary food and reduced its numbers drastically. Infection with a parasitic mite is also a major threat to the bird.



The Gouldian Finch can have a red, black, or more rarely, orange-yellow face, but is distinctive in all variants. Black-faced birds make up most of the population. Throughout the year, the Gouldian Finch depends upon grass seeds as its primary food. It builds nests in tree-holes in open, grassy woodland. Outside the breeding period, it is found in a wide variety of woodland habitats. In the dry season, it gathers to drink at water holes.

This once abundant finch has, however, been reduced to fewer than 2,500 birds in the wild, possibly because of its popularity as a cage-bird.

Conservationists are trying to re-establish wild breeding populations from this captive stock. This is more complicated than it sounds. A high proportion have been bred as colour mutants, and there has been inevitable genetic drifts, with birds becoming less able to look after themselves and more prone to disease. Aviculturists are trying to provide a genetically variable stock for the release programme. Other initiatives include fencing cattle out of the finch's habitat and researching the role of fire in the ecosystem (fire regimes) that will provide a year-round supply of suitable habitat and seeds.

*Lonchura atricapilla*

## Chestnut Munia



LENGTH

12cm (4 1/2in)

WEIGHT

13g (1/2oz)

MIGRATION

Non-migrant

**HABITAT** Swamps and marshes, mangroves, reedbeds, and rice fields; the edges of forest

The Chestnut Munia has many different forms, varying in size and colour, and tolerating a wide range of habitats and altitudes, from sea-level to over 2,000m (6,560ft). Outside the breeding season, it can assemble in huge flocks, and for this reason, in some places it has become a serious pest of rice crops. In addition to its already huge range across tropical south and southeast Asia, the Chestnut Munia has been introduced or has established itself from cage-bird escapes in Australia, Japan, Hawaii, Jamaica, Guam, Puerto Rico, and Florida.

*Lonchura oryzivora*

## Java Sparrow



LENGTH

17cm (6 1/2in)

WEIGHT

25g (1oz)

MIGRATION

Non-migrant

**HABITAT** Lowland grassland and open woods; farmland

**RED LIST CATEGORY** Vulnerable

The black head, huge pink bill, white cheeks, pearl-grey back, and pink belly makes the Java Sparrow a popular cage-bird, which has proved disastrous for the species. It is also killed as an agricultural pest. Its habit of forming large flocks at roost sites near cultivated land around towns and villages makes it easy to trap in large numbers. The species has all but disappeared from large parts of its former range in Java and Bali. Conservation work includes protecting surviving populations, controlling pet trade, and meeting demands for the bird from the cage-bird trade.



MALE JAVA SPARROW

# WHYDAHS

**ORDER** Passeriformes  
**FAMILY** Viduidae  
**SPECIES** 20

RESIDENTS OF THE OPEN woodlands of sub-Saharan Africa, whydahs and indigobirds, which are also placed in this family, are close relatives of waxbills (see p.458). Males

and females are usually strikingly different in plumage. Male indigobirds are uniformly black and are difficult to tell apart; male whydahs can be boldly patterned and all have long, often elaborate tails. The females have generally plain brown plumage.

## BEHAVIOUR

All members of the family are brood parasites, laying their eggs in the nests of other birds, usually a species of waxbill. Most species of whydah and indigobird specialist parasites, targeting only one species of waxbill. The structure and coloration of the nestling's mouthparts

are often distinctively patterned and tend to closely match the mouthparts of the young of the host species. The young also mimic the begging behaviour of the host species' young. Adult birds feed almost exclusively on grass seeds they find by kicking the dirt and sand with both feet.



### COURTING

A male Pin-tailed Whydah courts a female by fluttering up and down to display his greatly elongated, central tail feathers.

*Vidua macroura*

### Pin-tailed Whydah



<b>LENGTH</b>	11–32cm (4½–12½in)
<b>WEIGHT</b>	12–18g (7/16–5/8oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open areas of scrub; also cultivated areas

This species gets its name from the two very long tail feathers displayed by the male Pin-tailed Whydah during the breeding season, when it courts with a bouncing flight to show off its tail. Its breeding plumage also includes a black cap and breast-band, a white collar, and a broad white wing-bar. However, the female and non-breeding male lack the long tail feathers and are streaked brown on the upperparts, with pale underparts. The bill is bright red throughout the year in both sexes, but the juvenile has a grey bill.

One of the most adaptable brood parasites, the Pin-tailed Whydah mainly targets waxbills. The host egg is eaten and replaced by a single egg, which the female lays one by one in different nests; 2–4 eggs are laid in a single brood and up to 25 eggs can be produced in a season. The young Pin-tailed Whydahs are raised in the

host brood and mimic the host's young, fooling them into believing they are one of their own. The main food of this species is grass seeds and the eggs of host species, but it also takes some invertebrates.



MALE PIN-TAILED WHYDAHS

# WAGTAILS AND PIPITS

**ORDER** Passeriformes  
**FAMILY** Motacillidae  
**SPECIES** 64

THIS FAMILY HAS MEMBERS on every continent and several species breed on the Arctic tundra. Pipits occur from rocky seashores to the highest mountains. Usually found

near water, most are birds of open country, but there are a number of forest species. Pipits are usually streaked, brown birds, while the wagtails are more colourful, especially the males.

## BEHAVIOUR

All species within this family walk or run rather than hop. Wagtails bob their long tails continuously. Although most feed on insects on the ground, they will also catch flies in the air. Species with longer tails, being more manoeuvrable, are thought to spend more time hunting in flight. Most species are fiercely territorial when breeding, but roost communally, and form flocks for migration and feeding at other times.



**GREY WAGTAIL AT NEST**  
Wagtails and pipits build their nests at ground level. Both male and female wagtails feed the young.

*Motacilla cinerea*

### Grey Wagtail



<b>LENGTH</b>	17–20cm (6½–8in)
<b>WEIGHT</b>	14–20g (1½–11/16oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Fast-flowing upland water courses; also slow and still water habitats in winter

The slimmest of the wagtails, the Grey Wagtail also has the longest tail. It has a white stripe across the eye and its slate-grey upperparts contrast with its



MALE DISPLAYING AND CALLING

bright yellow underparts. The males of some subspecies show a strong black throat area that is absent in the female and juvenile.

The Grey Wagtail mainly feeds on insects and insect larvae collected around water, although terrestrial invertebrates are also taken. It nests in crevices in cliffs and rocks, laying 3–6 eggs. Its range stretches from the resident populations of western Europe to the strongly migratory races of Siberia and central and eastern Asia. There are also indications of vertical migration in the resident populations.



MALE GOLDEN PIPIT

*Tmetothylacus tenellus*

## Golden Pipit



**LENGTH**  
14–16cm (5½–6½in)

**WEIGHT**  
18–20g (⁹/₁₆–¹¹/₁₆oz)

**MIGRATION**  
Partial migrant

**HABITAT** Acacia scrub; open scrub and grassland

The male Golden Pipit is mainly yellow, with brown streaked upperparts and wings and a prominent black breast-band. The female is plain with uniform brown underparts. Its diet consists mainly of insects taken from vegetation and open ground. Much of the population is non-migratory but the species may irrupt periodically to appear in areas outside the normal range. Birds in the northern part of the species' range are known to make seasonal movements during the dry season.

*Macronyx capensis*

## Cape Longclaw



**LENGTH**  
20cm (8in)

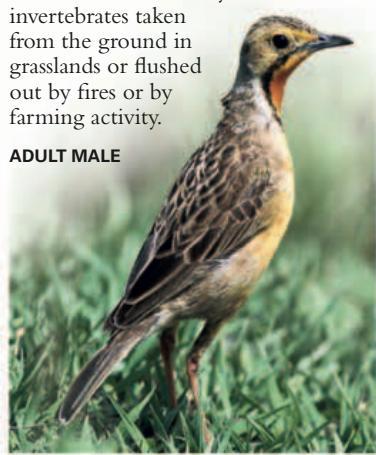
**WEIGHT**  
45–55g (¹⁵/₈–2oz)

**MIGRATION**  
Non-migrant

**HABITAT** Mainly dry grassland up to 2,300m (7,500ft), but also some wet areas

The most striking feature of the Cape Longclaw is the bright red throat patch surrounded by a black band in the male and a smaller, paler area in the female. The plumage of this bird is brown, with streaked upperparts. It feeds on a wide variety of invertebrates taken from the ground in grasslands or flushed out by fires or by farming activity.

## ADULT MALE

*Anthus novaeseelandiae*

## New Zealand Pipit



**LENGTH**  
18cm (7in)

**WEIGHT**  
25g (⁷/₁₆oz)

**MIGRATION**  
Non-migrant

**HABITAT** Open and short grassland, including roadsides, dunes, and artificial areas such as airfields

The New Zealand Pipit is not confined to New Zealand as its name would suggest. It has a strong, pale eyebrow stripe, brown streaked upperparts, and underparts that are plain, apart from some streaking around the throat. However, there are variations between subspecies. Its diet mostly consists of invertebrates, including

small crabs. The breeding season is from August to December. Each pair produces two or three broods, each consisting of 2–5 eggs, in a season.

ADULT NEW  
ZEALAND PIPIT*Anthus spinoletta*

## Water Pipit



**LENGTH**  
15–17cm (6–6½in)

**WEIGHT**  
19–25g (¹¹/₁₆–⁷/₈oz)

**MIGRATION**  
Migrant

**HABITAT** Alpine pastures and meadows above 600–3,200m (2,000–10,500ft)

The Water Pipit has dark grey upperparts and is fairly uniform in colour, except for the wings that are heavily marked and some streaking on the underparts. Recognized as

a separate species only in the second half of the 20th century, it has three subspecies in a range stretching from western and southern Europe to central Asia. It feeds on insects and small invertebrates on the ground. The nest is a grass-lined cup and 4 or 5 eggs are laid.

## ADULT WATER PIPIT

*Anthus pratensis*

## Meadow Pipit



**LENGTH**  
15cm (6in)

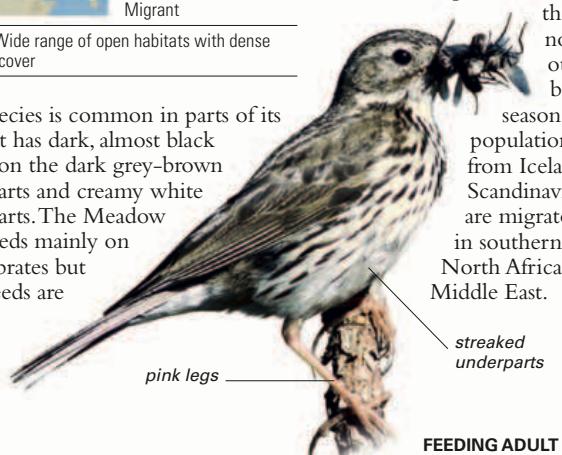
**WEIGHT**  
18–20g (⁹/₁₆–¹¹/₁₆oz)

**MIGRATION**  
Migrant

**HABITAT** Wide range of open habitats with dense low-level cover

This species is common in parts of its range. It has dark, almost black streaks on the dark grey-brown upperparts and creamy white underparts. The Meadow Pipit feeds mainly on invertebrates but plant seeds are

also taken. The male has a display flight incorporating a courtship song that begins from a prominent perch. It rises sharply into the air and makes a shallower descent, usually in a straight rather than spiral flight. The Meadow Pipit nests on the ground (see panel) and 4 or 5 eggs are laid. Populations in western Europe are sedentary, although the birds form nomadic flocks outside the breeding season. Northern populations ranging from Iceland, northern Scandinavia, and Russia are migratory, wintering in southern Europe, North Africa, and the Middle East.



FEEDING ADULT

GROUND-NESTING  
MEADOW PIPIT

The Meadow Pipit builds a nest in a hollow in the ground, building a partial canopy of grass over it, which can be a substantial structure. Some birds use a natural hollow beneath a stone instead. The female incubates the eggs, while the male helps the female to feed the young after the eggs hatch.

*Anthus cervinus*

## Red-throated Pipit



**LENGTH**  
15cm (6in)

**WEIGHT**  
16–30g (¹/₁₆–¹¹/₁₆oz)

**MIGRATION**  
Migrant

**HABITAT** Willows, sedges, and marshy tundra

ADULT RED-  
throated PIPIT

The Red-throated Pipit has dark brown, streaked upperparts and a heavily streaked belly and lower breast. The red-brown throat, which gives the bird its name, stretches from the chin to the upper breast; it is less extensive in the female. The male has two display flights: it flies up to 20m (65ft) and makes a parachuting descent and has a horizontal flight of about 50m (165ft) when it delivers its courtship song. The nest of this species is a grassy cup

and a single brood of 2–7 eggs is produced during the short Arctic summer.

# ACCENTORS

ORDER Passeriformes  
FAMILY Prunellidae  
SPECIES 13

ACCENTORS ARE A FAMILY of small, streaky brown birds that are often seen hopping along the ground. A number of species have noticeable facial masks. Accentors occur predominantly in Europe and Asia, with most species preferring mountainous areas above the tree line. Only one species, the Dunnock, is common in lowland temperate areas, being a common garden bird in much of Europe.

## BEHAVIOUR

Although many accentors are quite plain to look at, recent research has shed new light on their complex mating behaviour. In the humble Dunnock, for example, easily overlooked as it skulks along a hedgerow or hops across a flowerbed, promiscuous males will mate with several females, unaware that the female birds are acting in a similar fashion, mating with a number of males.

### NOT SO PLAIN

The breeding behaviour of the unobtrusive Dunnock has cast new light on its previous image as a boring brown bird. Here, a typical brood of five chicks is fed by an adult bird.



## FINCHES AND RELATIVES

ORDER Passeriformes  
FAMILY Fringillidae  
SPECIES 168

FINCHES ARE SMALL, STOCKY birds with stout cone-shaped bills. They come in a huge variety of plumages. Many species have rather plain and brown plumage, while others display a range of gaudy colours from bright golden yellows to rich scarlets. Numerous finches are familiar visitors to garden feeders, where they supplement their natural diet.

## ANATOMY

Among the most conspicuous features shared by members of the finch family are their bills. Generally finches have thick, conical bills that are adapted for cracking open seeds. However, there is considerable variation among the family. For instance, the European Goldfinch has a fairly typical conical bill that is used to open small seeds. In contrast, the Hawfinch has a massive bill (complemented by large muscles at the side of the skull) that is specially adapted for splitting large, hard seeds such as cherry stones. Variations include the unique cross-tipped beak of the crossbills.



### HAWFINCH

Strong bill and cheek muscles capable of splitting hard tree seeds.



### GOLDFINCH

Cone-shaped bill, ideal for dealing with most small seeds.



### CROSSBILL

Crossed bill adapted for prising open spruce and pine cones.

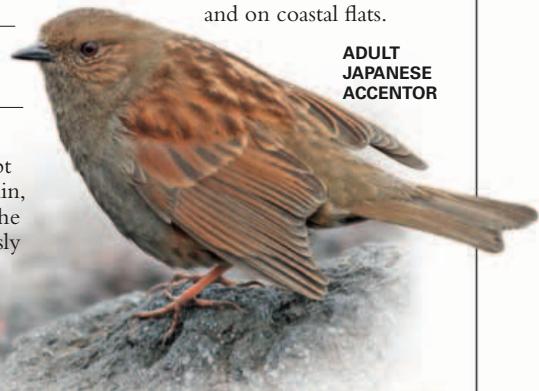
### *Prunella rubida*

## Japanese Accentor

	<b>LENGTH</b> 15cm (6in)
	<b>WEIGHT</b> 17g (½oz)
	<b>MIGRATION</b> Partial migrant

**HABITAT** Thickets, scrub, and forest undergrowth

may assist a female in raising a single brood. The Japanese Accentor forages on the ground, never far from cover, or in the branches of bushes. It is an “altitudinal migrant”, coming down from the mountains in winter, when it can be found in lowland thickets and on coastal flats.



ADULT JAPANESE ACCENTOR

### GREAT SITES

## MOUNT FUJI



At the base of Japan’s highest mountain is a bird reserve that is home to more than 175 bird species, over 100 of which breed there. The first bird reserve in the area was established in 1924. Important birds include the endemic Japanese Accentor, Alpine Accentor, Nutcracker, Red-flanked Bluetail, Japanese Green Pigeon, Brown Thrush, and several species of cuckoos and flycatchers.



### FIGHTING FINCHES

Although European Greenfinches are sociable, fights do occasionally break out, particularly between male birds during the breeding season.

## BEHAVIOUR

Many species of finch are extremely sociable, often forming large flocks, particularly outside the breeding season. For example, huge flocks of Bramblings, numbering around one million birds, have been known to take up temporary residence near forests containing an abundant supply of beech nuts. Smaller gatherings, often comprising a variety of finch species, are more commonplace. In the breeding season, however, many species become less sociable.



ADULT (EUROPEAN SUBSPECIES)

*Fringilla coelebs*

## Common Chaffinch

LENGTH  
15cm (6in)WEIGHT  
25g (7/16oz)MIGRATION  
Partial migrant

HABITAT Deciduous and coniferous woodland, farmland, parks, and gardens

An abundant species, the Common Chaffinch is often seen across its extensive range. Its plumage varies considerably between subspecies in western Europe, Africa, and the Canary Islands, but the black and white pattern of its wings and tail and its characteristic jerky, nodding walk are unmistakable. It feeds on insects, seeds, and shoots.

*Fringilla montifringilla*

## Brambling

LENGTH  
15cm (6in)WEIGHT  
25g (7/16oz)MIGRATION  
Migrant

HABITAT Breeds in northern birch and birch-conifer forests; winters in woodland and farmland



MALE IN BREEDING PLUMAGE

In winter plumage, the Brambling is superficially similar to the Common Chaffinch (left), with a black and white wing pattern, although it can be distinguished by its white rump and all-black tail. The breeding male Brambling has a distinctive jet-black head and mantle.

In summer, the Brambling eats insects and their larvae. It also feeds on weed seeds and berries, and in alpine regions, seeds from spruce cones. When snow is thick on the ground, it digs tunnels, using its wings and bills to reach food. It also takes beech nuts from their cups on the trees, sometimes hovering to do so.

*Carduelis pinus*

## Pine Siskin

LENGTH  
13cm (5in)WEIGHT  
13g (7/16oz)MIGRATION  
Partial migrant

HABITAT Conifer forests, mixed woodland, and alder thickets

Locally abundant in one year, Pine Siskins may be absent from the same area in the next. Their irregular movements are related to the supply of hemlock, spruce, and birch buds and seeds. The Pine Siskin has a narrow, pointed bill, dark streaks all over its plumage, and yellow in its wings and tail. A sociable species, it nests colonially.



ADULT PINE SISKIN

*Carduelis chloris*

## European Greenfinch

LENGTH  
16cm (6 1/2in)WEIGHT  
25g (7/16oz)MIGRATION  
Partial migrant

HABITAT Woodland, farmland, parks, and gardens

Larger and sturdier than other green-coloured finches in its range, the European Greenfinch is also more uniformly green, the colour varying from the rich green of the breeding male to the olive-brown of the female

and juvenile. It has striking yellow patches on the wings and tail. The European Greenfinch has a powerful bill and can easily feed on large, hard seeds. It is a familiar visitor to gardens, taking sunflower seeds, seed mixes, and peanuts from bird-tables. It also feeds on rosehips, picking out the seeds and leaving the fruit. In early spring, the male flies slowly at treetop height, rolling from side to side while it sings. It also sings from a perch. The nest of the European Greenfinch is bulky and made of grass and twigs.

Originally a woodland-edge species, these birds have exploited human changes to the landscape, taking advantage of irrigation on farmland.

ADULT MALE



MALE IN BREEDING PLUMAGE

*Carduelis tristis*

## American Goldfinch

LENGTH  
11cm (4 1/2in)WEIGHT  
13g (7/16oz)MIGRATION  
Partial migrant

HABITAT Woodland, farmland, gardens, and open ground with plentiful weeds

In the USA, the American Goldfinch is also known as the Wild Canary because of the brilliant canary yellow plumage of the breeding male. In winter, the adult male looks more like the female, which is grey and brownish yellow in colour. In mid- to late summer, while other songbirds are coming to the end of breeding, the American Goldfinch begins to nest – it does not begin to breed until the seeds of thistles, teasels, dandelions, and burdock are widely available. In winter, it feeds on seeds of trees, such as alder and birch, and is often found feeding in flocks.

*Carduelis carduelis*

## European Goldfinch

LENGTH  
14cm (5 1/2in)WEIGHT  
16g (9/16oz)MIGRATION  
Partial migrant

HABITAT Mixed and coniferous woodland, farmland, gardens, and wasteland with weeds

A brilliantly coloured bird, the adult European Goldfinch has a red face and yellow, black, and white plumage. In flight, the broad yellow band on its wings is clearly visible. The juvenile has a grey head and duller wings than the adult. The slender bill of this species is ideal for extracting small seeds that are inaccessible to other birds. Its call is a liquid, lilting, slightly metallic twittering.



ADULT EUROPEAN GOLDFINCH

MALE MEALY REDPOLL

*Carduelis flammea*

## Common Redpoll



LENGTH	12–15cm (4½–6in)
WEIGHT	12g (⅓oz)
MIGRATION	Partial migrant

HABITAT Mainly heath and woodland (both coniferous and deciduous)

The Redpoll's name literally means "red head", referring to its bright red cap, characteristic of the male and female but absent in the plainer, brown-streaked juvenile. Birds that breed from Scandinavia and Siberia across to North America are slightly larger and paler than those found in western Europe and are often referred to as Mealy Redpolls. The largest Common Redpolls are Greenland Redpolls, which breed in Greenland

and Iceland. Common Redpolls are quite abundant in New Zealand, where they were introduced in the 19th century by European colonists.

This species is often found in large flocks – in winter, as it moves between treetops for seeds, and during migration. It is often seen with other bird species. It is a non-territorial bird, and breeding pairs nest close to one another. The call is "sweet-ee-et", while its flight song is a rattling "chit-chit-chit".

*Carduelis cannabina*

## Common Linnet



LENGTH	14cm (5½in)
WEIGHT	20g (⅓oz)
MIGRATION	Partial migrant

HABITAT Mainly lowland, usually in farmland, scrub, and heath, up to 2,500m (8,200ft)

This attractive small finch is a common bird across most of Europe (and as far east as Afghanistan). The male varies in plumage, with a pale red forehead and pink-red chest in the breeding season in summer. In winter, its chest turns paler and its head becomes brown. Both the male and female have pale brown cheek spots, but the female has streaked brown plumage throughout the year.

In the summer, the Common Linnet's song is musical, which is why it was once a popular cage bird. When the breeding season is over, it can often be found feeding on waste ground in flocks of up to several thousand birds.



ADULT MALE IN SUMMER PLUMAGE

*Carpodacus cassinii*

## Cassin's Finch



LENGTH	16cm (6½in)
WEIGHT	25g (⅔oz)
MIGRATION	Partial migrant

HABITAT Mountainous coniferous forest

Unusually for male birds in their first breeding year, young male Cassin's Finches do not attain their stunning bright red plumage, appearing similar to the much drabber, brown-streaked female. Both the male and the female have brown wings and short, forked tails. These finches mainly feed on seeds, berries, and insects. They breed in the mountainous west of Canada and the USA, and then many move to northern Mexico for the winter. The species is named after John Cassin, a famous 19th-century American ornithologist, who described nearly 200 species.

ADULT MALE CASSIN'S FINCH

*Rhodospiza obsoleta*

## Desert Finch



LENGTH	15cm (6in)
WEIGHT	25g (⅔oz)
MIGRATION	Non-migrant

HABITAT Deserts and semi-arid areas

A large finch, found mainly in Asia, the Desert Finch has pale brown plumage that blends in with its desert habitat. The adult has a strong, dark bill (paler in juveniles) and a distinctive pink, white, and black wing coloration. The species feeds in large flocks, sometimes with other finches, on seeds and insects.



ADULT MALE DESERT FINCH

*Carpodacus roseus*

## Pallas's Rosefinch



LENGTH	17cm (6½in)
WEIGHT	30g (1⅓oz)
MIGRATION	Migrant

HABITAT Coniferous forests, alpine meadows, mountains, scrub, and taiga

The male Pallas's Rosefinch is an attractive small bird. Its rump and underparts are scarlet-pink, with

silvery edging to the feathers of its throat and forehead. Its back and neck are covered with dark streaking; its wings are predominantly brown, with a pink double wing-bar and pale edging to the feathers. It has a pale bill. The female is much less distinct than the male; it is a streaky brown bird that is difficult to distinguish from other rosefinches. However, it shows a pale pink rump, a pale orange forehead, and generally warmer brown plumage tones than its relatives. Another useful identification feature of Pallas's Rosefinch is its rather plain face that lacks any eye-stripes.



ADULT MALE PALLAS'S ROSEFINCH

*Pinicola enucleator*

## Pine Grosbeak

**LENGTH**

20cm (8in)

**WEIGHT**

55g (2oz)

**MIGRATION**

Partial migrant

**HABITAT** Boreal forest

populations are resident, large irruptions occur periodically during autumn and winter as the birds move south to search for food.

**MALE PINE GROSBEAK**

The Pine Grosbeak is a large, thrush-sized finch. The male is predominantly bright scarlet in colour, while the female and juvenile are duller and browner. Despite its striking appearance, the species is often overlooked as it forages silently on the ground, feeding mainly on berries and seeds. Although most

*Haematoxiphis sipahi*

## Scarlet Finch

**LENGTH**

18cm (7in)

**WEIGHT**40g (1 $\frac{7}{16}$ oz)**MIGRATION**

Partial migrant

**HABITAT** Fir and oak forests – particularly edges and clearings

As its name suggests, the male Scarlet Finch is predominantly bright red in its coloration, except for a small amount of dark plumage in front of the eye (the lores); and black feathering on its wings and tail. It

has a large, powerful yellow bill that it uses to prise open seeds. The females is olive-green, with paler tips to the feathers and a striking bright yellow rump. The bill is duller than that of the male. Young male birds are rather like the female, but with a more orange tint to their plumage and an orange-yellow rump.

This uncommon bird is only found in the Himalayas, where it usually inhabits upland forests. The Scarlet Finch is generally a solitary species, although it can occasionally be found in small flocks numbering up to 30 birds. In winter, the species retreats to lower levels and has been recorded away from its usual range as a scarce visitor.

**MALE DISPLAYING ITS UNDERWING***Pyrrhula pyrrhula*

## Eurasian Bullfinch

**LENGTH**

15–17cm (6–6½in)

**WEIGHT**20–25g (1 $\frac{1}{16}$ –7 $\frac{7}{16}$ oz)**MIGRATION**

Partial migrant

**HABITAT** Woodland, scrub, orchards, hedgerows, and gardens

This shy species is often seen in pairs, offering the observer the chance to compare the bright male with its duller female companion. The male Eurasian Bullfinch has bright pink underparts and cheeks, and a slate-grey back that contrasts with its black wings. The female is browner. Both sexes, however, are distinguished by their large powerful bill and conspicuous black cap and face.

**MALE BULLFINCH***Loxia curvirostra*

## Red Crossbill

**LENGTH**

17cm (6½in)

**WEIGHT**35–40g (1 $\frac{1}{4}$ –1 $\frac{7}{16}$ oz)**MIGRATION**

Partial migrant

**HABITAT** Coniferous forest

Named after its distinctive strong, crossed beak, which is specially adapted to prise seeds out of spruce and pine cones (see panel, below), the Red Crossbill

**ADULT MALE RED CROSSBILL**

usually seen feeding high among coniferous trees in flocks, they are often seen drinking from puddles on the ground.

They also eat insects and caterpillars.

### CROSSED BILL

The tips of the upper and lower mandibles of the Red Crossbill's bill overlap each other to form an efficient tool to help it feed. Using its sharp, hooked bill, this bird extracts dry seeds from ripe pine or spruce cones on which it thrives. It places the tips of its slightly open bill under a cone scale and bites down. The crossed tips of the bill push the scale up, while its tongue scoops the seed into its mouth.

*Coccothraustes coccothraustes*

## Hawfinch

**LENGTH**

18cm (7in)

**WEIGHT**55–60g (2–2 $\frac{1}{2}$ oz)**MIGRATION**

Partial migrant

**HABITAT** Deciduous and mixed woodland, parks, and gardens

The Hawfinch is found across Europe and parts of Asia to Japan. Its most noticeable feature is its massive, powerful bill. This adaptation enables it to crack open hard seeds (such as cherry stones) and get at the kernel. Despite its strength, the bill is also a precision tool capable of rotating fruit to strip them of their pulp. The plumage of the Hawfinch is a subtle mix of browns, greys, and whites. The male is slightly brighter than the female, with a purple gloss to its black flight feathers. In the plumage of both the male and female, the primaries (wing-tips) have a scaled appearance.

Compared to other finches, it is notoriously wary and difficult to observe; despite its large size and distinctive markings, it can often sit in the tops of trees, unseen.



ADULT JAPANESE GROSBEAK

*Eophona personata*

## Japanese Grosbeak

<b>LENGTH</b>	23cm (9in)
<b>WEIGHT</b>	80g (2 $\frac{7}{16}$ oz)
<b>MIGRATION</b>	Migrant
<b>HABITAT</b> Various types of forest and woodland, also scrub	

A large, striking finch, the Japanese Grosbeak has a largely lilac grey plumage that contrasts with its black head, wings (with small white patches), white vent, and tail. This bird has an enormous deep-based yellow bill, which it uses to crack open fruit, nuts, and seeds – the main elements of its diet. Although common in its range incorporating Japan and parts of China, the Japanese Grosbeak is not always easy to spot.

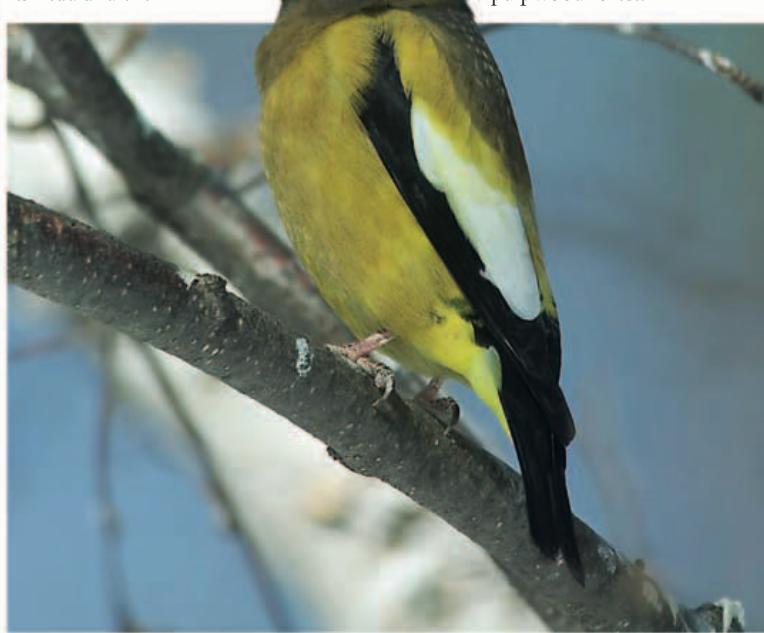
*Hesperiphona vespertina*

## Evening Grosbeak

<b>LENGTH</b>	19cm (7 $\frac{1}{2}$ in)
<b>WEIGHT</b>	55–60g (2–2 $\frac{1}{2}$ oz)
<b>MIGRATION</b>	Non-migrant
<b>HABITAT</b> Dense coniferous and mixed forest, suburban gardens in winter	

The male Evening Grosbeak is a striking bird with a deep, conical bill and yellow eyebrows. It has an olive yellow plumage, which is darkest on its head and the

breast, with contrasting black and white wings, and a black tail. The female Evening Grosbeak is more subdued in its appearance. Its plumage is silver-grey, with yellow patches on the nape, sides, and the rump. Its underparts are pale grey in colour, with white patches on the wing feathers, and it has a black tail. The Evening Grosbeak forages in trees, bushes, and sometimes on the ground. It feeds on nuts and seeds that it cracks open with its stout bill, and also takes fruit and insects. It is an irregular visitor to feeding stations and gardens, especially in winter. An irruptive migrant, its population cycle closely follows that of a key prey item, the larvae of the spruce budworm, which is a pulpwood forest.



MALE EVENING GROSBEAK

*Pseudonestor xanthophrys*

## Maui Parrotbill

<b>LENGTH</b>	14cm (5 $\frac{1}{2}$ in)
<b>WEIGHT</b>	20–25g (1 $\frac{1}{16}$ –7 $\frac{1}{16}$ oz)
<b>MIGRATION</b>	Non-migrant
<b>HABITAT</b> Montane mesic and wet forest at 1,200–2,000m (4,000–6,500ft) altitude	

**RED LIST CATEGORY** Critically endangered

A rare honeycreeper, the Maui Parrotbill is best known for its large, parrot-like bill. The upper mandible is decurved, with the lower mandible tapering to a chisel-like tip, helping the bird to pry open twigs and probe bark for food. The male has bright yellow-green plumage.

*Vestiaria coccinea*

## Iiwi

<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	15–20g (9 $\frac{1}{16}$ –11 $\frac{1}{16}$ oz)
<b>MIGRATION</b>	Non-migrant
<b>HABITAT</b> High altitude wet forest with 'ohi'a and koa trees; also dry mamane forest	

One of the most common of Hawaii's endemic landbirds, the Iiwi has bright red plumage and its wings and tail are black. It once extracted nectar from Hawaiian lobelioids, using its long, decurved bill. However, with the plant becoming extinct, it now feeds on 'ohi'a nectar, for which its bill is less well adapted.

## NEW WORLD WARBLERS

**ORDER** Passeriformes**FAMILY** Parulidae**SPECIES** 118

THESE BRIGHTLY COLOURED insectivorous birds are restricted to the New World and are unrelated to the generally much plainer Old World

warblers (see p.413). Despite their name, many species have songs that are more insect-like than warbling. Most species frequent the tops of trees, while some use the middle levels. Others stay close to or on the trunks, and a few have become primarily terrestrial.



SPRING MIGRATION

The Black-and-white Warbler is one of the most common – and most often seen – warblers during spring migration in New York City's Central Park.

## BEHAVIOUR

About half of the New World warblers are migratory, breeding in North America and wintering in Central and South America. During the peak of spring migration in the eastern USA, 20–30 species can be found in a single morning in some urban parks. The autumn migration is more dispersed, and some species, such as the Blackpoll Warbler, make nonstop, 36-hour flights over the Atlantic Ocean from North to South America.

## ENDANGERED WARBLER

The only place to hear a singing male Kirtland's Warbler is in young jack pines, 1.5–7.5m (5–25ft) tall, in the lower peninsula of Michigan, USA.

*Vermivora peregrina*

## Tennessee Warbler

<b>LENGTH</b>	12cm (4 $\frac{1}{2}$ in)
<b>WEIGHT</b>	9g (1 $\frac{1}{16}$ oz)
<b>MIGRATION</b>	Migrant
<b>HABITAT</b> Open or young woodland with mossy or weedy understorey; migrants in brushy habitat	

A dainty warbler of the North American boreal forest, the Tennessee Warbler was named after the American state where it was first discovered. However, the bird does not breed within the state. The male Tennessee Warbler has a slender bill, grey crown, white eyebrows with dark patches around its eyes, and a bold white stripe above the eye. It has olive uppersparts and wings, while the underparts and the undertail feathers are white in colour. In autumn, the male, female, and the juvenile have pale yellow underparts.

The bird primarily feeds on the Spruce Budworm, a pulpwood forest pest. It is solitary when nesting and its cup-shaped nest is usually placed at the bottom of a small tree or shrub.



MALE NORTHERN PARULA

*Parula americana***Northern Parula**

LENGTH	11cm (4½in)
WEIGHT	8g (½oz)
MIGRATION	Migrant

**HABITAT** Coniferous, deciduous, and mixed hardwood forest, particularly near water, with lichens

A small and compact denizen of the lichen-strewn canopy, the Northern Parula has a striking plumage. The male of the species has a blue head, with a broken white eye-ring, and black patches around the eyes. Its throat and breast are yellow, with a dark red “necklace”. It has blue-grey upperparts with a bronze-green mantle and the blue wings show two short white wing-bars. In comparison, the female and the juvenile are much duller. The Northern Parula has a long, sharp bill. The lower mandible is a conspicuous orange colour.

This bird is insectivorous, feeding mainly on spiders and caterpillars by gleaning them from foliage, twigs, and branches. It also sallies or hovers for insects. The Northern Parula’s nest is a cup-shaped structure sited at the tip of a tree limb. There are two breeding populations: the northern is associated with beard moss or lace lichen, the southern with Spanish moss.

*Dendroica petechia***American Yellow Warbler**

LENGTH	13cm (5in)
WEIGHT	10–12g (¾–1oz)
MIGRATION	Partial migrant

**HABITAT** Various brushy and semi-open habitats, especially if shady and near water; also mangroves

As the name suggests, the American Yellow Warbler has yellow plumage. The migratory subspecies is bright yellow with slightly duller upperparts and broad red streaks below. The males in a few of the over 40 subspecies, have varying amounts of rufous coloration on their heads, throat, and breast. The females and the juveniles of all the subspecies are duller than the males. The bird’s courtship is intense, with the male having been recorded singing over 3,000 times every day. The American Yellow Warbler feeds on insects and spiders.



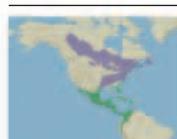
MALE (MIGRATORY SUBSPECIES)

surface, while its short, stout legs serve a similar purpose.

As distinctive in behaviour as in its plumage, the bird forages for insects while climbing along the trunks and larger branches of trees. Therefore, it is also often referred to as the Black-and-white Creeper. It lays 4 or 5 eggs in a cup nest on the ground.



MALE BLACK-AND-WHITE WARBLER

*Mniotilla varia***Black-and-white Warbler**

LENGTH	13cm (5in)
WEIGHT	11g (¾oz)
MIGRATION	Migrant

**HABITAT** Mature deciduous or mixed forest; winters in forest borders and secondary woodland

True to its name, the Black-and-white Warbler has pied black and white plumage. It has a striped head and a slightly decurved bill. The bill’s shape helps this warbler to probe into deep crevices. The Black-and-white Warbler has an unusually long hind toe and claw on each foot. This adaptation enables it to clamber safely along the bark

*Dendroica fusca***Blackburnian Warbler**

LENGTH	13cm (5in)
WEIGHT	10g (⅓oz)
MIGRATION	Non-migrant

**HABITAT** Coniferous or mixed woodland; winters in forest canopy and borders and secondary woodland

Named after an English botanist, the Blackburnian Warbler is an attractive species. The male has a glowing plumage of black, white, and orange. It has a black face mask, with a flaming orange throat, black upperparts with a yellow belly, a white wing panel, and a white vent. The female is a duller version of the male, with a pale orange-ochre eyebrow, pale orange sides of the head, and dark grey-olive upperparts. The juvenile is duller than the female.

The Blackburnian Warbler’s song is a thin, high-pitched ascending trill in two or three parts, ending with a “seep seep seep titi zeeee”. It gleans insects, particularly lepidopteran larvae, in the canopy, taking prey from branches, twigs, and foliage. It sometimes catches insects in flight. While solitary in its wintering



ADULT BIRD

grounds, the species may join mixed foraging flocks after breeding. It is territorial on its breeding grounds, building a solitary nest of small sticks, lichen, and plant down, lined with bark pieces and small roots. It is placed on a horizontal branch and 4 or 5 eggs are laid. The female builds the nest and incubates the eggs, but both parents feed the young. One brood a year is produced.

**GREAT SITES****CENTRAL PARK, NEW YORK**

It may seem unlikely, but Central Park, in the middle of New York’s Manhattan, is a bird haven. During spring migration, it becomes an oasis for warblers, including the Blackburnian Warbler, tanagers, and grosbeaks. Birds stop for a day or two in this green oasis amid a concrete desert, before continuing their journey. The spectacle of colours and forms is a magnet for bird-lovers.



its second autumn; some yearlings nevertheless hold territories and sing to attract mates.

The American Redstart is an active forager, always on the move, flicking its wings and tail while feeding. The resulting flash of bright colour flushes the insect prey from the foliage. The bird mostly gleans its prey, but also catches them in the air.

**ADULT MALE**

The American Redstart, a boldly patterned warbler, gets its name from the male’s bright markings on its tail – “start” being an old word for tail. The male American Redstart is black, with orange patches on the breast sides, the wings, and the tail. The female and the juvenile have grey plumage with yellow patches. A young male resembles a female until

*Protonotaria citrea*

## Prothonotary Warbler

LENGTH	13cm (5in)
WEIGHT	14g (1/2oz)
MIGRATION	Migrant

**HABITAT** Mangroves, woodland, and scrub, especially near water

Once called the Golden Swamp Warbler because it is found in flooded forests, the Prothonotary Warbler is named for its plumage, in reference to the golden robes of the protonotaries (papal officials). The golden yellow of its head, neck, and underparts is offset by its olive-green back and blue-grey wings and tail. The species nests in tree-holes or cavities and lays 4–6 eggs.



MALE PROTHONOTARY WARBLER

*Geothlypis trichas*

## Common Yellowthroat

LENGTH	12cm (4½in)
WEIGHT	10g (3/8oz)
MIGRATION	Partial migrant

**HABITAT** Dense vegetation in wet marshes, wet fields, and bushy areas

A shy warbler found in damp thickets, the Common Yellowthroat has a bright yellow chin, throat, and breast, and olive-brown upperparts. The male has a bold black face mask, edged with white, which varies in size. This is an important feature during courtship because a male with a large mask is likely to attract the most females.

The Common Yellowthroat is more often heard than seen. Its cheerful song – “wichity-wichity-wichity” – can be heard throughout its vast range. It usually feeds close to the ground. In the breeding season, the male performs a display flight, particularly in the late afternoon. It flies up to 7m (21ft) in the air, uttering a jumble of high-pitched notes, then parachutes down, calling out its song. When nesting, the parent Common Yellowthroat foils predators by dropping down into thick grass away from the nest, in the opposite direction.

MALE COMMON YELLOWTHROAT



ADULT OVENBIRD

*Seiurus noveboracensis*

## Northern Waterthrush

LENGTH	14cm (5½in)
WEIGHT	16g (9/16oz)
MIGRATION	Migrant

**HABITAT** Dense shrubbery, small trees, woodland and mangroves near slow-moving or standing water

Uniformly dark brown above, this species has white or creamy yellow underparts, with bold black stripes. Its head is marked with a prominent pale yellow eyebrow. It feeds on the ground at the edges of water or in damp places, walking sedately, with the rear of its body and its tail slowly moving up and down. The Northern Waterthrush eats aquatic and terrestrial insects, caterpillars, and worms. It also takes crustaceans, molluscs, and small fish.



ADULT NORTHERN WATERTHRUSH

*Zeledonia coronata*

## Wrenthrush

LENGTH	12cm (4½in)
WEIGHT	20g (11/16oz)
MIGRATION	Non-migrant

**HABITAT** Dense undergrowth of montane humid forest and forest borders

A plump little bird with a short tail, the Wrenthrush, or Zeledonia, is the only member of its genus. A secretive bird, it skulks in forest undergrowth, hopping along the ground or from perch to perch, flicking its wings, and very rarely flying. It has a distinctive golden-tawny crown, slate-grey face and necksides, dark olive-brown upperparts, and slate-grey underparts. Its nest is a domed structure made mainly of moss.

*Icteria virens*

## Yellow-breasted Chat

LENGTH	18cm (7in)
WEIGHT	25g (7/16oz)
MIGRATION	Migrant

**HABITAT** Dense bushes and hedgerows in open, sunny areas near deciduous woodland

The largest warbler of North America, the Yellow-breasted Chat is the only member of its genus and is unusual among warblers in being relatively large, and having a stout bill, stocky body, and long tail. Olive-grey above, the bird has a bright yellow throat and breast, and a white belly and rump. Prominent white “spectacles” on its face contrast with a black patch around its bill.

The female is similar to the male, but has a grey patch around the bill. The song of the Yellow-breasted Chat is varied, consisting of a series of up to 10 simple notes, with long pauses, odd liquid whistles, and harsh, rasping notes. Unlike most warblers, it mimics other birds’ calls and often sings at night in addition to daytime. It forages in dense vegetation for insects, insect larvae, and berries.

The male performs a display flight in the breeding season, pumping its tail up and down as it sings.



MALE YELLOW-BREASTED CHAT

# NEW WORLD BLACKBIRDS

**ORDER** Passeriformes  
**FAMILY** Icteridae  
**SPECIES** 98

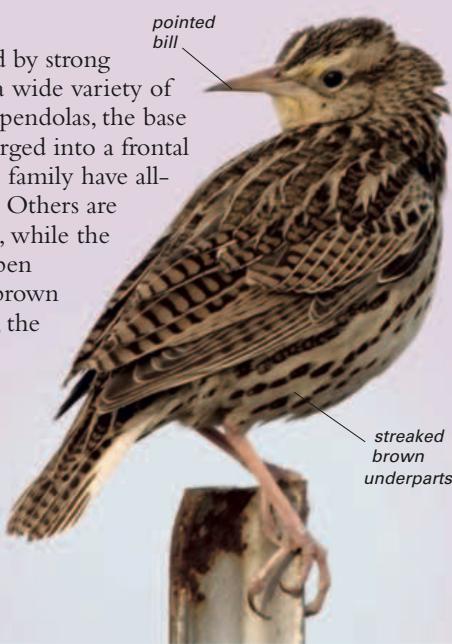
NEW WORLD BLACKBIRDS are unrelated to the Common Blackbird, a species of thrush (see p.436) native to Europe, just as the New World orioles are unrelated to the Old World orioles (see p.384). To avoid confusion, members of this family are referred to as icterids (an anglicized version of the scientific family name).

## ANATOMY

Pointed, conical bills powered by strong muscles allow icterids to eat a wide variety of food. In the caciques and oropendolas, the base of the upper mandible is enlarged into a frontal shield. Some members of this family have all-black but iridescent plumage. Others are patterned in yellows and reds, while the meadowlarks that frequent open country, tend to be streaked brown on the back. In many species, the males and the females have different plumage.

### PERCHING MEADOWLARK

Meadowlarks (a Western Meadowlark is pictured) often seek elevated perches from which to sing.



MALE YELLOW-RUMPED CACIQUE

Cacicus cela

## Yellow-rumped Cacique



**LENGTH**  
23–29cm (9–11½in)  
**WEIGHT**  
70–100g (2½–3½oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Forest edges, woodland, and semi-open areas with scattered trees

A slender long-tailed bird, the Yellow-rumped Cacique has black plumage that contrasts with its yellow lower belly, wing patches, rump, and tail base. Its eyes are blue and its bill is white. It breeds colonially, with up to 100 bag-shaped nests in a tree, usually near a wasp's nest for protection. A sociable species, these birds feed in flocks.

*Psarocolius decumanus*

## Crested Oropendola



**LENGTH**  
34–49cm (13½–19½in)  
**WEIGHT**  
150–275g (5–10oz)  
**MIGRATION**  
Non-migrant

**HABITAT** Edges and clearings of lowland rainforest, deciduous woodland; farmland with scattered trees

## HANGING NESTS

The Crested Oropendola, as all oropendolas, is a colonial breeder. The female builds a hanging woven nest, more than 1.2m (4ft) long, high in a tree, usually near a hornet's nest. Each colony has a dominant male, which mates with many females, after an elaborate bowing display. In a colony there may be 15–30 females and only 3 or 4 males.



## BEHAVIOUR

While some icterids build simple nests on or near the ground, the orioles weave sack-like nests suspended from the ends of branches. These are smaller versions of the large, hanging nests of the oropendolas. This family exhibits a great diversity of social organization and breeding arrangements. Many species are territorial and monogamous, while others are monogamous within breeding colonies. The oropendolas are colonial, but they are polygynous within the colony, with many females mating with only a few males. Most cowbirds do not nest at all, but are brood parasites, laying their eggs in the nests of other species.

### GRACKLE COURTSHIP

A calling, displaying Common Grackle puffs up its chest and opens its wings to show off the iridescence on the chest.



narrow crest

black nape

A characteristic sight of Amazonia is a Crested Oropendola colony, which is invariably sited in an isolated tree separated from the forest edge. Crested Oropendolas often nest in the same tree as hornets. These stinging insects provide protection for the nesting birds and their young – in addition to that provided from snakes, lizards, and monkeys, by the tree's location – by deterring predators. The male is black, with a long narrow crest (often hard to see), blue eyes, and a long, white bill, a chestnut rump, and a bright yellow tail. The female is smaller and duller, and lacks the crest. This species feeds on insects, fruit, and berries.

MALE CRESTED OROPENDOLA



*Icterus galbula*

## Baltimore Oriole



<b>LENGTH</b>	20–22cm (8–8½in)
<b>WEIGHT</b>	30–35g (1⅓–1⅓oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in open woodland and winters in rainforest; roosts in tall grass or cane; gardens

The Baltimore Oriole is the commonest oriole breeding in eastern North America, but has had a chequered history as a species. It was frequently grouped with Bullock's Oriole (*I. bullockii*), a similar species found in western USA, but DNA studies suggest that the two orioles are not close relatives.

The only bright orange and black oriole north of Florida, the male has an orange-yellow shoulder patch and black wings, with white



## ADULT MALE

The adult male has bright orange-red underparts, a deep black head and back, and white on the wings, especially when breeding.

edging. The female is mainly olive in colour, with pale orange underparts, and the juvenile is similar. Like most orioles, the Baltimore Oriole forages by gleaning insects and caterpillars from the leaves of trees, but it also searches for food in grass and plants. It switches to a diet of mainly nectar in winter, supplemented with berries.

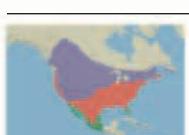
In the breeding season, the displaying male spreads its wings and tail and bows to the female. These orioles nest in trees and four eggs are laid in mid- to late May. Although the female is largely responsible for parental duties, it abandons the young just before they become independent, in order to commence its post-breeding moult. The species is a long-distance migrant, and southbound migration from breeding grounds begins as early as the end of July.

## ADULT FEMALE

With its paler underparts and back and plain head, the female is less colourful than the male.

*Molothrus ater*

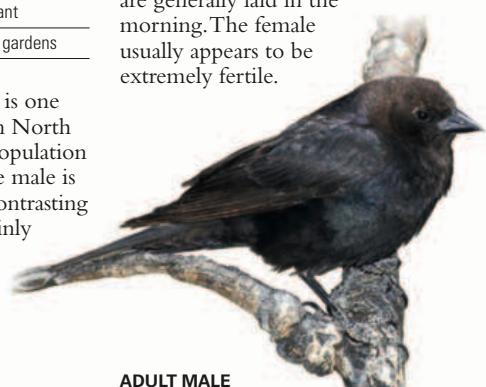
## Brown-headed Cowbird



<b>LENGTH</b>	19–20cm (7½–8in)
<b>WEIGHT</b>	30–50g (1⅓–1⅓oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open woodland and grassland; gardens

The Brown-headed Cowbird is one of the most numerous birds in North America, with an estimated population of 20–40 million. Whereas the male is metallic green-black with a contrasting brown head, the female is mainly grey-black and paler below. This species is gregarious, foraging and roosting in flocks. It walks on the ground to forage, feeding on insects, grain, and fruit.



## ADULT MALE

*Euphagus cyanocephalus*

## Brewer's Blackbird



<b>LENGTH</b>	21–23cm (8½–9in)
<b>WEIGHT</b>	60–65g (2⅓–2⅔oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open farmland, alpine meadows and beaches; very common in urban areas

In contrast to the grey-brown female, the male Brewer's Blackbird is all black with a green and purple-blue gloss. The male has yellow eyes; these are usually brown in the female. A gregarious bird, it forms large foraging and roosting flocks in winter and during migration, often joining mixed-species flocks. It is a colonial nester, a strategy that appears to reduce nest predation, although the

Brown-headed Cowbird (below) parasitizes this species. The nest is made of dry grass, held together with mud, and usually placed in a bush or occasionally, on the ground.



## ADULT MALE

The Common Grackle appears completely black from a distance, but there is a purplish blue or even bronzy hue to its metallic plumage. The female is slightly smaller and duller than the male. Both sexes have pale yellow eyes and a long, keel-shaped tail. In a characteristic display, the male spreads out its wings and tail and fluffs up its body feathers, which then resemble a ruffed collar. It also displays in flight.

*Quiscalus quiscula*

## Common Grackle



<b>LENGTH</b>	12–13cm (4½–5in)
<b>WEIGHT</b>	90–125g (3¼–4oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Open areas, such as fields, marshes, and parks; common in suburban areas



## ADULT COMMON GRACKLE

*Sturnella magna*

## Eastern Meadowlark



<b>LENGTH</b>	22–25cm (8½–10in)
<b>WEIGHT</b>	75–100g (2⅓–3⅓oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Native grassland, pastures, meadows, and old fields

The Eastern Meadowlark has heavily streaked brown upperparts and yellow underparts with black markings. It has a short tail and a long, pointed bill. The species feeds principally on the ground and flies short distances if flushed, its fluttering flight recalling that of a quail. Its nest is a domed, grassy structure with an entrance tunnel. The female incubates the eggs and the young leave the nest after about two weeks.



## ADULT EASTERN MEADOWLARK

*Dolichonyx oryzivorus*

## Bobolink



<b>LENGTH</b>	18–21cm (7–8½in)
<b>WEIGHT</b>	30–35g (1⅓–1⅔oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in grassy prairies and fallow fields; winters in rice fields, grassland, and marshes

The Bobolink undertakes a very long migration, travelling to south of the equator each autumn, moving up to 10,000km (6,200 miles) from its breeding to its wintering grounds.

The breeding male is a mixture of black and white, with a buff nape patch; the female is principally yellow, with a striped head pattern and streaked upperparts.

The Bobolink's name reflects its song, which the male utters in flight over breeding territories.

The species shows strong site fidelity, nesting on the same grounds year after year.

ADULT MALE BOBOLINK

*Agelaius phoeniceus*

## Red-winged Blackbird



<b>LENGTH</b>	20–22cm (8–8½in)
<b>WEIGHT</b>	40–65g (1⅓–2⅓oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Breeds in dense freshwater vegetation; also occurs in fields and woodland edges

In contrast to the extremely boldly patterned male, the female Red-winged Blackbird is dark brown to charcoal black above, with heavily streaked underparts, and sometimes wedge-shaped flashes of red on the wings. The species lives in colonies and is one of the earliest harbingers of spring in North America. The male generally arrives first and immediately begins to establish a territory. The nest is made in reed and sedge beds just above the water surface and is usually woven around the stalks of cat-tails. The period from the start of incubation – carried out by the female – until the young fledge, is less than a month.

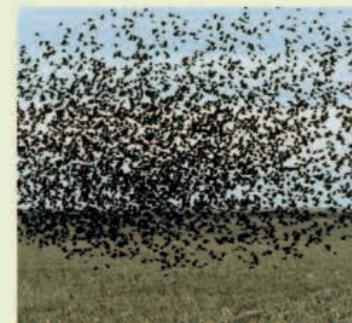
The song of both sexes is a series of ringing and scratchy, buzzy trills; when the whole colony is active, there is a cacophony of sound. Most populations north of Mexico are migratory, while the tropical birds are largely sedentary.



MALE RED-WINGED BLACKBIRD

## LARGE ROOSTING FLOCKS

Gregarious at roosts all year round, the Red-winged Blackbird gathers in large flocks – in its wintering grounds, some roosts may number in the millions. It also forages in flocks, sometimes up to a distance of 80km (50 miles) from the roost site. In the breeding season, roosts are smaller and attended only by young, non-breeding males.



## BANANAQUIT

**ORDER** Passeriformes

**FAMILY** Coerebidae

**SPECIES** 1

other birds has long been debated. It has in the past been considered one of the New World warblers (see p.468) or a tanager (see p.481). However, many ornithologists now put it in a family of its own.

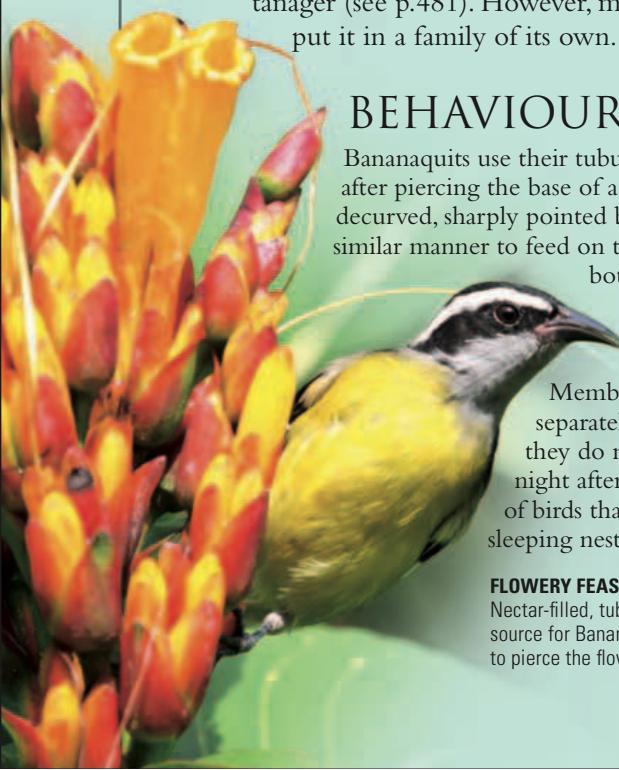
## BEHAVIOUR

Bananaquits use their tubular tongues to suck nectar after piercing the base of a flower with their decurved, sharply pointed bill. They pierce fruit in a similar manner to feed on the juice. Males and females both build globular nests that are often used as sleeping quarters with separate nests used for breeding.

Members of a pair sleep separately in different nests, but they do not sleep in the same nest night after night. Sometimes groups of birds that are not mates share a sleeping nest as a kind of dormitory.

## FLOWERY FEAST

Nectar-filled, tubular flowers are a favourite food source for Bananaquits, which use their sharp bills to pierce the flower base.

*Coereba flaveola*

## Bananaquit



<b>LENGTH</b>	10–12cm (4–4½in)
<b>WEIGHT</b>	8–11g (⅕–⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Any form of wooded or well-vegetated habitat, including gardens, but generally not tall forest

Commonly known as "sugarbird" or "nectar robber", due to its propensity to visit sugar-water feeders intended for hummingbirds, the Bananaquit is a familiar tropical bird. It usually has a white eyebrow, dark upperparts, and yellow and white underparts.



ADULT BANANAQUIT

# BUNTINGS AND AMERICAN SPARROWS

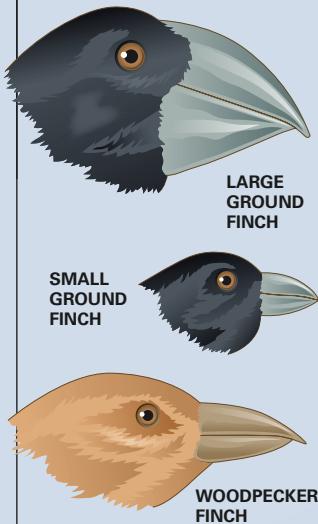
**ORDER** Passeriformes

**FAMILY** Emberizidae

**SPECIES** 308

THIS FAMILY INCLUDES BOTH the New World sparrows and the Old World buntings. Once treated as a sub-family of the Finches (see p.464), they are now recognized as a family in their own right. American sparrows are believed to have evolved in the Americas, subsequently spreading to most of

the world, except for Madagascar, southeast Asia, and Australasia. Many species have relatively drab and subdued body plumage, streaked with browns, blacks, and whites for camouflage. However, the males especially tend to have striking head patterns.



#### ADAPTIVE RADIATION

Among Galapagos ground finches, bills have evolved to take advantage of all available food sources, including large and small seeds and insects.

## ANATOMY

Generally larger and more sturdily built than finches, these birds vary in size from the tiny grassquits, weighing less than 10gm ( $\frac{1}{3}$ oz), to buntings and towhees (sparrows) weighing three to six times as much. They have strong, short conical bills for seed eating. These bills may be adapted for small seeds, as in smaller species, such as the grassquits, whose light weight enables them to cling to the seedheads of grasses. But they also include some very powerful bills capable of tackling large, hard seeds. The most extreme examples are found among ground finches from the Galapagos islands (known as Darwin's ground finches), where an original ground finch ancestor has evolved to occupy many different seed-eating and insect-eating niches. The Woodpecker Finch actually extends the reach of its bill by using a sharp twig or cactus spine to probe for invertebrates.

#### COURTSHIP AND MATING

Corn Buntings are known to be promiscuous, with both males and females mating with more than one partner. Males play no part in raising young.



## BEHAVIOUR

Like most other seed-eating birds, buntings and New World sparrows switch to a diet of mostly insects when feeding young. Most species feed on or near the ground, and hop on their relatively large feet, although some walk and run. Usually seen singly or in pairs in the breeding season, during winter and on migration they form small groups and, less frequently, large flocks, sometimes joining with other species. Most buntings and American sparrows have simple, jangling songs given from a perch and, more rarely, in a song-flight. Most species within this family are highly territorial, using their songs to mark and defend their territories as well as to attract mates.



#### ACTIVE PARENT

The Lapland Longspur (above) is a ground-nesting species which breeds in the Arctic tundra, where the continual daylight of high summer means parents can be active at all hours.



#### YELLOWHAMMERS FEEDING

In winter, many buntings such as these Yellowhammers form flocks for feeding and roosting. Changes in farming practice have led to a reduced availability of winter food, which in turn has been responsible for a decline in populations of many species.

*Emberiza citrinella*

## Yellowhammer



LENGTH

17cm (6½in)

WEIGHT

30g (1⅓oz)

MIGRATION

Partial migrant

**HABITAT** Farmland, bushy areas, heaths, and woodland edges; also on coasts

The Yellowhammer is characterized by its long tail. The male, with its mainly yellow head and breast, cannot be easily confused with other species. The female is distinctive too, with a partly yellow head, the rest of the plumage being streaky brown.

Like many buntings, Yellowhammers are social birds, especially in winter, when they forage on the ground in large flocks for grain and seeds, flying up to the nearest cover at the slightest disturbance. In summer, they move in pairs and nest low down either in a bush or on the ground. The Yellowhammer is best known for its song, which was formerly a commonplace sound in rural areas.

## MALE YELLOWHAMMER



## ADULT MALE

*Emberiza schoeniclus*

## Common Reed Bunting



LENGTH

14–16cm (5½–6½in)

WEIGHT

17–20g (½–1⅓oz)

MIGRATION

Partial migrant

**HABITAT** Reeds or wet areas; also breeds among young conifers and crops

The male Common Reed Bunting has a striking black and white head, rusty-brown upperparts, and pale underparts, while the female is plainer, with cream and brown streaks on its back. In spring, the male sings from a tall reed or bush, staking out its territory. The male can be polygamous, but both sexes incubate the eggs and feed the young. However, the female builds the nest.

*Calcarius lapponicus*

## Lapland Longspur



LENGTH

14–16cm (5½–6½in)

WEIGHT

30g (1⅓oz)

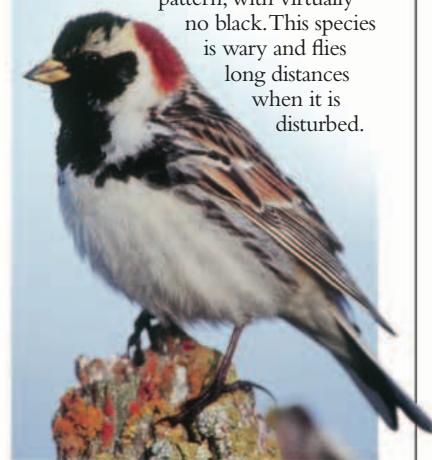
MIGRATION

Migrant

**HABITAT** Breeds in upland and tundra; winters on coasts and cultivated steppes

In winter, the Lapland Longspur has red-brown cheeks and pale brown plumage. However, in summer, the male (pictured here) has a black and white facial pattern and a bright rufous nape. Compared to the summer male, the breeding female has a plainer face

pattern, with virtually no black. This species is wary and flies long distances when it is disturbed.



## MALE IN SUMMER PLUMAGE

*Plectrophenax nivalis*

## Snow Bunting

LENGTH  
15–18cm (6–7in)WEIGHT  
35–55g (1⅓–2oz)MIGRATION  
Migrant**HABITAT** Breeds in dry rocky areas of the Arctic; winters in fields and on shores to the south

Named by the famous Swedish naturalist, Carl Linné (better known as Linnaeus), the dainty Snow Bunting often appears completely white when it is in flight. The male Snow Bunting has a white head and shoulders, black upperparts, long black and white wings, and a white rump. The

## MALE IN SUMMER PLUMAGE

female has a white head, with brown streaks, and greyish black upperparts tinged with brown. Both sexes have white underparts.

The Snow Bunting is the most northerly-breeding songbird in the world. This bird is among the last to reach its breeding grounds and does not start nesting until late May. It is usually monogamous, remaining in pairs during the breeding season. The nest is on the ground and sheltered from the elements in a crevice; up to nine eggs are laid. Incubation and nest-building duties, as with many other bunting species, are carried out solely by the female.

In winter, these birds prefer to form flocks limited to their own species, but in areas where they are less common, they may band with longspurs or other seed-eating birds. In harsh weather, they may take shelter in a hole.

## SEASONAL PLUMAGE

In summer, the male Snow Bunting is strikingly black and white, while in winter, it has a yellow bill and assumes a less conspicuous garb of warm buff-brown and white (pictured right). The female is similar to the male in this season, but shows much less white in the wing, while in summer, when it is nesting, it is largely grey below and dark brownish grey on the upperparts.

*Calamospiza melanocorys*

## Lark Bunting

LENGTH  
14–18cm (5½–7in)WEIGHT  
30–50g (1⅓–1⅔oz)MIGRATION  
Migrant**HABITAT** Breeds in short-grass prairies; winters in open grassland and farmland

## MALE LARK BUNTING

The male Lark Bunting is mainly black, with large, white wing patches. The female Lark Bunting has brown-streaked plumage with a pale wing-panel. In the early breeding season, the male performs display flights, ascending high up in the air, singing all the while, and then parachuting down. These sparrows breed colonially; the male sometimes has more than one mate and the female is responsible for nest-building and incubating the eggs.



ADULT FOX SPARROW (EASTERN SUBSPECIES)

*Zonotrichia albicollis*

## White-throated Sparrow



<b>LENGTH</b>	15–17cm (6–6½in)
<b>WEIGHT</b>	19–35g (⅓–1¼oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Brushland and semi-open woodland, including plantations and bogs; often in clearings

The White-throated Sparrow is identifiable principally by its complex head pattern of white crown-stripes and white eyebrows, with a yellow patch in front of the eyes, and a white throat patch. However, different forms exist, and some birds have tan-coloured crown-stripes and eyebrows. In breeding grounds, the male sings constantly, even at night.

## ADULT MALE

*Junco hyemalis*

## Dark-eyed Junco



<b>LENGTH</b>	13–17cm (5–6½in)
<b>WEIGHT</b>	14–25g (½–1¾oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Semi-open woodland and edges, brushy country, urban areas, and gardens

Writing in the 1700s, the American naturalist John James Audubon remarked that there was not a person in the country who did not know this little sparrow and it remains one of the most common and ubiquitous birds of North America. The Dark-eyed Junco was formerly known as the Snow-bird or Winter Finch. This was probably because over much of the more populous eastern states, where it is primarily a winter visitor, its numbers increase during severe winter. This species has a variable appearance (see panel), although all forms have dark eyes. The sexes are alike, but the juvenile has a streaked plumage.

The species feeds on seeds, berries, and invertebrates. The male Dark-eyed Junco sings almost year-round, but most frequently between February and June, coinciding with the main breeding period. As winter turns to

*Passerella iliaca*

## Fox Sparrow



<b>LENGTH</b>	15–19cm (6–7½in)
<b>WEIGHT</b>	25–50g (⅔–1¾oz)
<b>MIGRATION</b>	Migrant

**HABITAT** Breeds in deciduous thickets or firs; winters in brush and chaparral

In recent years, some scientists have been in favour of treating Fox Sparrows as four different species, principally based on the wide variation in plumage coloration. The most widespread variant is the eastern subspecies pictured here (the so-called Red Fox Sparrow), with its grey crown and red-streaked chest and back. The other subspecies are the Sooty Fox Sparrow, which is dark brown, the grey Slate-coloured Fox Sparrow, and the Thick-billed Fox Sparrow, although the two latter forms are very similar.

The Fox Sparrow mainly feeds in bushes and brush, but occasionally ventures to the ground where, in winter, it may be heard scratching for food in the dry leaves. It forms small, loose flocks at this season, but is less sociable than many North American sparrows. The Fox Sparrow generally nests on the ground, but occasionally in trees, and constructs a bulky cup of twigs, rootlets, and grasses. The female alone incubates the 3–5 eggs.

*Melospiza melodia*

## Song Sparrow



<b>LENGTH</b>	12–17cm (4½–6½in)
<b>WEIGHT</b>	12–55g (⅓–5oz)
<b>MIGRATION</b>	Partial migrant

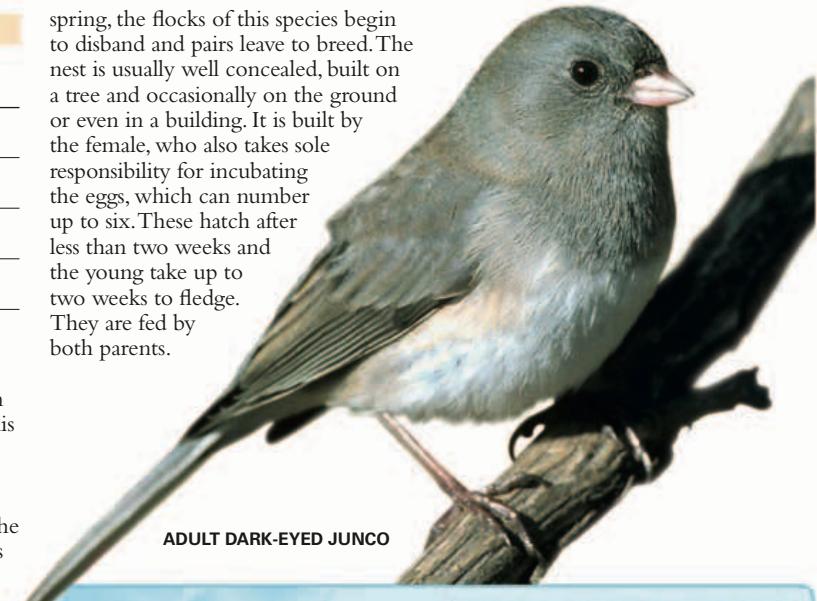
**HABITAT** Open brushy areas, woodland edges, coastal marshes, and beaches

The plumage of the Song Sparrow is mainly reddish brown and grey, with a well-marked grey and brown striped head pattern. Some populations are greyer and paler above and below. The species is variable in size and plumage. Its song varies too, but is usually a whistle ending in a trill. It is a sociable bird, forming flocks often in combination with other species in winter. It may have up to three broods in a season, with the young fledging in as little as a week.



ADULT SONG SPARROW

spring, the flocks of this species begin to disband and pairs leave to breed. The nest is usually well concealed, built on a tree and occasionally on the ground or even in a building. It is built by the female, who also takes sole responsibility for incubating the eggs, which can number up to six. These hatch after less than two weeks and the young take up to two weeks to fledge. They are fed by both parents.



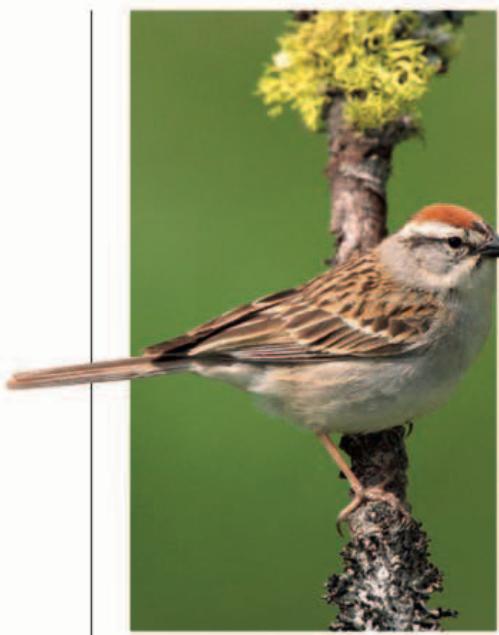
ADULT DARK-EYED JUNCO

## VARIABLE SPECIES

Striking plumage differences exist between the five forms of the Dark-eyed Junco. The commonest form is the Slate-coloured Junco, but the four other recognized forms are the Pink-sided, White-winged, Grey-headed, and Oregon (shown here) Juncos.

However, since they interbreed, they are still considered as a single species.





ADULT CHIPPING SPARROW

*Spizella passerina*

## Chipping Sparrow

<b>LENGTH</b>	12–14cm (4½–5½in)
<b>WEIGHT</b>	11–15g (⅓–⅔oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Widespread in open woodland, edges, grassy fields, and parkland

One of the most common North American sparrows, the Chipping Sparrow is a small, slim bird. It has a rusty crown and striking white eyebrows in summer, but in winter, its face pattern is less well marked and the crown is a duller brown. It is named after its repetitive rattle, a series of “chip chip” sounds that is among the most frequently heard bird songs. The species breeds from March in southern USA. The female builds the nest on a branch, well above the ground.

*Amphispiza belli*

## Sage Sparrow

<b>LENGTH</b>	14–16cm (5½–6½in)
<b>WEIGHT</b>	14–19g (½–1⅓oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Sagebrush desert and chaparral, with some populations moving to higher altitudes in summer

Both the male and female Sage Sparrow have the same plumage, with predominantly dark head, a white moustachial stripe and spot in front of the bill, and dark brown-grey upperparts. This sparrow spends most of its time foraging unobtrusively on the ground in small flocks. Two subspecies are now recognized: the Bell's Sparrow of coastal areas and the larger, paler form in the interior.

ADULT SAGE SPARROW

*Aimophila aestivalis*

## Bachman's Sparrow

<b>LENGTH</b>	12–16cm (4½–6½in)
<b>WEIGHT</b>	18–25g (⅔–1oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Dry open woodland and scrub, especially closely associated with pines

Formerly known as the Pine-woods Sparrow, this typical North American sparrow has a grey head and back heavily streaked with chestnut and dark brown and off-white underparts. Bachman's Sparrow has a comparatively large bill and a long, rounded tail. Except when singing, when it selects a high open perch, the species often stays close to the ground.

*Torreornis inexpectata*

## Zapata Sparrow

<b>LENGTH</b>	17cm (6½in)
<b>WEIGHT</b>	25g (⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Forest and scrub, including extremely dry areas

**RED LIST CATEGORY** Endangered

Named after the shoe-shaped peninsula in southern Cuba where it was originally observed (“zapata” means “shoe” in Spanish), the Zapata Sparrow has a white throat, olive-grey upperparts, and yellow underparts, with short wings. In some areas, it feeds on water snails, eggs, and small lizards. Its call is a high-pitched trill.



ADULT ZAPATA SPARROW

*Sicalis flaveola*

## Saffron Finch

<b>LENGTH</b>	14cm (5½in)
<b>WEIGHT</b>	16–20g (⅓–⅔oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Open, weedy, and shrubby areas; secondary growth and parks

Almost entirely bright yellow, the male Saffron Finch has a striking orange forecrown. In contrast, the female and the juvenile have streaky greenish yellow plumage, relieved only by occasional yellow patches. The species mainly forages on the ground, frequently in large flocks, in which they sometimes join other seed-eating birds.

*Sporophila corvina*

## Variable Seedeater

<b>LENGTH</b>	12cm (4½in)
<b>WEIGHT</b>	10g (⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Grassy and shrubby areas, including in urban areas; woodland edges

The male Variable Seedeater is not difficult to identify, with its mainly black upperparts, white

partial collar, black chest-band, and white to grey belly. The female is much more difficult to tell apart from other female seed-eaters, being essentially yellowish olive-brown above and paler below. The Variable Seedeater is a ground-loving bird, but if disturbed, it flies into nearby cover. It also clings to low grass-heads to feed on seeds. These birds are generally found in pairs or small groups, or in larger flocks outside the breeding season.

## MALE VARIABLE SEEDEATER

*Tiaris olivaceus*

## Yellow-faced Grassquit

<b>LENGTH</b>	10cm (4in)
<b>WEIGHT</b>	9g (⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Wooded areas, especially at edges; also bushy country

Both sexes of the small Yellow-faced Grassquit are olive-green with yellow on the face, but the male has a larger area of yellow on the throat, which is set off by black on the face and upper breast. It is a sociable sparrow-like bird that spends much time of its time feeding on the ground, searching for seeds and small fruit, but ascends to nearby trees to sing. The song is a high-pitched insect-like trill. It nests the year round, laying 2–4 eggs.



MALE YELLOW-FACED GRASSQUIT



**WHITE-THROATED SPARROW**

This sparrow usually breeds in Canada, but in winter it can be found across large parts of the eastern United States (this bird was photographed on Long Island).





ADULT LARGE GROUND FINCH

*Geospiza magnirostris*

## Large Ground Finch

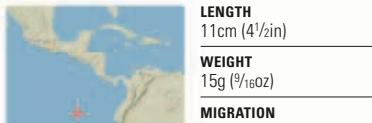
<b>LENGTH</b>	16cm (6½in)
<b>WEIGHT</b>	35g (1¼oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Arid zones, with deciduous, open dry forest and scrubland

Endemic to the Galapagos Islands, the Large Ground Finch has the deepest bill in its family, the depth at the base being the same length as the upper mandible, which it uses to crush seeds. Despite its name, this bird does not feed on the ground as often as the other ground finches.

underparts. Both have short, pointed bills. These finches have a symbiotic relationship with giant tortoises and iguanas, feeding on their skin parasites. After breeding, in the warm or wet season, they move up to the highlands.

## ADULT SMALL GROUND FINCH



<b>LENGTH</b>	11cm (4½in)
<b>WEIGHT</b>	15g (⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Arid, highland zones of Galapagos, in forest, scrub, and open areas

The Small Ground Finch is the smallest of the four species of ground finch. The male is black with white-tipped undertail feathers, while the female is brown with streaked

*Camarhynchus pallidus*

## Woodpecker Finch



<b>LENGTH</b>	15cm (6in)
<b>WEIGHT</b>	25g (¾oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Humid forest in highland zones of the Galapagos, also in dry forest in arid lowland

One of the few bird species in the world that uses a tool during foraging (see panel, below), the Woodpecker Finch probes under rocks, branches, or leaves to extract invertebrates, such as grubs, to eat, quite unlike the other Galapagos finches. The male and female are alike

## ADULT WOODPECKER FINCH

in plumage, which consists of plain olive or brown upperparts and yellow or off-white underparts, which are usually unmarked, although some birds show fine grey streaking on the upper breast. The bill is long and stout with the upper part markedly curved. The call of the Woodpecker Finch is a high-pitched whistle descending to a lower note.



## USING TOOLS

The Woodpecker Finch is adept at holding tools, such as a twig or cactus spine, in its bill. It manipulates these tools to probe deep into cracks and crevices to prise out insects. The bird is one of the very few birds in the world to use tools to feed.

## TOOLS AS COMPENSATION

With its short tongue, the Woodpecker Finch has to resort to using tools; in the dry season, it acquires half its prey in this way.

*Pipilo maculatus*

## Spotted Towhee

<b>LENGTH</b>	21cm (8½in)
<b>WEIGHT</b>	40g (1⅓oz)
<b>MIGRATION</b>	Partial migrant

**HABITAT** Brushy areas, sunny clearings, shrubland or undergrowth within open forest

Until recently, the Spotted Towhee was considered to be the same species as the Eastern Towhee (*P. erythrrophthalmus*), but differences in their plumage and voice resulted in their separation



MALE SPOTTED TOWHEE

into distinct species. However, the two species hybridize where their range overlaps. The male Spotted Towhee has a black head and breast, black upperparts, spotted white, black wings with two white wing-bars, a white-tipped black tail, red flanks, and a white belly. The female is duller, with a dark brown head, neck, breast, and upperparts and dark brown wings.

These birds forage on the ground by scratching in leaf litter, using their characteristic two-footed, backwards-scratching hop, to unearth insects, caterpillars, and seeds. They move in pairs or alone, but small family groups stay together after the nesting season.

*Paroaria coronata*

## Red-crested Cardinal

<b>LENGTH</b>	19cm (7½in)
<b>WEIGHT</b>	40g (1⅓oz)
<b>MIGRATION</b>	Non-migrant

**HABITAT** Semi-open areas with shrubbery and scattered trees, particularly near water

A well-known and very distinctive inhabitant of the grasslands of southern South America, the Red-crested Cardinal has plumage that is striking in colour. The head, crest, throat, and central breast are bright red. The upperparts are grey, with blacker wings and tail, and the underparts are white. The juvenile is duller, with a shorter crest.

The species generally occurs in pairs or small groups, but larger flocks may form outside the breeding season. Red-crested Cardinals feed on open ground, foraging for seeds, fruit, and insects. In the nesting season, both parents feed the young when they are in the nest. As soon as they have fledged, however, the male takes sole responsibility for feeding and guarding the pair's offspring.

ADULT RED-CRESTED CARDINAL

# TANAGERS

**ORDER** Passeriformes  
**FAMILY** Thraupidae  
**SPECIES** 202

The exact relationships of some birds long known as tanagers remain unclear, with some of the best known, such as the Scarlet Tanager and the euphonias, removed from the Tanager family by some authorities and placed in a limbo status between the tanagers and cardinals (see p.484).



## SUMMER AND WINTER

The plumage of the male Scarlet Tanager changes from its bright red breeding coloration during the summer to dull yellow in the winter.

## ANATOMY

Small to medium-sized forest birds, many tanagers exhibit combinations of brilliant yellows, reds, greens, and blues, with a few species even appearing metallic. Their bills are generally medium-sized and slightly pointed, although in some groups, such as the honeycreepers, they are thin and decurved. In the flowerpiercers, the bills are slightly up-turned and hooked at the tip. With the exception of the unique Giant Conebill, which looks remarkably like a nuthatch (see p.426) in both shape and posture, the overall body shape of tanagers is finchlike with a medium-sized tail. In most species there is no significant difference between males and females in either colour or size.

## BEHAVIOUR

Primarily fruit-eaters, tanagers will supplement their diet with insects and small spiders. Honeycreepers regularly feed on nectar. They are birds of the treetops and will move through the canopy in mixed-species flocks. Many species maintain their pair bond throughout the year; in these birds the males will occasionally feed the female, especially at the beginning of the breeding season. Nests are open and cup-shaped, placed in trees and small shrubs. Only the Swallow Tanager regularly nests on the ground.

### NESTING TANNER

The Black-capped Tanager raises its young in a simple, open, cup-shaped nest.



### *Schistochlamys ruficapillus*

## Cinnamon Tanager



LENGTH	18cm (7in)
WEIGHT	30g (1 1/16oz)
MIGRATION	Non-migrant

**HABITAT** Semi-open grassy areas with scattered bushes and low trees, cerrado, and caatinga

An attractive denizen of the cerrado and caatinga (open grasslands) regions of east Brazil, the Cinnamon Tanager is fairly common in some areas but uncommon in others. Named because of the cinnamon colour of most of its head, throat, breast, upper belly and vent, the Cinnamon Tanager has a conspicuous black eye mask that

### ADULT CINNAMON TANGER



offsets the cinnamon of its head. The belly is white and the flanks grey. The bill is blue, tipped black. Its upperparts are blue-grey with duskier wings and tail. In fact, the shade on the upperparts is reflected in the generic name of the species, which is derived from the Greek word for "slate cloak". Sexes are similarly plumaged.

The Cinnamon Tanager is usually seen singly or in pairs, perching in low shrubbery, often in the open. The species associates only infrequently with mixed flocks. The short song is a musical whistle, and is repeated several times in succession.

It is usually given from a prominent perch. Although much of its habitat has been destroyed or degraded, the species is not considered a global conservation concern.

### *Cissopis leverianus*

## Magpie-tanager



LENGTH	25–29cm (10–11 1/2in)
WEIGHT	75g (2 5/8oz)
MIGRATION	Non-migrant

**HABITAT** Forest edges and shrubby clearings with scattered tall trees

A large and unmistakable tanager, the Magpie-tanager is called a "magpie" because of its superficial resemblance to the Black-billed (*P. hudsonia*) and Common Magpies (see p.392) of North America and Eurasia. It is mainly black and white in colour, with a black throat, mantle, and breast, extending to the upper back. It has piercing yellow eyes that stand out against its glossy black head. Its most distinctive feature, however, is its long, graduated, black and white tail, which it moves up and down as it perches or makes long hops from branch to branch. A noisy bird, it often calls from the tops of trees with loud, metallic squeaks, and is conspicuous as it flies, with its wings whistling, a trait unusual among tanagers and one that is produced by its modified flight feathers.

The Magpie-tanager rarely joins mixed flocks, preferring to move in pairs or small groups of up to 10 birds of its own kind. These groups search for food, usually seeds, fruit, and insects. In the breeding season, the Magpie-tanager builds a nest on



### ADULT MAGPIE-TANGER

a small tree or in dense vegetation, lining it with leaves, grass, or other plant material, and lays 2–5 eggs.

The form that occurs in Amazonia is smaller than that of eastern South America, and has a white back.



FEMALE SILVER-BEAKED TANAGER

**Ramphocelus carbo****Silver-beaked Tanager**

LENGTH	18cm (7in)
WEIGHT	30g (1½oz)
MIGRATION	Non-migrant

**HABITAT** Shrubby clearings, forest edges, and gardens, especially near water

Aptly named, the male Silver-beaked Tanager has a swollen lower mandible that gleams silver-white even in dim light. In bright light, the male's black upperparts take on a velvety-maroon sheen, highlighting its dark crimson throat and breast. The female is a duller red in colour. These social birds mainly eat fruit, but insects are also taken.

**Anisognathus somptuosus****Blue-winged Mountain Tanager**

LENGTH	18cm (7in)
WEIGHT	45g (1½oz)
MIGRATION	Non-migrant

**HABITAT** Humid forest and forest edges, mainly at altitudes of 1,500–2,500m (5,000–8,205ft)

One of a group of five strikingly patterned Andean tanagers, with either all-yellow or all-red underparts, the Blue-winged Mountain Tanager has cobalt blue patches on its wings, visible when the edges of its flight feathers close up together when it is at rest. It has stunning blue shoulders and upperparts, a yellow crown, broad black eye mask, and yellow underparts. The Blue-winged Mountain Tanager moves in flocks in the Andean forests.



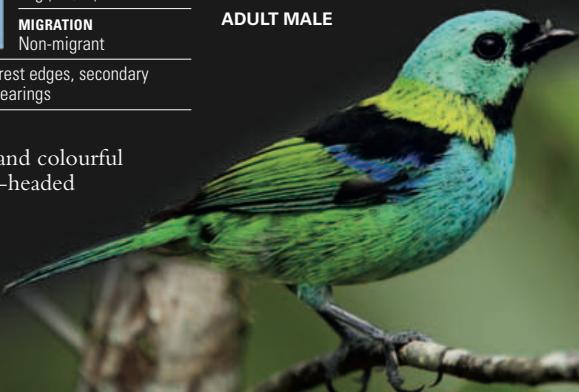
ADULT BLUE-WINGED MOUNTAIN TANAGER

**Tangara seledon****Green-headed Tanager**

LENGTH	13cm (5in)
WEIGHT	19g (1½oz)
MIGRATION	Non-migrant

**HABITAT** Humid forest, forest edges, secondary woodland, and shrubby clearings

With its complex and colourful pattern, the Green-headed Tanager is easily recognizable in its Atlantic forest



range. The male has a turquoise head and breast, yellow-green collar, black back and throat, and orange rump. Its wings, tail, and belly are green. The female is similar but duller in colour. The Green-headed Tanager occurs in groups of up to 10 vocal birds, which often form the centre of flocks feeding in the canopy.

**ADULT MALE****Tangara cyanocephala****Red-necked Tanager**

LENGTH	13cm (5in)
WEIGHT	18g (½oz)
MIGRATION	Non-migrant

**HABITAT** Humid montane forest and forest edges

The prominent red neck band of the Red-necked Tanager helps to distinguish it from the other brightly coloured *Tangara* tanagers with which

ADULT RED-NECKED TANAGER

it usually flocks. The Red-necked Tanager's red collar is offset by a beautiful violet-blue crown, forehead, and chin, the rest of its plumage is basically a vivid green. Its eyes are circled in violet-blue and there is a small yellow-orange patch on its upper wing.

The Red-necked Tanager is common in its Atlantic forest range. The species feeds actively, usually gleaning insects in the canopy, but also descending lower to fruiting trees and to pick berries.

**Tersina viridis****Swallow Tanager**

LENGTH	15cm (6in)
WEIGHT	30g (1½oz)
MIGRATION	Partial migrant

**HABITAT** Humid forest edges and clearings with scattered trees and narrow strips of forest

Unusually among tanagers, the Swallow Tanager frequently flycatches for insects such as flying termites. At such times, with its partially forked tail, it may resemble a swallow. The male takes four years to develop the full adult plumage of turquoise, with a black throat. The female is bright green, with a grey mottled throat. This nomadic species moves in groups of up to 12 birds.



ADULT MALE WITH MATURE PLUMAGE

of its purplish blue plumage, with a contrasting pale turquoise crown, then returns. This splash of colour is offset by a black eye mask, nape, mantle, wings, and tail. The legs, as its common name indicates, are bright red. The female's legs, however, are red-brown. This bird uses its curved bill to suck nectar from flowers and to pick small insects as it forages in the forest.

**Cyanerpes cyaneus****Red-legged Honeycreeper**

LENGTH	12cm (4½in)
WEIGHT	14g (½oz)
MIGRATION	Non-migrant

**HABITAT** Forest edges, woodland, clearings with scattered trees, and even residential areas

Almost alone among South American birds, the male Red-legged Honeycreeper molts into an "eclipse" plumage after the breeding season. For a few months, the male becomes dull green like the female, but with a black back, wings, and tail. The brilliance



MALE RED-LEGGED HONEYCREEPER



BLUISH GREEN MALE

*Conirostrum cinereum*

## Cinereous Conebill



## LENGTH

12cm (4 1/2in)

## WEIGHT

10g (3/8 oz)

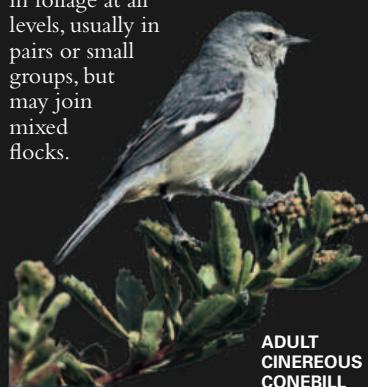
## MIGRATION

Non-migrant

**HABITAT** Shrubby areas, woodland edges and areas with scattered trees and bushes, and even gardens

The Cinereous Conebill is the most common of the six Andean conebills (there are also four lowland members of the same genus). It is a small tanager, with a slender, sharply pointed bill. It has a white eyebrow, blue-grey upperparts that are darkest on the crown, and greyish white underparts, turning to buff on the vent. It has a distinctive L-shaped white patch on the wing, formed by white bases to the main flight feathers and white-tipped coverts.

Cinereous Conebills forage actively in foliage at all levels, usually in pairs or small groups, but may join mixed flocks.



ADULT CINEREOUS CONEBILL

## Green Honeycreeper



## LENGTH

14cm (5 1/2in)

## WEIGHT

19g (1 1/16oz)

## MIGRATION

Non-migrant

**HABITAT** Humid tropical forest and secondary woodland, including forest edges

As indicated by its name, green is the main colour of the plumage of both sexes of the Green Honeycreeper. The female is almost entirely bright “parakeet” green, darker on the wings and slightly paler below with a yellowish throat and belly. The male is a shiny green or (in some subspecies) bluish green, with duskier wings, and a contrasting black head.

The sole member of its genus, this bird is large and stocky, with a stout, slightly decurved yellow bill. It is a canopy fruit-eater, usually seen singly or in pairs (not in groups), although it often joins mixed flocks of tanagers.

often with a yellow forehead, and yellow underparts. The female is dull olive and yellow, while the young male resembles the female but has a yellow forehead and a blue eye mask.

The Thick-billed Euphonia can be distinguished from all euphonias, except the Violaceous Euphonia (*E. violacea*), by its yellow throat; the two species do not overlap in range, so confusion is unlikely. While the Thick-billed Euphonia is well named, as it has the thickest bill of any euphonia, this characteristic is hard to determine in the field. It tends to forage for fruit in pairs or small groups, often with mixed tanager flocks, high up on trees. It builds its dome-shaped nest in a sheltered nook or cranny.

## MALE IN FOREST CANOPY



## LENGTH

11cm (4 1/2in)

## WEIGHT

15g (9/16oz)

## MIGRATION

Non-migrant

**HABITAT** Forest edge, woodland, scrub, gardens, and agricultural areas with scattered trees

Typical of the euphonia species, the Thick-billed Euphonia is a small, short-tailed tanager with a stubby bill. The male is typically dark blue above,

*Piranga olivacea*

## Scarlet Tanager



## LENGTH

17cm (6 1/2in)

## WEIGHT

30g (1 1/16oz)

## MIGRATION

Migrant

**HABITAT** Deciduous forests; humid forest edges and secondary woodlands in winter

In breeding plumage, the male Scarlet Tanager is strikingly bicoloured with its black wings and tail offsetting its brilliant red plumage. In non-breeding plumage, it retains its black wings and

tail, but otherwise resembles the female, being uniformly green above and greenish yellow below. The young male is dull orange-red, sometimes with faint pale wing-bars.

After breeding in North America, virtually the entire population of Scarlet Tanagers migrates south in autumn, wintering in South America. In common with other members of its genus, but unlike other tanagers, the Scarlet Tanager feeds exclusively on insects and larvae, usually gleaned from the undersides of leaves.

## MALE IN BREEDING PLUMAGE

*Euphonia laniirostris*

## Thick-billed Euphonia



## LENGTH

11cm (4 1/2in)

## WEIGHT

15g (9/16oz)

## MIGRATION

Non-migrant

**HABITAT** Forest edge, woodland, scrub, gardens, and agricultural areas with scattered trees

Typical of the euphonia species, the Thick-billed Euphonia is a small, short-tailed tanager with a stubby bill. The male is typically dark blue above,

## MALE IN FOREST CANOPY

*Chlorophonia cyanea*

## Blue-naped Chlorophonia



## LENGTH

11cm (4 1/2in)

## WEIGHT

14g (1 1/16oz)

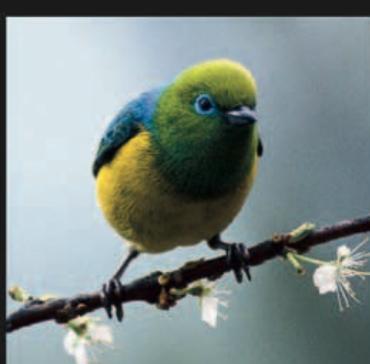
## MIGRATION

Non-migrant

**HABITAT** Humid forest edges and clearings with large trees

The head, throat, breast, wings, and tail of the Blue-naped Chlorophonia are bright green; its nape, mantle, and rump bright blue; and its belly and vent bright yellow. Despite this gaudy plumage, the Blue-naped Chlorophonia, like the other

chlorophonias, can be inconspicuous, often remaining hidden in dense canopy foliage. These birds are fruit-eaters, favouring mistletoe berries, and unlike other tanagers, their nests are domed.



MALE BLUE-NAPED CHLOROPHONIA

# CARDINALS AND GROSBEAKS

## BEHAVIOUR

**ORDER** Passeriformes  
**FAMILY** Cardinalidae  
**SPECIES** 42

extremely apt. However, the English names of grosbeak and bunting that are used for some species in this family are also used for species in other families, such as finches (see p.464) and buntings and American sparrows (see p.474). The males are usually much more brightly coloured than the females, especially during the breeding season. Many species live in open woodland, which provides the seed-based diet, which they favour.

FOR SOME SPECIES of this heavy-billed, finchlike family of American birds, the name "grosbeak" is

The males of most species of cardinals and grosbeaks are highly territorial. Many have loud, sweet, often repetitious songs, which they usually sing persistently from exposed perches during the breeding season. Birds of this family use their thick bills and powerful jaw muscles to crack open heavy seeds. They supplement their diet with berries, and will also feed on insects.

### BREEDING RITUAL

As part of its elaborate courtship ritual, the bright red male Northern Cardinal feeds the much duller-coloured female when she assumes a begging posture.



SINGING MALE DICKCISSEL

*Pheucticus ludovicianus*

### Rose-breasted Grosbeak



**LENGTH**  
18.5cm (7½in)

**WEIGHT**  
40g (1⅓oz)

**MIGRATION**  
Migrant

**HABITAT** Mature, deciduous forest, forest edges, thick brush, semi-open country with scattered trees

A medium-sized stocky songbird, the male Rose-breasted Grosbeak is a striking creature, boldly patterned in black, white, and red. The drab female resembles a large sparrow or finch and is more of an identification challenge. However, it can be recognized by its large, thick, pale, cone-shaped bill, boldly striped head, and coarsely streaked breast. The juvenile resembles the female, although young males have an unstreaked orange breast.

Where their ranges overlap, the Rose-breasted Grosbeak hybridizes with the Black-headed Grosbeak (*P. melanocephalus*). Hybrids can look like either parent species, or show intermediate features. In areas of overlap, male Rose-breasted Grosbeaks respond equally to songs of either species. The song of this grosbeak resembles that of the American Robin (*Turdus migratorius*), but is longer, mellower, and more melodic.

The Rose-breasted Grosbeak provides an important economic service to farmers by eating large numbers of destructive insect pests such as potato beetles, grasshoppers, cankerworms, and moths. It also feeds on other insects, weed seeds, wild fruit, and buds. Females tend to forage higher in the tree canopy than males and hover-glean more frequently.

**MALE ROSE-BREASTED GROSBEAK**



### Dickcissel



**LENGTH**  
15cm (6in)  
**WEIGHT**  
25g (1oz)  
**MIGRATION**  
Migrant

**HABITAT** Grassy fallow fields, tall grass prairies, open country, and agricultural areas

The Dickcissel is a familiar bird in the farmlands in the Great Plains region of the USA. It is a stocky, sparrow-sized bird with a heavy bill and short tail. It has brown upperparts and a yellow breast. The distribution of this bird is obscured by its irregular movements. Birds may breed in large numbers at a site one year, only to be absent the next. During winter, these birds form huge flocks on the Venezuelan llanos, where they feed on rice and sorghum. Considered an agricultural pest, the roosts of this species – often in the millions – are targeted for poisoning.

### PARENTAL CARE

The male Rose-breasted Grosbeak helps the female to incubate the eggs, and sings while on the nest. Incubation takes 14 days and fledging 9–12 days. Both parents care for the young. Juveniles remain under parental care for about three weeks.



### MALE FEEDING JUVENILE

When two broods are produced in a season, the male feeds the fledged young, while the female builds the new nest.

*Cardinalis cardinalis*

## Northern Cardinal



LENGTH	22cm (8½in)
WEIGHT	45g (1½oz)
MIGRATION	Non-migrant

**HABITAT** Brushy habitat within or at edge of woodland, often in suburban areas

The Northern Cardinal is a popular bird in the USA, holding the title of state bird in no less than seven states. It is associated with Christmas and often appears on greetings cards. It is often seen at snow-covered bird-feeders throughout the east of the USA. Its name refers to the red-robed Roman Catholic cardinals and its crested head is



## FEMALE NORTHERN CARDINAL

The female has a buff, golden-brown head, buff-olive upperparts, buff-brown underparts, and a red wash on the wings and tail.

## ADULT MALE

The male is entirely brilliant red in colour, except for a thick black line around the bill.

also thought to resemble a bishop's mitre. The male's brilliant red plumage – which gives rise to its occasional moniker of Redbird – stands out majestically against snowy backdrops. A brighter red male holds territories with denser vegetation, feeds at higher rates, and has greater reproductive success than a duller male. The female is brown with a red crest, wings, and tail. The juvenile is also brown, with slightly orange underparts and a redder tail. Both sexes sing, the female often doing so from the nest, and its song is thought to inform the male that the chicks require food.

chestnut-brown with chestnut wing-bars. The Blue Grosbeak forages by hovering and gleaning from weeds and bushes and by walking or hopping on the ground. The species' large bill allows for manipulation of large grains such as corn, and insects such as grasshoppers and mantids. It will also eat snails and fruit.

*Passerina caerulea*

## Blue Grosbeak



LENGTH	17cm (6½in)
WEIGHT	25g (1oz)
MIGRATION	Migrant

**HABITAT** Open weedy fields with brushy patches, riparian woodland, forest edges, freshwater marshes

A beautiful blue bird with a silvery bill and chestnut wing-bars, the Blue Grosbeak was formerly placed in its own genus, *Guiraca*. Similarities with buntings in genetics, behaviour, moult, and plumage led to its inclusion in the bunting genus *Passerina*. Only the male is bright blue; the female and juveniles are

brown markings  
chestnut wing-bars

MALE BLUE GROSBEAK

*Passerina ciris*

## Painted Bunting



LENGTH	13.5cm (5¼in)
WEIGHT	16g (½oz)
MIGRATION	Migrant

**HABITAT** Brushy lowland with tall trees, woodland borders, and overgrown fields

*Saltator maximus*

## Buff-throated Saltator

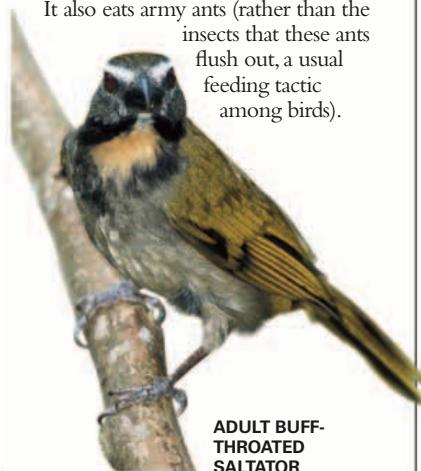


LENGTH	21cm (8½in)
WEIGHT	50g (1¾oz)
MIGRATION	Non-migrant

**HABITAT** Shrubby clearings with scattered trees, forest borders, and secondary woodland

The *Saltator* genus is comprised of a dozen stout passersines with thick, convex bills, and the Buff-throated Saltator is one of its most widespread members. It has a slate-grey head with white eyebrows and a green crown. The upperparts are olive-green, the throat is buff-cinnamon, and the underparts grey to buff towards the central belly. Its song is a long series of short, melodious, phrases. This bird feeds on fruit, buds, and insects, and forages at low and mid-levels, sometimes with mixed-species flocks.

It also eats army ants (rather than the insects that these ants flush out, a usual feeding tactic among birds).



ADULT BUFF-THROATED SALTATOR



## MALE PAINTED BUNTING

The male Painted Bunting's plumage – a vivid blue head and breast sides, bright green mantle, and red rump and underparts – made it a popular cage-bird until it came under federal protection. Despite its vibrant colours, it is difficult to spot as it skulks in dense thickets. This is particularly true of the female, which has green upperparts and olive-yellow underparts, and the uniform drab olive-grey juvenile.



**NORTHERN CARDINAL**

Male Northern Cardinals develop their intense red plumage progressively as they mature. They can be aggressive and often defend their territories fiercely.



## **GLOSSARY AND INDEX**

# GLOSSARY

## A

**adult** A fully developed, mature bird that is able to breed. It is in its final plumage. See also *immature*.

**aerofoil** A bird's wing is based on an aerodynamic shape called an aerofoil. It is curved outwards along the entire upper surface, to produce an upward force known as lift.

**air sac** A thin-walled structure joined to the lungs of a bird, involved in respiration. There are usually nine air sacs, which may extend into some of a bird's hollow bones. Birds that plunge-dive into water, such as gannets and boobies, have modified air sacs beneath their skin to help cushion the impact.

**alarm call** A call made by a bird to signal danger. Alarm calls are often short and urgent in tone, and a few species use different calls to signify the precise nature of the threat. See also *call*.

**albino** An animal that lacks pigments. Albino birds have a white plumage, usually with red eyes and a pinkish bill and legs. See also *leucistic*.

**allopreening** Mutual preening between two birds, the main purpose of which is to reduce the instinctive aggression when birds come into close contact. In the breeding season, allopreening helps to strengthen the pair bond between the male and female. This behaviour is particularly common in parrots and estrildid finches. See also *preening*.

**altricial** Describes young birds that hatch naked or with a patchy covering of down, often with closed or non-functioning eyes. They are helpless and depend entirely on their parents. See also *precocial*.

**alula** A small group of two to six feathers projecting from a bird's "thumb", at the bend of its wing. When raised, the alula reduces turbulence, by enabling fine control of the airflow over the wing. It is also known as the bastard wing.

**arboreal** Living fully or mainly in trees.

**altitudinal migrant** see *vertical migrant*

**anting** A type of behaviour practised by some songbirds in which they allow ants to run through their plumage. Often the birds open their wings fully and lie on the ground to encourage the ants, sometimes even picking the ants up in their bills and rubbing them over their feathers. It is thought that this behaviour releases the ants' formic acid, which may help to kill parasites in the plumage or act as an insect repellent.

**Australasia** A biogeographical region that comprises Australia, New Guinea, New Zealand, and adjacent islands in the East Indies and Polynesia.

**avian influenza** A highly infectious disease carried by birds, especially waterfowl and domestic chickens and turkeys. It is caused by avian influenza viruses closely related to those that cause human influenza. The disease is popularly known as "bird flu".

**axillary** A term describing feathers at the base of the underwing. Axillary feathers often form small, distinct patches.

## B

**barb** In most feathers, the central shaft (rachis) has thousands of barbs – tiny, closely spaced branches that project outwards to form a continuous, flat surface. Down feathers lack barbs. See also *down feather*.

**barbule** In a feather, a minuscule side branch that locks the barbs together, rather like a zip.

**bastard wing** see *alula*

**beak** see *bill*

**bill** A bird's jaws. A bill is made of bone, with a horn-like outer covering of keratin.

**binocular vision** Vision in which the two eyes have overlapping fields of view. This enables an animal to judge depth accurately. In birds, binocular vision is found mainly in predatory species, such as herons, gannets, boobies, birds of prey, and owls.

**biome** A characteristic grouping of living things, together with the setting in which they are found. On land, most biomes are defined mainly by their vegetation (for example, rainforest). The extent of any particular biome is determined by climatic conditions.

**bird** A warm-blooded, two-legged animal that has feathers, wings, and a bill, lays eggs, and can (in most cases) fly.

**bird flu** see *avian influenza*

**bird of prey** Any of the predatory birds in the orders Falconiformes (the eagles, hawks, falcons, kites, buzzards, ospreys, and vultures) and Strigiformes (the owls). They are typified by their acute eyesight, powerful legs, strongly hooked bill, and sharp talons. These birds, particularly the Falconiformes, are also known as raptors. See also *talon*.

**body feather** see *contour feather*

**booming** An unusual form of "song" produced by large species of bittern, the Kakapo (a New Zealand parrot), and a few other birds. The booming of male bitterns is a deep, resonant, hollow sound that carries for several kilometres.

**brackish** Containing a mixture of salt water and fresh water, for example, in a coastal lagoon.

**breeding plumage** A general term for the plumage worn by adult birds when they display and form breeding pairs. It is usually worn in the spring and summer, but this is not always the case; for example, in the northern hemisphere many species of duck are in their breeding plumage during the winter. See also *non-breeding plumage*.

**brood (n.)** The young birds produced from a single clutch of eggs and brooded together. See also *clutch*.

**brood (vb)** In birds, to sit on nestlings to keep them warm. Brooding is usually

carried out mostly or entirely by the adult female, although in some species the male takes sole responsibility for this task. See also *incubate*.

**brood parasite** A bird that tricks another bird into raising its young. Some brood parasites, including cowbirds and many Old World cuckoos, always breed in this way, laying their eggs in the nests of different species. A variety of other birds, including waterfowl, gamebirds, and songbirds, are occasional brood parasites. They usually raise their young themselves, but sometimes dump their eggs in the nest of another member of the same species instead.

**brood patch** An area of bare skin on the belly of a parent bird that is richly supplied with blood vessels and thus helps to keep eggs warm during incubation. This area loses its feathers in readiness for the breeding season and is fully feathered at other times.

## C

**cage-bird** A species of bird commonly kept in captivity. In general, the term refers to parrots and songbirds, which are kept for their colourful plumage or musical song. The trapping of wild birds to supply the international cage-bird trade is a major factor in the endangerment of many tropical species.

**call** A vocal sound produced by a bird to communicate a variety of messages. Calls are often highly characteristic of individual species and can be a major aid in locating and identifying birds in the field. Most bird calls are shorter and simpler than songs. See also *alarm call*, *contact call*, *song*.

**canopy** The highest layer of a forest or woodland, created by the overlapping branches of neighbouring trees.

**carpal joint** The outer joint of a bird's wing, equivalent to the human wrist.

**carrion** The remains of dead animals.

**casque** A bony extension on the head of an animal. Cassowaries and hornbills have a casque, typically larger in the male.

**cere** A leathery patch of bare skin that covers the base of a bird's bill. It is found only in a few groups, including birds of prey, pigeons, and parrots.

**cerrado** A type of South American savanna dotted with small, gnarled trees. Most cerrado is in Brazil. See also *savanna*.

**chaparral** A type of dry, scrub-like habitat dominated by evergreen shrubs, found only in southern California, USA.

**churring** An extremely long, far-carrying, repetitive trill produced at night by some species of nightjar, as a territorial song.

**class** A level used in classification. In the sequence of classification levels, a class forms part of a phylum, and is subdivided into one or more orders. The world's birds make up the class Aves.

**clay lick** A site, often a riverbank or exposed cliff, where animals regularly

gather to eat clay, which contains useful salts and minerals. Among birds, parrots are the most frequent visitors to clay licks.

**cloaca** An opening towards the rear of a bird's body. It is present in both sexes and is used by the reproductive and excretory systems.

**cloudforest** A damp forest almost constantly under mist or clouds, especially in highland regions in the tropics. The tropical cloudforests of Central and South America support a wider variety of birds than any other habitat, except for lowland rainforest.

**clutch** The group of eggs in a single nest, usually laid by one female and incubated together. Clutch sizes vary from a single egg in some species, to as many as 28 eggs in the Northern Bobwhite of North America. The largest clutch recorded in a songbird is 19 eggs, laid by a European Blue Tit. See also *brood*.

**cock** A term sometimes used to describe the adult male in gamebirds and songbirds. See also *hen*.

**collar** The area around the middle of a bird's neck, which in some species is a prominent feature of the plumage.

**colony** In birds, a group of the same species nesting together in the same area. Colonial nesting is common among seabirds, herons and their relatives, swifts, bee-eaters, and weavers.

**colour form** One of two or more clearly defined plumage variations found in the same species. Also known as a colour morph or phase, a colour form may be restricted to a particular part of a species' range, or it may occur side by side with other colour forms throughout the entire range. Adults of different colour forms are able to interbreed, and these mixed pairings can produce young of either form.

**comb** A bare, fleshy growth on the top of the head in some birds.

**contact call** A call made by a bird to give its location as a means of staying in touch with others of the same species nearby. Contact calls are used by birds in flocks and by breeding pairs. See also *call*.

**contour feather** A general term for any feather that covers the outer surface of a bird, including its wings and tail. Contour feathers are also known as body feathers, and help to streamline the bird.

**convergent evolution** The independent evolution of similar characteristics in unrelated species. For example, the hummingbirds of the Americas and the sunbirds of Africa and Asia have independently evolved to lead a high-energy, nectar-eating lifestyle.

**cooperative breeding** A breeding system in which a pair of parent birds are helped in raising their young by several other birds, which are often related to them and may be the young birds from previous broods. A few hundred species worldwide reproduce in this way.

including several well-studied species such as the Southern Ground Hornbill, Florida Scrub Jay, Groove-billed Ani, and Acorn Woodpecker.

**courtship display** Ritualized, showy behaviour used in courtship by the male and sometimes also by the female.

**covert** A small feather that covers the base of a bird's flight feather. Together, the coverts form a well-defined feather tract on the wing or at the base of the tail. See also *feather tract*.

**crèche** A group of young birds of about the same age, produced by different parents. One or more adults guards the entire crèche. This behaviour is found in penguins, flamingos, ostriches, and rheas.

**crest** A group of elongated feathers on the top of a bird's head, which may be raised during courtship or to indicate alarm. A crest is often a prominent plumage feature, but in some species it is not easily visible when lowered.

**Critically Endangered (CR)** A label used to describe a species that faces an extremely high risk of extinction in the wild in the immediate future. See also *IUCN*.

**crop** In birds, a muscular pouch below the throat, forming an extension to the oesophagus. Its purpose is to store undigested food, and it enables birds to feed quickly so that they can digest their meal later in safer surroundings.

**crop milk** A milk-like fluid rich in fat, protein, and vitamins, produced by adult pigeons and doves to feed their nestlings.

**crown** The area on top of a bird's head. It is often a prominent plumage feature.

**cryptic coloration** Coloration and markings that make an animal difficult to see against its background.

## D

**dabble** To feed in shallow water by sieving water and food through comb-like filters in the bill. This behaviour is common in some ducks, giving rise to the name "dabbling duck".

**Data Deficient (DD)** A label used to describe a species about which there is insufficient up-to-date information to produce an estimate of its population, and therefore the level of threat that it faces. See also *IUCN*.

**dawn chorus** The intense, short-lived concentration of bird song around dawn. In temperate regions, it is usually restricted to the spring, when birds are establishing breeding territories and attracting mates.

**decurved** A term describing a bird's bill that curves downwards towards the tip.

**dimorphism** see *sexual dimorphism*

**display** see *courtship display*, *distraction display*, *threat display*

**distraction display** A special display in which a bird deliberately attempts to hold a predator's attention in order to lure it away from its nest and eggs. This behaviour is common in ground-nesting waders, which pretend to have an injured wing to tempt the predator to follow them, and in the fairywrens of Australia, which scurry along the ground in a zig-zag pattern while making a mouse-like noise.

**diurnal** Active during the day.

**DNA-DNA hybridization** A scientific technique used to determine how similar two different samples of DNA are. It is playing an increasingly important part in establishing the evolutionary relationships between different species and has resulted in various changes to bird classification.

**down feather** A soft, fluffy feather that provides good insulation. Young birds are covered by down feathers before they moult into their first juvenile plumage. Some adult birds, including waterfowl, have a layer of down feathers under their contour feathers. See also *contour feather, juvenile*.

**drake** An adult male duck. The adult female is known as the duck.

**drumming** An unusual form of non-vocal "song". In woodpeckers, drumming is a repetitive tapping noise made by vibrating the bill rapidly against a branch or tree-trunk. In snipes, it is a humming noise produced in mid-air by air rushing through specially modified outer tail feathers.

**dusting** A type of behaviour in which birds roll around in dry earth or sand, flicking their wings and ruffling their feathers to help spread the material evenly. This probably helps to keep their feathers clean by removing dry skin and getting rid of parasites such as lice, mites, and fleas. Dusting is also known as dust bathing.

**dynamic soaring** see *soaring*

## E

**ear tuft** A distinct tuft of feathers on each side of a bird's forehead, with no connection to the true ears. Many owls have ear tufts.

**echolocation** A method of sensing nearby objects using pulses of high-frequency sound. Echoes bounce back from obstacles, enabling the sender to build up a "picture" of its surroundings. Echolocation is used by a small number of cave-dwelling birds, including the Oilbird and some cave swiftlets.

**eclipse plumage** An inconspicuous plumage worn in some birds by adult males for a short period after the breeding season is over. At this time, the males often resemble the females. The eclipse plumage helps to camouflage them during their moult.

**egg tooth** A small, horn-like growth on the bill of a nestling, with which it breaks out of its shell.

**Endangered (EN)** A label used to describe a species that faces a very high risk of extinction in the wild in the near future. See also *IUCN*.

**endemic** A species native to a particular geographic area, such as an island, forest, mountain, state, or country, and which is found nowhere else.

**escape** An individual bird that has escaped from a zoo or other collection to live in the wild. Waterfowl and birds of prey are frequent escapes.

**eyering** A ring of colour around the eye of a bird.

**eyestripe** A stripe of colour running as a line through the eye of a bird.

**eyrie** The nest of a large bird of prey, usually on a cliff, or rocky promontory, often used by the same pair of adult birds in successive years.

## F

**family** A level used in classification. In the sequence of classification levels, a family forms part of an order and is subdivided into one or more genera.

**feather tract** A distinct area on a bird's skin, covered by a particular type of feather.

**fledge** In young birds, to leave the nest or to acquire the first complete set of flight feathers. These birds are known as fledglings, and may remain dependent on their parents for some time after fledging. See also *flight feather*.

**fledgling period** The average time taken by the young of a species to fledge, timed from the moment they hatch. In flying birds, fledgling periods range from 11 days in some small songbirds to as long as 280 days in the Wandering Albatross.

**fledgling** see *fledge*

**flight feather** A collective term for a bird's wing and tail feathers, used in flight. More specifically, it also refers to the largest feathers on the outer part of the wing.

**forewing** The front section of a bird's spread wing. See also *hindwing*.

## G

**gallery forest** A narrow strip of forest, often along a riverbank or beside a stream but also in savanna and other open country. Gallery forest may be an area's only forest for many miles.

**gamebird** A member of the order Galliformes, including species such as pheasants, quails, francolins, peafowl, turkeys, grouse, and the domestic chicken.

**gape** The mouth of a bird, or the angle at the base of its bill. Young birds, especially songbirds, often have brightly coloured orange or yellow gapes to stimulate their parents to push food into their mouths.

**genus (pl. genera)** A level used in classification. In the sequence of classification levels, a genus forms part of a family and is subdivided into one or more species. A genus that contains a single species is known as monotypic.

**gizzard** A muscular sac that forms the upper part of a bird's stomach. It plays an important part in grinding up food, especially in species that eat seeds and nuts, such as gamebirds, pigeons, doves, and parrots.

**guano** The accumulated droppings of seabirds at their nesting colony, sometimes harvested as a fertilizer.

**gular sac** Also known as a gular pouch, a large, fleshy, extendable sac just below the bill of some birds, especially fish-eaters such as pelicans and cormorants. It forms part of the throat.

## H

**habitat** The area in which a particular kind of organism usually lives.

**hawking** A feeding technique in which a

bird sits motionless on a perch and waits for a flying insect to come near, then suddenly flies out to catch it in mid-air. Hawking is used by flycatchers and bee-eaters in particular. See also *sally*.

**hen** A term sometimes used to describe the adult female in gamebirds and songbirds. See also *cock*.

**hindwing** The rear section of a bird's spread wing. See also *forewing*.

**hybrid** The offspring produced when two different species cross-breed. Hybrids are rare in the wild. Among birds, hybrids are most frequent in gamebirds and waterfowl, especially ducks.

## I

**immature** In birds, an individual that is not yet fully mature or able to breed. Some birds, such as gulls, pass through a series of different immature plumages over a period of several years before finally adopting their first adult plumage. See also *adult, juvenile*.

**incubate** In birds, to sit on eggs to keep them warm, allowing them to develop. Incubation is often, but not always, carried out by the adult female. See also *brood*.

**incubation period** In birds, the period when a parent incubates its eggs. Incubation periods range from 11 days in some small songbirds to over two-and-a-half months in the Wandering Albatross.

**Indomalayan** A biogeographical region comprising southern and southeast Asia and associated islands. It is separated from the Palearctic region to the north by the Himalayas. See also *Palearctic*.

**insectivorous** An animal that feeds on insects and other invertebrates.

**introduced species** A species that humans have accidentally or deliberately brought into an area where it does not normally occur. Also known as an alien species.

**iridescent plumage** Plumage that shows brilliant, luminous colours that seem to sparkle and change when seen from different angles. It is found in a number of bird families, including kingfishers, hummingbirds, and starlings.

**irruption** A sporadic mass movement of animals outside their normal range. Irruptions are usually short-lived and occur in response to severe conditions, such as winter cold or lack of food.

**IUCN** The initials used to designate the World Conservation Union (formerly the International Union for the Conservation of Nature). This organization carries out conservation-related activities, including gathering and publishing information on the current status of threatened species.

## JK

**juvenile** A term referring to the plumage worn by a young bird at the time it makes its first flight and until it begins its first moult. See also *adult, immature*.

**keel** In birds, a ridge-shaped enlargement of the breastbone that anchors the powerful muscles used in flight. It is sometimes known as the carina. See also *sternum*.

**keratin** A tough but lightweight structural protein, from which human fingernails and hair are made. In birds, keratin is found in the claws, feathers, and outer part of the bill.

**kleptoparasite** A bird that gets much of its food by stealing it from other birds. Skuas and frigatebirds all follow this piratic lifestyle.

## L

**lamellae** Delicate, comb-like structures inside the bill of some birds – such as flamingos, ducks, and geese – used for filtering tiny food particles out of water.

**leap-frog migration** A pattern of migration in which some populations of a species travel much further than the other populations, by “leap-frogging” over the area where these sedentary (non-migratory) birds are found. For example, in some waders that breed in the northern hemisphere, the most northerly breeders fly furthest south to their wintering grounds, while the population that breeds further south stays in much the same area all year. See also *migration*.

**Least Concern (LC)** A label used to describe a species that is widespread or abundant or which is not likely to become threatened in the near future. See also *IUCN*.

**lek** A communal display area used by male birds during courtship. The same location is often revisited for many years. Species that display at leks include some gamebirds and waders and a variety of tropical forest birds, such as manakins, birds-of-paradise, and cotingas.

**leucistic** A term describing an animal that is lacking in some pigments. Leucistic birds appear very pale, often with abnormal patches of white plumage. See also *albino*.

**lobed feet** Feet with a series of loose, fleshy lobes on the toes, designed for swimming, as in the grebes and coots.

**lore** A small area between a bird's eye and the base of its upper bill.

## M

**mallee** A dry, scrub-like habitat with scattered shrubs and small eucalyptus trees, found in parts of Australia.

**mandible** The upper or lower part of a bird's bill, known as the upper or lower mandible respectively.

**mangrove swamp** A forest-like habitat found in the tropics along muddy coasts and river mouths. It is formed by mangrove trees, which are adapted to grow with their roots immersed in saltwater. Mangrove swamps are an important habitat for nesting seabirds, herons, and egrets.

**mantle** The area on the upper surface of a bird between its wings.

**melanistic** A term describing an animal with more brown or black pigments than usual. Melanistic birds appear very dark.

**migration** A journey to a different region, following a well-defined route. Most birds that migrate regularly do so in step with the seasons, so that they can take advantage of good breeding conditions

in one place, and good wintering ones in another. See also *leap-frog migration*, *partial migrant*, *reverse migration*, *sedentary*, *vertical migrant*, *visible migration*.

**migrant** A species that migrates. See also *partial migrant*, *sedentary*.

**mimicry** In birds, the act of copying the songs or calls of other species. The mimic often weaves these vocal fragments into its own usual song. Some birds, including parrots and mynas, can also copy mechanical sounds such as ringing telephones, machinery, and car alarms.

**mobbing** A type of defensive behaviour in which a group of birds gang up to harass a predator, such as a bird of prey or an owl, swooping repeatedly to drive it away.

**monogamous** Mating with a single partner, either in the course of a single breeding season or for life. See also *polygamous*.

**morph** see *colour form*

**moult** In birds, to shed old feathers so they can be replaced. Moult enables birds to keep their plumage in good condition, change their level of insulation, and change their coloration or markings so that they are ready to breed.

## N

**nape** The back of the neck.

**Nearctic** A biogeographical region that includes Greenland, Canada, most of the USA (except for the far south), and the highlands of northern Mexico. See also *Neotropics*.

**Near Threatened (NT)** A label used to describe a species that is not currently facing any serious risk of extinction in the wild, but which is considered likely to become threatened in the near future. See also *IUCN*.

**Neotropics** A biogeographical region that encompasses the tropical regions of the Americas, as well as the temperate region of southern South America. It includes the southern states of the USA, southern Mexico, Central America, the Caribbean, and South America. See also *Nearctic*.

**nestling** A young bird that is still in the nest.

**New World** The Americas, including the Caribbean and offshore islands in the Pacific and Atlantic oceans. See also *Old World*.

**niche** An animal's place and role in its habitat. Although two species may share the same habitat, they never share the same niche.

**nictitating membrane** A transparent or semi-opaque “third eyelid”, which moves sideways across the eye. Water birds often use the membrane as an aid to vision when swimming underwater.

**nidicolous** A term describing young birds that need a period of parental care before they can leave the nest. Most birds are nidicolous, including all passerines.

**nidifugous** A term describing young birds that can leave the nest immediately or soon after hatching. Nidifugous birds include many gamebirds, rails, plovers, sandpipers, and ducks.

**nomadic** Being almost constantly on the move. Birds of deserts, grasslands, and the coniferous forests of the far north are commonly nomadic.

**non-breeding plumage** A general term referring to the plumage worn by adult birds outside the breeding season. In many species, particularly in temperate regions, it is also known as winter plumage. See also *breeding plumage*.

**non-migrant** see *sedentary*

**non-passerine** Any bird that is not a member of the order Passeriformes (or passerines). See also *passerine*.

## O

**Old World** Europe, Asia, Africa, and Australasia. See also *New World*.

**omnivorous** An animal that eats both plant and animal food.

**order** A level used in classification. In the sequence of classification levels, an order forms part of a class and is subdivided into one or more families. The world's birds are separated into 29 orders.

**oscine** A term used to describe members of the suborder Passeri – the larger of the two main subdivisions of the order Passeriformes (or passerines). The oscines have a complex, highly specialized syrinx (voicebox), and as a result they can sing very intricate, often beautiful songs. These species are often known as the songbirds. See also *passerine*, *suboscine*, *syrinx*.

## PQ

**Paleartic** A biogeographical region that comprises Europe, North Africa, the Middle East, and all but southern Asia. It is separated from the Indomalayan region, to the south, by the Himalayas. See also *Indomalayan*.

**partial migrant** A species in which some populations migrate while others are sedentary. This situation is common in birds with a wide distribution, because the different populations often experience very different climatic conditions. See also *migration*, *sedentary*.

**passerine** Any bird belonging to the vast order Passeriformes – the passerines. This group contains more species than all the other orders of birds combined, the members of which are known as non-passerines. An alternative name for the passerines is perching birds, because they have a unique type of foot that enables them to grip even the most slender branches or stems. See also *non-passerine*, *oscine*, *suboscine*.

**pelagic** Relating to the open ocean. Pelagic birds spend most of their life at sea and only come to land to nest. They include the albatrosses, petrels, shearwaters, tropicbirds, gannets, boobies, and skuas, as well as most auks and some penguins and terns.

**phase** see *colour form*

**phylum (pl. phyla)** A level used in classification. In the sequence of classification levels, a phylum forms part of a kingdom, and is subdivided into one or more classes.

**polygamous** Mating with two or more partners during the course of a single breeding season. See also *monogamous*.

**precocial** Describes young birds that are well developed at hatching, with down feathers and open, functioning eyes.

Many precocial young are soon able to walk or swim and find food themselves. See also *altricial*, *down feather*.

**preen gland** A gland, found near the base of a bird's tail, that secretes oils that are spread over the feathers during preening. It is also known as the oil gland.

**preening** Essential routine behaviour by which birds keep their feathers in good condition. A bird grasps an individual feather at its base and then “nibbles” upwards towards the tip, and repeats the process over and over with different feathers. This helps to smooth and clean the plumage. Birds often also smear oil from their preen gland onto their feathers at the same time. See also *allopreening*.

**primary feather** One of the large outer wing feathers, growing from the digits of a bird's “hand”. The primary feathers are often collectively referred to as primaries. See also *secondary feather*.

**quill** The lowest, exposed section of a feather's central shaft (rachis) – the part which grows from a bird's skin. See also *rachis*.

## R

**race** see *species*

**rachis** The central, hollow shaft of a feather. See also *quill*.

**rainforest** A forest, usually in the tropics, with very high rainfall, high humidity, and high temperatures all year round. Undisturbed lowland tropical rainforest is home to the greatest variety of birds on Earth.

**raptor** see *bird of prey*

**ratite** A member of an ancient group of flightless birds called the ratites. Today, this group is quite small, comprising the ostriches, cassowaries, emus, rheas, and kiwis, but in the past it was larger and more diverse.

**resident** see *sedentary*

**reverse migration** A phenomenon that occurs when a young bird from a migratory species mistakenly travels in the opposite direction to normal, usually on a line that is approximately 180 degrees from its “correct” route. The reasons for this failure of orientation are not fully understood. Reverse migration causes birds to turn up in places far outside their normal range. See also *migration*.

**rictal bristles** Stiff, hair-like feathers that project from the base of the bill in many insect-eating birds. They provide protection against struggling prey, especially large stinging insects, and may help the birds to detect the movements of their victims.

**rookery** A nesting colony of Rooks (a species of Eurasian crow) or penguins.

**roost** A place where birds sleep, or the act of sleeping. The majority of birds roost at night. However, nocturnal species such as owls and nightjars roost by day, and many coastal species, particularly waders, roost at high tide when their feeding areas are flooded by the rising seawater.

**rump** The area between a bird's back and the base of its upper tail. It may be partly or wholly hidden when a bird is

perched or on the ground with wings folded. In many species, the rump has a different colour from the rest of the plumage.

## S

**sally** A short flight from a perch to catch an invertebrate, often in mid-air. See also *hawking*.

**salt gland** A gland located just above the eye of some birds, particularly seabirds. This enables them to extract the fluids they require from saltwater and then expel the excess salts through the nostrils.

**salt marsh** A habitat found on sheltered, flat, muddy coastlines. It consists of a wide, low-lying area colonized by salt-tolerant plants and is covered by high tides. Salt marsh is an important habitat for many waders and waterfowl.

**savanna** A general term for all tropical grasslands. Most savannas have a scattering of trees or scrub.

**scrape** A simple nest that consists of a shallow depression in the ground, which may be unlined or lined with soft material such as feathers and grasses. Birds that make nests of this type include terns, some gulls, waders, and gamebirds.

**secondary feather** One of the row of long, stiff feathers along the rear edge of a bird's wing, between the body and the primary feathers at the wingtip. The secondary feathers are often collectively referred to as secondaries. See also *primary feather*.

**sedentary** Having a settled lifestyle that involves relatively little movement. Sedentary birds remain in the same area throughout their life and are also said to be resident or non-migrants. See also *migration*.

**sexual dimorphism** The occurrence of physical differences between males and females. In birds, the most common type of sexual dimorphism is plumage variation. Other forms of sexual dimorphism include differences in bill length or body size; for example, in many birds of prey, the female is larger than the male.

**shield** In birds, a hard, shield-like structure on the forehead that joins the bill and often appears to be an extension of it. Coots are an example of a bird with a frontal shield.

**soaring** In birds, flight without flapping of the wings. A soaring bird stays at the same height or gains height. Many seabirds and large land birds soar; the smallest soaring birds are swifts. Slope soaring is a type of soaring in which a bird benefits from the rising currents of air that form at cliffs or along mountain ridges. Seabirds are expert at dynamic soaring, in which they repeatedly dive into the troughs between ocean waves and then use the rising air deflected off the waves to wheel back up into the air.

**shorebird** see *wader*

**song** A loud vocal performance by a bird, usually the adult male, to attract and impress a potential mate, advertise ownership of a territory, or drive away rival birds. Songs are often characteristic of individual species and can be a major

aid in locating and identifying birds in the field. See also *call*.

**songbird** A general term popularly used to describe a member of the suborder Passeri (or oscines). This group includes the finest singers in the bird world. See also *oscine*.

**song flight** A special flight during which a bird performs its song. Song flights are particularly common in birds of open or treeless habitats, such as larks.

**species** A group of similar living things that are capable of interbreeding in the wild and of producing fertile offspring that resemble themselves. Species are the fundamental units used in biological classification. Some species have distinct populations that vary from each other. Where the differences are significant and the populations biologically isolated, these forms are classified as separate subspecies (or races). In situations where two individuals belonging to different subspecies meet and form a mixed pair, they are still capable of interbreeding successfully.

**speculum** A colourful patch on the wing of a duck, formed by the secondary feathers. See also *secondary feather*.

**staging ground** An area where migrant birds regularly pause while on migration, to rest and feed. Staging grounds are often used over many years by many different generations of birds, and their protection is an important part of bird conservation.

**sternum** The breastbone of a four-limbed vertebrate. The sternum of most birds is relatively large, with a prominent central ridge known as the keel. See also *keel*.

**stoop** A fast, near-vertical dive made by falcons and some other birds of prey when chasing aerial prey.

**suboscine** A term used to describe members of the suborder Tyranni – the smaller of the two main subdivisions of the order Passeriformes (or passerines). Their syrinx (voicebox) has a different structure to the rest of the passerines. The great majority of suboscine birds are found in the Americas, particularly South and Central America, but the tyrant flycatchers also occur in North America. Elsewhere, a few groups of suboscine birds are found in Africa, Asia, and Australia, including the broadbills, pittas, and asities. See also *oscine*, *passerine*, *syrinx*.

**subspecies** see *species*

**syrinx** A modified section of a bird's trachea (windpipe), equivalent to the voicebox in humans, that enables birds to call and sing. Membranes inside the syrinx vibrate and produce sound as air passes over them. Passerines, especially oscine birds, have the most complex syrinx. See also *oscine*, *passerine*.

## T

**talon** The sharp, hooked claw of a bird of prey.

**tarsus (pl. tarsi)** A part of the leg. In birds, it is the longest, most exposed section of the leg, between the "ankle" joint and the "toes".

**temperate** The regions of the world that lie at mid-latitudes, between the polar regions and the tropics and subtropics.

**territory** An area defended by an animal, or group of animals, against other members of the same species. Territories often include useful resources, such as good breeding sites or feeding areas, which help a male to attract a mate. In birds, territories vary in size from just a few centimetres wide in colonial species, such as cliff-nesting seabirds, to many square kilometres in some large eagles.

**thermal** A rising bubble or column of warm air that soaring birds can make use of to gain height with little effort. Thermals only occur over land. See also *soaring*.

**threat display** A form of defence in which a bird adopts certain postures to drive away a rival or a potential predator. These postures are often designed to make the bird appear larger than it actually is. A threat display is sometimes accompanied by loud, agitated calls.

**torpor** A sleep-like state similar to hibernation, in which the heart rate and other body processes slow down below their normal rate. Animals normally become torpid to survive difficult conditions. This behaviour is relatively rare in birds: among the best known examples are swifts and hummingbirds, which become torpid at night to survive low temperatures, and the Common Poorwill, a nightjar from North America, which enters a state of torpor during cold weather or when its insect prey is scarce.

**trachea** A breathing tube in animals, also known as the windpipe.

**twitcher** A birdwatcher who travels specifically to see a rare or unusual bird that has already been discovered and whose location has been made public. See also *vagrant*.

**tubenose** A general term used informally to describe members of the order Procellariiformes, including albatrosses, petrels, and shearwaters. It refers to the distinctive tubular nostrils on their upper bill, which are not found in any other birds.

## UV

**underwing** The underside of a bird's wing.

**upperwing** The upper surface of a bird's wing.

**vagrant** A bird that has strayed far from its normal range. Usually, vagrants are long-distance migrants that have been blown off course by storms while on migration, have overshot their intended destination due to strong winds, or have become disorientated. Intercontinental vagrants in particular are highly sought-after by keen birdwatchers. See also *twitcher*.

**vane** In most feathers, the flat surface on either side of the central shaft (rachis). The vane is largest in wing feathers.

**vent** The area of feathers between the base of a bird's tail and its legs.

**vertical migrant** A species that migrates up or down mountains, usually in response to changes in the weather or food supply. Many vertical migrants breed at higher altitudes and spend the winter lower down. See also *migration*.

**visible migration** Bird migration that can be observed overhead during the day, usually at certain favoured locations on the migration routes of many different species. See also *migration*.

**Vulnerable (V)** A label used to describe a species that faces a high risk of extinction in the wild in the medium-term future. See also *IUCN*.

## W

**wader** Any member of several families in the order Charadriiformes, including plovers, sandpipers, godwits, snipes, avocets, stilts, oystercatchers, and curlews. Waders typically have a long bill and long legs. Many of them occur at the water's edge in wetlands or along coasts, but despite their name not all species actually wade in water and some live in quite dry habitats. An alternative name for waders is shorebirds, especially in the USA and Canada.

**Wallace's Line** An imaginary line in the Pacific region that passes between the Philippines and the Moluccas in the north, and between Lombok and Bali in the south. It separates the Indomalayan and Australasian biogeographical regions; the bird life either side of the line is quite different. This phenomenon is named after its discoverer, the naturalist Alfred Russel Wallace. See also *Australasian*, *Indomalayan*.

**wattle** A bare, fleshy growth that hangs loosely below the bill in some birds. It is often brightly coloured, and may play a part in courtship.

**waterfowl** A collective term for members of the family Anatidae, including ducks, geese, and swans.

**wildfowl** see *waterfowl*

**wingbar** A line or bar of colour across the upper surface of a bird's wing. Wingbars can often be seen when a bird is on the ground or perched and its wings are in the closed position, but they are normally much more obvious in flight. Wingbars may be single or in groups of two or more.

**wing loading** The ratio of a bird's body weight to its total wing area, usually measured in grams per square centimetre. Wing loading affects a bird's manoeuvrability and the energy it requires to fly. As the wing loading increases, so does the amount of work required for the bird to stay airborne.

**wingspan** The distance across a bird's outstretched wings and back, from one wingtip to the other.

**wrist** see *carpal joint*

## Z

**zygodactyl feet** A specialized arrangement of the feet in which the toes are arranged in pairs, with the second and third toes facing forwards and the first and fourth toes facing backwards. This adaptation helps birds to climb and perch on tree-trunks and other vertical surfaces. Several groups of bird have zygodactyl feet, including the parrots, the cuckoos and turacos (Cuculiformes), the owls, the toucans, and the woodpeckers and their relatives (Piciformes).

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Cal Vornberger: (cra). 229 Jari Peltomäki/Birdfoto.fi: (tr). Dudley Edmonson: (tl). Hanne & Jens Eriksen: (cra). Joe Fuhrman: (bl) (br). 230 Markus Varesvuo/Birdfoto.fi: (br). Hanne & Jens Eriksen: (bc). Joe Fuhrman: (tl) (cra). Mike Read: (cla). George Reszeter: (bl). 231 Alamy Images: Mike Lane (cb). Hanne & Jens Eriksen: (fcr). Josef Hlasek: Lubomir Hlasek (br). Barry Hughes: (tl). Arto Juvonen/Birdfoto.fi: (bl). 234 Josef Hlasek: Lubomir Hlasek (cl). Barry Hughes: (cla) (cr) (tc). 235 Alamy Images: The Photolibrary Wales (cra). Jari Peltomäki/Birdfoto.fi: (bc). Barry Hughes: (tr). George Reszeter: (tl) (cra). 236 Hanne & Jens Eriksen: (bl). justbirds.org: (br). Tomi Muukonen: (tl). Mike Read: (cra). George Reszeter: (tr). 237 Barry Hughes: (cra). Tomi Muukonen: (br). George Reszeter: (tl) (cra). 238 Dudley Edmonson: (bl). 239 Hanne & Jens Eriksen: (br). Barry Hughes: (tr). Mike Read: (cra). 240 justbirds.org: (br). Cal Vornberger: (br). 241 Jari Peltomäki/Birdfoto.fi: (bl). Dudley Edmonson: (clb). Melvin Grey: (tr). Barry Hughes: (crb). 241 Alamy Images: Chris Gomersall (bl). Tomi Muukonen: (cra). 242 Alamy Images: Sean O'Neill (cra). Hanne & Jens Eriksen: (cl). Barry Hughes: (tr) (bc) (bl). Photoshot/NHPA: Matt Bain (cra). 243 Alamy Images: Juniors Bildarchiv (tr). Hanne & Jens Eriksen: (cra). Josef Hlasek: Lubomir Hlasek (bl). OSF: Adrian Bailey (ftr). Photoshot/NHPA: Roger Tidman (cra). 244–245 FLPA: Yva Momatiuk/John Eastcott (cra). 245 Alamy Images: Cornforth Images (cra) (cr); Oyvind Martinsen (br). Cal Vornberger: (fcr). 246 Alamy Images: David Hosking (cra); John Cancalosi (c). FLPA: Winfried Wisniewski (tr). Barry Hughes: (bl). Greg & Yvonne Dean/WorldWildlifeImages.com: (br). 247 Alamy Images: Sean O'Neill (cra). 248 Jari Peltomäki/Birdfoto.fi: (tr). DK Images: Gary Omble (clb); Getty Active (cla). Neil Fletcher: (fcl). Ian Montgomery/Birdway.com.au: (bl) (cra). Tomi Muukonen: (br). 248 Hanne & Jens Eriksen: (cla). Ian Montgomery/Birdway.com.au: (tr). Tom Tarrant: (br). 249 Dudley Edmonson: (cla). Joe Fuhrman: (fcl) (tl). Barry Hughes: (br). Pete Morris: (br). Greg & Yvonne Dean/WorldWildlifeImages.com: (cra). 250 Nigel Hicks: (cra). Josef Hlasek: (br). 251 Nigel Hicks: (cra) (bl). 252 Alamy Images: © (cra). 253 Barry Hughes: (br). Ian Montgomery/Birdway.com.au: (tl). Greg & Yvonne Dean/WorldWildlifeImages.com: (cra). 254 Jari Peltomäki/Birdfoto.fi: (tr). Greg & Yvonne Dean/WorldWildlifeImages.com: (cra). 255 Barry Hughes: (fcr). 256 Barry Hughes: (cra). 257 Barry Hughes: (cra). 258 Barry Hughes: (cra). 259 Barry Hughes: (cra). 260 Barry Hughes: (cra). 261 Barry Hughes: (cra). 262 Barry Hughes: (cra). 263 Barry Hughes: (cra). 264 Barry Hughes: (cra). 265 Barry Hughes: (cra). 266 Barry Hughes: (cra). 267 Barry Hughes: (cra). 268 Barry Hughes: (cra). 269 Barry Hughes: (cra). 270 Barry Hughes: (cra). 271 Ardea: Dennis Avon (cra). FLPA: Jürgen & Christine Sohns (tc). Ian Montgomery/Birdway.com.au: (bc). 272 Alamy Images: Bowler, Mark Amazon-Images (clb); David Hosking (ca). Barry Hughes: (crb). Renee Overbosch: (tr). Andy & Gill Swash/WorldWildlifeImages.com: (tr). 273 Hanne & Jens Eriksen: (cra). Josef Hlasek: Lubomir Hlasek (bl). **Pete Morris:** (cr). Andy & Gill Swash/WorldWildlifeImages.com: (tl). 274 Markus Varesvuo/Birdfoto.fi: (br). Barry Hughes: (tc). Pete Morris: (br). Mike Read: (crb). 275 Hanne & Jens Eriksen: (br). Ian Montgomery/Birdway.com.au: (cl) (crb). Tom Tarrant: (tr). 276 Lars Carlsson: (tl). Barry Hughes: (bl) (br). justbirds.org: (fcl). Pete Morris: (tr). 277 Joe Fuhrman: (br). Mike Read: (cr). Andy & Gill Swash/WorldWildlifeImages.com: (tl). 278 Jari Peltomäki/Birdfoto.fi: (ca) (br). DK Images: Peter Chadwick (cra). Tomi Muukonen: (bl). 279 Roger & Liz Charwood: (fcr). Melvin Grey: (cbl). 280 Mike Read: (bl). George Reszeter: (cra). Cal Vornberger: (tr). 280 Hanne & Jens Eriksen: (br). 281 Markus Varesvuo/Birdfoto.fi: (bl). Jari Peltomäki/Birdfoto.fi: (br). 282 Joe Fuhrman: (br). Melvin Grey: (tr). Mike Read: (bl). Andy & Gill Swash/WorldWildlifeImages.com: (tl). 283 Dudley Edmonson: (bl). 284 Alamy Images: William Leaman (cra); Peter Susan & Allan (bc). Dudley Edmonson: (clb) (cra). Barry Hughes: (tr). Andy & Gill Swash/WorldWildlifeImages.com: (br). 285 Markus Varesvuo/Birdfoto.fi: (br). Jari Peltomäki/Birdfoto.fi: (br). Melvin Grey: (cra). 286–287 Getty Images: Art Wolfe (c). 288 FLPA: A (tr). Withers, Martin B (cra). Barry Hughes: (br) (bl). 289 Dudley Edmonson: (cra). Joe Fuhrman: (tl) (br). David Plummer: (tr). 290 Justbirds.org: (cra). Greg & Yvonne Dean/WorldWildlifeImages.com: (br). 291 FLPA: Michael Gore (cra). Melvin Grey: (br). Barry Hughes: (ca). Andy & Gill Swash/WorldWildlifeImages.com: (br). 292 Alamy Images: Stock Connection Distribution (tr). Markus Varesvuo/Birdfoto.fi: (cla). Corbis: Ron Sanford (cr). FLPA: David Hosking (cra). 293 A.N.T. Photo Library: Alan Gibb (tc); Dave Water (tr). FLPA: Ron Austin (bl). Melvin Grey: (br). Ian Montgomery/Birdway.com.au: (tl). George Reszeter: (cra). 294 justbirds.org: (cra). Greg & Gill Swash/WorldWildlifeImages.com: (br). 295 Nigel Hicks: (cra) (bl). 296 Barry Hughes: (cra). 297 Barry Hughes: (cra). 298 Barry Hughes: (cra). 299 Barry Hughes: (cra). 300 Barry Hughes: (cra). 301 Barry Hughes: (cra). 302 Barry Hughes: (cra). 303 Barry Hughes: (cra). 304 Barry Hughes: (cra). 305 Barry Hughes: (cra). 306 Barry Hughes: (cra). 307 Barry Hughes: (cra). 308 Barry Hughes: (cra). 309 Barry Hughes: (cra). 310 Barry Hughes: (cra). 311 Barry Hughes: (cra). 312 Barry Hughes: (cra). 313 Barry Hughes: (cra). 314 Barry Hughes: (cra). 315 Barry Hughes: (cra). 316 Barry Hughes: (cra). 317 Barry Hughes: (cra). 318 Barry Hughes: (cra). 319 Barry Hughes: (cra). 320 Nigel Hicks: (cra). 321 Barry Hughes: (cra). 322 Barry Hughes: (cra). 323 Barry Hughes: (cra). 324 Barry Hughes: (cra). 325 Barry Hughes: (cra). 326 Rebecca Dean: (cra). 327 Nigel Hicks: (cra). 328 Ian Chatterjee: (cra). 329 Ian Montgomery/Birdway.com.au: (br). 330 Barry Hughes: (cra). 331 Barry Hughes: (cra). 332 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(br). Ian Montgomery/Birdway.com.au: (tl) (bl) (cra) Andy & Gill Swash/WorldWildlifeImages.com: (cl). Greg & Yvonne Dean/WorldWildlifeImages.com: (bc). 360 A.N.T. Photo Library: Keith Vagg (cl) (ca/AnTweyn). Alamy Images: Mike Lane (ca/Giant Antshrike). FLPA: Neil Bowman (br). Andy & Gill Swash/WorldWildlifeImages.com: (cr). 361 Corbis: Wolfgang Kaehler (c). Andy & Gill Swash/WorldWildlifeImages.com: (da) (bc) (c) (tr).

362 Ardea: A.D. Trousson (clb). Corbis: Pam Gardner (cl). FLPA: Len Robinson (br). Ian Montgomery/Birdway.com.au: (tr). naturepl.com: Roger Powell (bl). 363 Roger & Liz Charlwood: (tl). Ian Montgomery/Birdway.com.au: (tc) (bl) (crb). 364 Alamy Images: Nic Cleave Photography (cra). Ian Montgomery/Birdway.com.au: (cl) (br). 365 Barry Hughes: (cl) (br). Ian Montgomery/Birdway.com.au: (cn) (bc) (bl) (br). 366 justbirds.org: (bl). Ian Montgomery/Birdway.com.au: (cla) (br) (cr).

367 Ardea: Don Hadden (clb). Tom Tarrant: (crb). Andy & Gill Swash/WorldWildlifeImages.com: (ca). 368 A.N.T. Photo Library: Frank Park (tr). Tomas Carleberg: (brb). Ian Montgomery/Birdway.com.au: (cr). 369 Ardea: Wilfred R. Taylor (tc). Ian Montgomery/Birdway.com.au: (tr) (bl) (br) (cb). Tom Tarrant: (cl). 370 A.N.T. Photo Library: Cliff & Dawn Frith (br). Ian Montgomery/Birdway.com.au: (tl) (crb). Andy & Gill Swash/WorldWildlifeImages.com: (tr). 371 A.N.T. Photo Library: Cliff & Dawn Frith (cra). Alamy Images: Bruce Coleman Inc. (tl). FLPA: Gerry Ellis/Minden Pictures (cr). Vireo: W. Peckover (crb) (bl). 372 FLPA: David Hosking (br). Minden Pictures (cl). Geoff Moon (tr). 373 FLPA: Len Robinson (brn). Andy & Gill Swash/WorldWildlifeImages.com: (cl). Greg & Yvonne Dean/WorldWildlifeImages.com: (tr).

374 Corbis: FLPA/Gore, Michael (tc). Andy & Gill Swash/WorldWildlifeImages.com: (cl). Greg & Yvonne Dean/WorldWildlifeImages.com: (br).

375 Hanne & Jens Eriksen: (cla) (br) (cra). FLPA: Michael Gore (cra). Greg & Yvonne Dean/WorldWildlifeImages.com: (bl). 376 A.N.T. Photo Library: Cliff & Dawn Frith (cla); Ralph & Daphne Keller (tr). Photoshot/NHPA: Nick Garbutt (bl).

376 A.N.T. Photo Library: Cliff & Dawn Frith (cra). Tom Tarrant: (bl) (br). Greg & Yvonne Dean/WorldWildlifeImages.com: (tr). 377 Photoshot/NHPA: A.N.T. Photo Library (c). Tom Tarrant: (bl) (br). Greg & Yvonne Dean/WorldWildlifeImages.com: (tl) (tr). 378 FLPA: Neil Bowman (cla). Sumit K Sen: (br). Vireo: Vivak R. Sinha (clb). Andy & Gill Swash/WorldWildlifeImages.com: (tr). 379 379 Alamy Images: Dave Water (cl). Ian Montgomery/Birdway.com.au: (cra) (fcrb) (tc). OSF: Krupakar Senani (bl). 380 A.N.T. Photo Library: Frank Park (cra). justbirds.org: (ca). Ian Montgomery/Birdway.com.au: (cla). Sumit K Sen (tr). Tom Tarrant: (br). 381 A.N.T. Photo Library: D. & M. Trousson (bl). FLPA: Len Robinson (cr). Andy & Gill Swash/WorldWildlifeImages.com: (tr) (crb).

382 Dudley Edmondson (bl). Hanne & Jens Eriksen: (tr). Melvin Grey: (br). Barry Hughes: (cra). George Reszeter: (ca). 383 Ron Austing: (tc). Dudley Edmondson: (bl). Joe Fuhrman: (br). Andy & Gill Swash/WorldWildlifeImages.com: (cla). 384 Corbis: Brendan Ryan; Gallo Images (tc). Hanne & Jens Eriksen: (cra). Josef Hlasek: Lubomir Hlasek (br). Ian Montgomery/Birdway.com.au: (cl). 385 A.N.T. Photo Library: Cliff & Dawn Frith (bl). Peter Morris: (br). Tom Tarrant: (cra). Andy & Gill Swash/WorldWildlifeImages.com: (cla). 386 Alamy Images: Genievee Valley (tr). Ian Montgomery/Birdway.com.au: (bl) (br). Sumit K Sen: (cla). Andy & Gill Swash/WorldWildlifeImages.com: (crb). 387 Alamy Images: Hu Lan (tc). Hanne & Jens Eriksen: (bc). OSF: Densey Clyne (cra). Sumit K Sen: (clb) (br).

388 Alamy Images: Douglas Peebles Photography (cla). Ian Montgomery/Birdway.com.au: (tr) (bl) (fcrb).

389 A.N.T. Photo Library: Cyril Webster (clb). Ian Montgomery/Birdway.com.au: (tl) (bc) (cr). 390 Alamy Images: blickwinkel (clb) (tr). Ashley Cooper (bc); Mike Lane (cla). Jari Peltomäki/Birdfoto.fi: (cr). 391 Markus Varesvuo/Birdfoto.fi: (br). Dudley Edmondson: (cla) (cra). Joe Fuhrman: (cra) (bl). Nigel Hicks: (tl). 392 Markus Varesvuo/Birdfoto.fi: (br). Melvin Grey: (cl). Mike Read: (tr). 393 Alamy Images: David Boag (br). Markus Varesvuo/Birdfoto.fi: (tr) (clb). Joe Fuhrman: (bl). Barry Hughes: (tl) (cra). Arto Juvonen/Birdfoto.fi: (crb). 394 Alamy Images: Juniors Bildarchiv (c). Markus Varesvuo/Birdfoto.fi: (bl). Melvin Grey: (tl). Nigel Hicks: (cr). Andy & Gill Swash/WorldWildlifeImages.com: (cr). 395 Barry Hughes: (tr). Ian Montgomery/Birdway.com.au: (bl). OSF: Katie Atkinson (cr). Andy & Gill Swash/WorldWildlifeImages.com: (br). 396 FLPA: Minden Pictures (bc); Martin B Withers (tr). 397 Alamy Images: blickwinkel (cr) (clb) (tr). Corbis: Pam Gardner/FLPA: (ch); Michael S. Yamashita (clb). FLPA: Jürgen & Christine Sohns (br). Greg & Yvonne Dean/WorldWildlifeImages.com: (tl). 398 Roger & Liz Charlwood: (br). FLPA: Len Robinson (tr). Ian Montgomery/Birdway.com.au: (da) (bl) (crb). 399 Alamy Images: Kevin Schafer (cra). Markus Varesvuo/Birdfoto.fi: (bl) (br). Photoshop/NHPA: Daniel Heulin (cla). 400-401 Markus Varesvuo/Birdfoto.fi: (c). 402 Markus Varesvuo/Birdfoto.fi: (bl) (br). Dudley Edmondson: (cra). justbirds.org: (tr). 403 Markus Varesvuo/Birdfoto.fi: (tr). Sujan Chatterjee: (br). Melvin Grey: (cla). Cal Vornberger: (crb). Greg & Yvonne Dean/WorldWildlifeImages.com: (dl). 404 Alamy Images: Worldwide Picture (cra).

Library (cla). Markus Varesvuo/Birdfoto.fi: (cra) (crb). Joe Fuhrman: (br). Arto Juvonen/Birdfoto.fi: (bl). 405 Alamy Images: imagebroker (tr). Jari Peltomäki/Birdfoto.fi: (cra). Barry Hughes: (br). Murray Lord: (bl). 406 Dudley Edmonson: (tr) (crb). Joe Fuhrman: (bl). Andy & Gill Swash/WorldWildlifeImages.com: (bl). 407 Jari Peltomäki/Birdfoto.fi: (bl). Markus Varesvuo/Birdfoto.fi: (tr) (cr). Barry Hughes: (cl). Mike Read: (cl). Andy & Gill Swash/WorldWildlifeImages.com: (br). 408 Alamy Images: FLPA: (tr). Jari Peltomäki/Birdfoto.fi: (ca). FLPA: Minden Pictures (cla). Barry Hughes: (bl) (cra). Andy & Gill Swash/WorldWildlifeImages.com: (bc). 409 Alamy Images: Clynt Garnham (bl). Markus Varesvuo/Birdfoto.fi: (cl) (crb). Josef Hlasek: Lubomir Hlasek (tl). Barry Hughes: (br). Mike Read: (crb). 410 Barry Hughes: (cra). Photolibrary: Warwick Tarboton/Apbl (tr). George Reszeter: (bl). Tom Tarrant: (cla). Andy & Gill Swash/WorldWildlifeImages.com: (br). 411 Alamy Images: mediacolor's (br). FLPA: Jürgen & Christine Sohns (cr). Nigel Hicks: (bc). Josef Hlasek: Lubomir Hlasek (tl). Mike Read: (fcbr). Sumit K Sen: (tr). Greg & Yvonne Dean/WorldWildlifeImages.com: (bl). 412 Hanne & Jens Eriksen: (tl). Nigel Hicks: (cr). Barry Hughes: (bl). Sumit K Sen: (br). 413 Josef Hlasek: (tl). Ian Montgomery/Birdway.com.au: (crb) (br). Tomi Muukonen: (cra). Per Smitterberg: (fcbr). Andy & Gill Swash/WorldWildlifeImages.com: (bl). 414 Markus Varesvuo/Birdfoto.fi: (bl). Barry Hughes: (br). Mike Read: (tl). Andy & Gill Swash/WorldWildlifeImages.com: (tr). 415 Markus Varesvuo/Birdfoto.fi: (br). Hanne & Jens Eriksen: (tr). Barry Hughes: (cr). Tomi Muukonen: (cl). George Reszeter: (bl). 416 Markus Varesvuo/Birdfoto.fi: (bl). Goran Ekstrom: (br). Pete Morris: (cr) (ljma's). Mike Read: (tr). 417 Markus Varesvuo/Birdfoto.fi: (cra). Hanne & Jens Eriksen: (br). Barry Hughes: (tl). Mike Read: (cl). 418 Barry Images: Dave and Sigrun Tollerton (tr). Sumit K Sen: (cla) (br). 419 FLPA: John Holmes (cra). Joe Fuhrman: (tl). Nigel Hicks: (clb). Sumit K Sen: (cla) (bc). Greg & Yvonne Dean/WorldWildlifeImages.com: (cra). 420 Markus Varesvuo/Birdfoto.fi: (c). Nigel Hicks: (tl) (br) (tr). justbirds.org: (br). 421 Alamy Images: Louise Heusinkveld (br); MM (fbr). Hanne & Jens Eriksen: (tc). Nigel Hicks: (br). Andy & Gill Swash/WorldWildlifeImages.com: (cla). 422 Alamy Images: Arco Images (clb); SPP Images (fcra). Nigel Hicks: (br). Ian Montgomery/Birdway.com.au: (tl). 423 Markus Varesvuo/Birdfoto.fi: (bl). Joe Fuhrman: (cra). Arto Juvonen/Birdfoto.fi: (tc). 424 Alamy Images: Wendy Conway (tr). Joe Fuhrman: (br). Barry Hughes: (bl). Arto Juvonen/Birdfoto.fi: (ca). 425 Markus Varesvuo/Birdfoto.fi: (clb). Dudley Edmonson: (cla). Hanne & Jens Eriksen: (bl). Joe Fuhrman: (tl) (cra). Mike Read: (fcbr). Cal Vornberger: (tr). Andy & Gill Swash/WorldWildlifeImages.com: (bc). 426 FLPA: S & D & K Maslowski (cla). Photolibrary: Andrew Anderson (bl). Mike Read: (br). Cal Vornberger: (tr). 427 Markus Varesvuo/Birdfoto.fi: (bc). FLPA: Bill Baston (bl). Roger Tidman (tr). Joe Fuhrman: (tl). Cal Vornberger: (br). 428 Ardea: Jim Zipp (cr). FLPA: Minden Pictures (cra). Joe Fuhrman: (br). Cal Vornberger: (cl). 429 Joe Fuhrman: (cl). Mike Read: (br). Cal Vornberger: (tr). Peter S Weber: (cbla). 430 Alamy Images: Elvele Images (crb). Markus Varesvuo/Birdfoto.fi: (c). Nigel Hicks: (br). 431 Hanne & Jens Eriksen: (fcbl). Nigel Hicks: (tl) (br) (tr). Barry Hughes: (br). 432 Markus Varesvuo/Birdfoto.fi: (cl). Barry Hughes: (br). 432-433 Neil Fletcher: (tc). 433 Alamy Images: Dania Delmont (br). Hanne & Jens Eriksen: (bl). Barry Hughes: (crb). Andy & Gill Swash/WorldWildlifeImages.com: (tr). 434-435 naturepl.com: (cra). John Waters (cbla). 436 Jari Peltomäki/Birdfoto.fi: (bc). Josef Hlasek: (cra). Cal Vornberger: (tr). 437 Alamy Images: Worldwide Picture Library (cra). Dudley Edmonson: (tl). Joe Fuhrman: (tr) (br). Sumit K Sen: (cl). Greg & Yvonne Dean/WorldWildlifeImages.com: (bc). 438 Lang Elliot: (tl). Neil Fletcher: (c). Photolibrary: Oxford Scientific (crb). Mike Read: (tc) (bl) (br). 439 Markus Varesvuo/Birdfoto.fi: (cra). Hanne & Jens Eriksen: (br). Greg & Yvonne Dean/WorldWildlifeImages.com: (bl). 440 Alamy Images: FLPA (tr). FLPA: David Hosking (crb). Nigel Hicks: (ca). Tomi Muukonen: (cbla). Mike Read: (tl). 441 Alamy Images: Arco Images (br). FLPA: Jeremy Early (tr). Huang How-Tang: (bl). Mike Read: (ca). 442 Jari Peltomäki/Birdfoto.fi: (cla). Hanne & Jens Eriksen: (tr) (cbla). Sumit K Sen: (bc). Greg & Yvonne Dean/WorldWildlifeImages.com: (crb). 443 Alamy Images: Arco Images (clb). Markus Varesvuo/Birdfoto.fi: (tl). Melvin Grey: (cra). Nigel Hicks: (br). Sumit K Sen: (bl). 444 Markus Varesvuo/Birdfoto.fi: (clb). Hanne & Jens Eriksen: (br). Nigel Hicks: (tl). Mike Read: (tc) (crb). Sumit K Sen: (bl). 445 Jari Peltomäki/Birdfoto.fi: (ca). Markus Varesvuo/Birdfoto.fi: (bl). Nigel Hicks: (bc). Barry Hughes: (tl). Tomi Muukonen: (cra). Sumit K Sen: (br). 446-447 Tomi Muukonen: (c). 448 Alamy Images: Arco Images (br). Corbis: David Hosking/FLPA (cbla). Joe Fuhrman: (cra). Photolibrary: (bl). Oxford Scientific (cla). Mike Read: (tr). 449 FLPA: John Holmes (bl) (tr). Ian Montgomery/Birdway.com.au: (cr) (br). 450 Alamy Images: Hornbill Images (tr). Hanne & Jens Eriksen: (br). justbirds.org: (cl). Sumit K Sen: (cra) (cla/Malachite). 451 Hanne & Jens Eriksen: (tl) (br). Ian Montgomery/Birdway.com.au: (tr). Sumit K Sen: (bc). 452 Alamy Images: Arco Images (blb); John Henwood (cra). Barry Hughes: (tr). Per Smitterberg: (br). 453 Markus Varesvuo/Birdfoto.fi: (tr) (cla). Barry Hughes: (bc). Mike Read: (clb). 454 Alamy Images: blickwinkel (cra). Jason Gallier (cra). Barry Hughes: (blb). naturepl.com: Dietmar Nill (fcbla). Andy & Gill Swash/WorldWildlifeImages.com: (clb). 455 Hanne & Jens Eriksen: (c). Barry Hughes: (br). justbirds.org: (tr). Mike Read: (cl). Andy & Gill Swash/WorldWildlifeImages.com: (bc). 456-457 FLPA: Jim Brandenburg/Minden Pictures (c). 458 DK Images: Cyril Laubscher (cb). FLPA: Michael Gore (tr). Still Pictures: H. Schmidbauer (cra). Andy & Gill Swash/WorldWildlifeImages.com: (bl). 459 Alamy Images: Arco Images (br). David Hosking (tr). Melvin Grey: (clb). Barry Hughes: (cra). David Smallshire: (tl). Andy & Gill Swash/WorldWildlifeImages.com: (crb). 460 Ian Montgomery/Birdway.com.au: (tl) (bl) (br) (tr). 461 Alamy Images: mediacolor's (cl). Melvin Grey: (c). Ian Montgomery/Birdway.com.au: (br). 462 FLPA: Jürgen & Christine Sohns (cla). Melvin Grey: (br). Barry Hughes: (tr). Tomi Muukonen: (cbla). 463 Hanne & Jens Eriksen: (br). Melvin Grey: (tl). Barry Hughes: (cra) (bl) (tr). Mike Read: (clb). George Reszeter: (cra). 464 Alamy Images: Juniors Bildarchiv (crb). FLPA: John Hawkins (cla). Getty Images: Orion Press/Stone (cra). Pete Morris: (tr). 465 Markus Varesvuo/Birdfoto.fi: (tl). Jari Peltomäki/Birdfoto.fi: (tc) (bl). Dudley Edmonson: (c). Joe Fuhrman: (cra). Melvin Grey: (br). 466 Jari Peltomäki/Birdfoto.fi: (tl). Hanne & Jens Eriksen: (cra) (br). Kogi Tagi: (br). Andy & Gill Swash/WorldWildlifeImages.com: (bl). 467 Markus Varesvuo/Birdfoto.fi: (cra) (bc). Corbis: Tim Zurowski (tr). Dudley Edmonson: (tl). Arto Juvonen/Birdfot.fi: (clb). 468 Dudley Edmonson: (ca). FLPA: Ron Austing (crb). Nigel Hicks: (tl). Cal Vornberger: (bl). 469 Alamy Images: Ambient Images Inc. (crb). Dudley Edmonson: (tr) (br). Joe Fuhrman: (tl) (bl). 469 Dudley Edmonson: (cla) (bl) (tr). Cal Vornberger: (tl). Peter S Weber: (br). 471 FLPA: Minden Pictures (tr). Jürgen & Christine Sohns (bc). Joe Fuhrman: (cl). Ian Montgomery/Birdway.com.au: (br). Peter S Weber: (tl). 472 Alamy Images: Rick & Nora Bowers (br). Joe Fuhrman: (tr) (bl) (cr). Cal Vornberger: (tl). 473 Dudley Edmonson: (fcra) (tr). Joe Fuhrman: (br). Ian Montgomery/Birdway.com.au: (bl). 474 Alamy Images: blickwinkel (clb). FLPA: Yuri Artukhin (cr). Giovanni Visetti: (tr). 475 Jari Peltomäki/Birdfoto.fi: (tc) (bc). Dudley Edmonson: (cra) (br). Hanne & Jens Eriksen: (tl). Tomi Muukonen: (bl). 476 Dudley Edmonson: (tl) (cr) (br). Joe Fuhrman: (br). Cal Vornberger: (tl). 477 Joe Fuhrman: (tl) (br) (tr). Andy & Gill Swash/WorldWildlifeImages.com: (tl) (cla) (clb). 478-479 naturepl.com: Tom Vezo (c). 480 FLPA: Minden Pictures (bl). 481 Alamy Images: Mike Lane (crb). Photolibrary: Patrício Ribeiro Gil (cra) (fela/winter). Cal Vornberger: (fela/summer). Andy & Gill Swash/WorldWildlifeImages.com: (bl). 482 Joe Fuhrman: (br). Photostock/NHPA: Roger Tidman (tl). Andy & Gill Swash/WorldWildlifeImages.com: (cla) (clb) (cr). 483 Dudley Edmonson: (tr). Barry Hughes: (tl). David Plummer: (br). Andy & Gill Swash/WorldWildlifeImages.com: (cra). Greg & Yvonne Dean/WorldWildlifeImages.com: (bl). 484 Alamy Images: PhotoStockFile (tr). Don Vail (clb). Dudley Edmonson: (cla) (br). 485 Dudley Edmonson: (cra). Joe Fuhrman: (cra) (bl) (br). Peter S Weber: (tc). 486-487 Getty Images: Joseph Devenney/Photographer's Choice (c). 488-489 naturepl.com: Solvin Zankl (c)