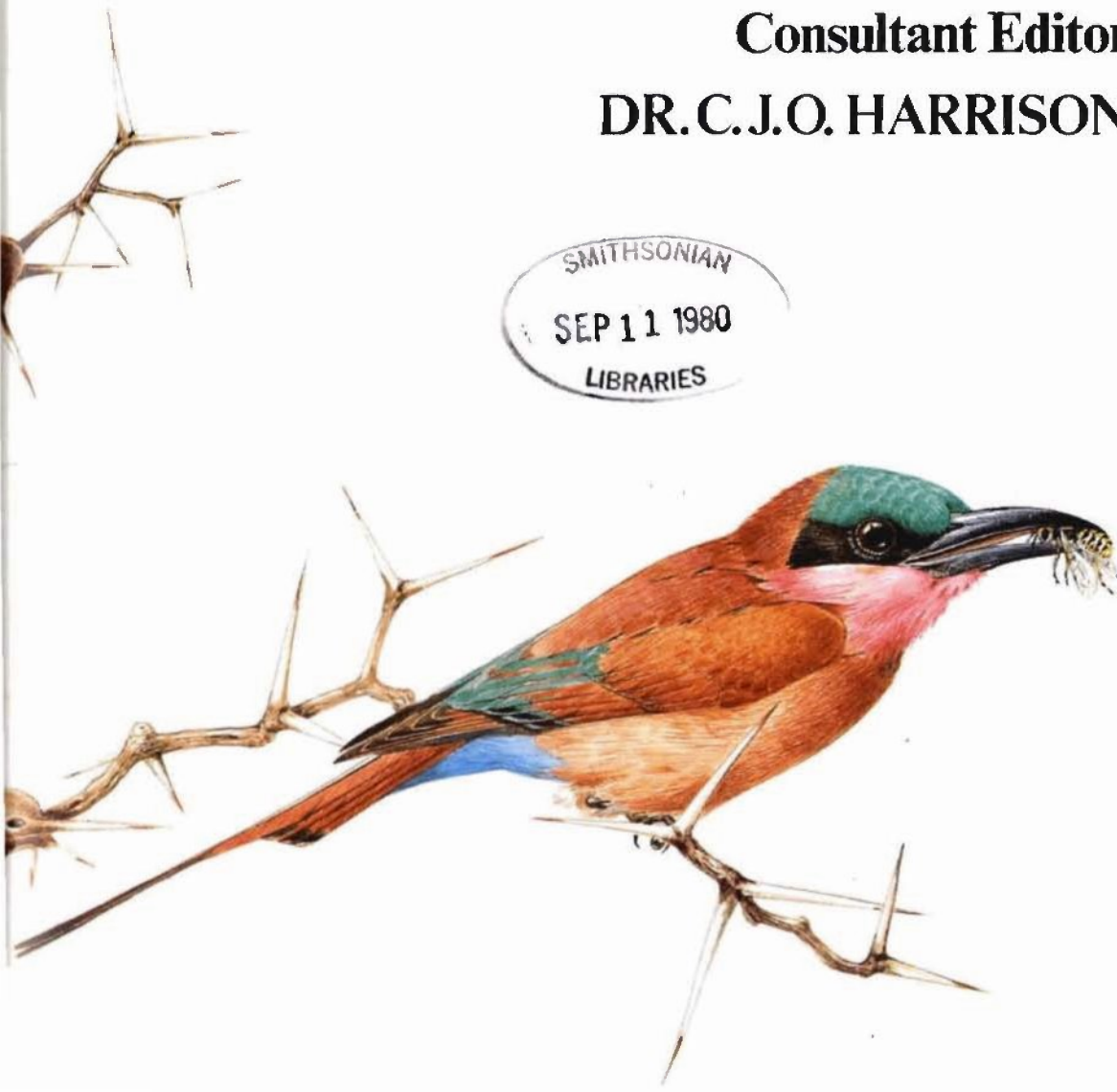
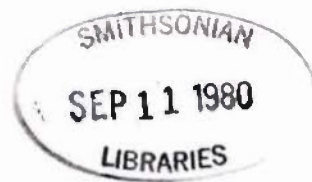


# BIRD FAMILIES OF THE WORLD

Illustrations by  
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(p6, left) Wren *Troglodytes troglodytes* in song.  
 (p6, right) The tiny Firecrest *Regulus ignicapillus*, showing the difference between the display plumage of the crest of the female, perching on the upper end of the twig, and the male.  
 (p7) Ruby-crowned kinglet *Regulus calendula*, the common representative of the goldcrests in the forests of eastern North America.



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## RAILS

The rails, including gallinules and coots, form a natural group of rather generalized birds, the Rallidae, somewhat fowl-like in appearance but actually most closely related to the finfoots Heliornithidae, and trumpeters Psophiidae, in the order Gruiformes.

Rails vary in size from species hardly bigger than a sparrow, to heavy flightless forms the size of a goose. They have short rounded wings, large legs and feet, and small, often degenerate tails. The bill shape is variable. Many forms have short chicken-like bills; the smaller of these species are frequently referred to as 'crakes.' Others, such as those in the genus *Rallus*, have long slender decurved bills for probing, while in some of the gallinules the bill is massive and conical. Coots and gallinules have a horny frontal shield extending back beyond the bill. The toes may be rather short and heavy, as in some of the flightless terrestrial species, or greatly elongated for walking on floating vegetation, as in the purple gallinules *Porphyrio*. Coots are notable for having the lateral fringes of the toes expanded into well-developed lobes as an adaptation for swimming and diving.

When the sexes differ in size, the male is usually the larger. In the more specialized marsh-dwelling species the body is markedly compressed from side to side, whence the expression 'skinny as a rail.' Marsh rails are often difficult to see, preferring to skulk and hide, or escape by running. When flushed they fly feebly for a short distance, with legs dangling, before dropping back into cover. Many of the forms occurring on islands have the wings and breast muscles greatly reduced and are flightless. This condition evolves rapidly (in some species there are both volant and flightless races) and is probably advantageous in conserving energy in predator-free environments. It has the effect, however, of rendering island rails extremely vulnerable to introduced predators, like rats and cats,

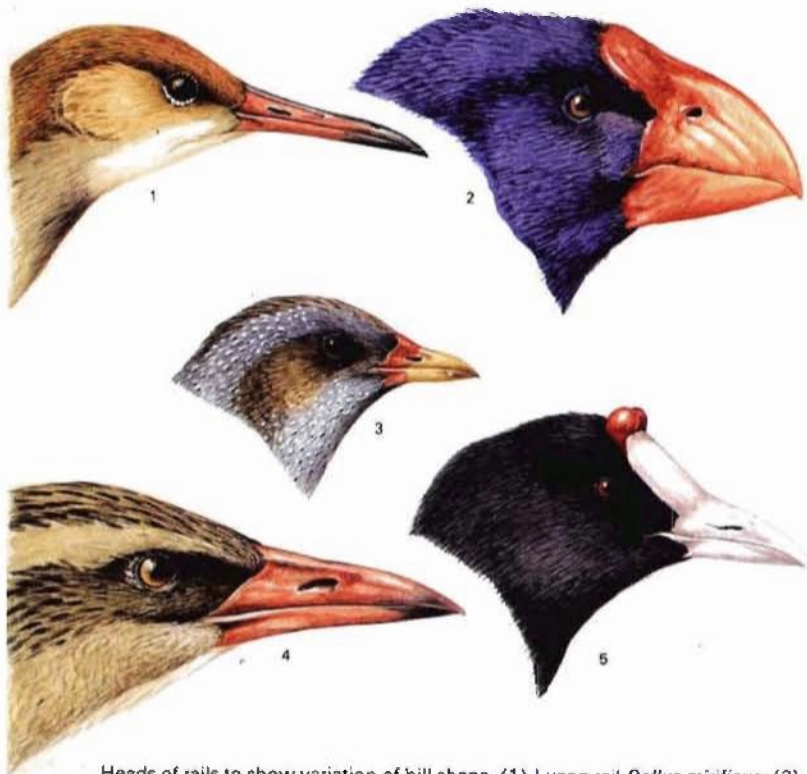


Water rails *Rallus aquaticus* seen in characteristic flight posture with legs hanging down, and washing its prey, in this case a young Reed-warbler.

and the Rallidae has, therefore, a sad history of repeated extinctions.

The plumage of rails is lax and decomposed; in some flightless species it appears almost hairlike. The colouration usually consists of sombre hues of black, white, grey, brown, or chestnut. A number of species are nearly uniform in pattern, while many others are variously barred and streaked, sometimes ornately so. The undertail coverts are commonly white and used conspicuously in displays. The purple gallinules are gaudily attired in shades of green, turquoise, and purple. They share brightly coloured frontal shields with several other genera. The sexes are alike in plumage, with the exception of the genus *Rallidula* of New Guinea, the flufftails *Sarothrura*, the Watercock *Gallicrex*, and the Little crake *Porzana parva*. Only in *Himantornis* are the downy young cryptically coloured and countershaded. In other rails the chicks are covered with black down, mottled with brown in a few species, or frosted about the head in gallinules. The heads of downy coots bear peculiar orange or reddish filaments. Flight feathers are moulted one at a time in some species and simultaneously in others, causing them to undergo a period of flightlessness until the new feathers regenerate. **Distribution.** Rails are perhaps the most widespread group of terrestrial birds. They occur on all continents, except Antarctica, and are most remarkable for their success at colonizing very remote oceanic islands. Living or sub-fossil rails are known from most of the world's temperate and tropical islands, regardless of their size or degree of isolation. Bones of recently exterminated species are being found with some regularity on islands where rails were previously unknown.

Rails are commonly thought of as being restricted to marshy areas, but in reality are extremely catholic in their choice of habitat, being excluded only from polar areas and the great deserts. Clapper rails *Rallus longirostris*, for instance, are found in salt marshes and mangrove swamps at sea level, while the Giant coot *Fulica gigantea* and the Horned coot *F. cornuta* are confined to small frigid lakes in the highest Andes. Many rails, particularly some of the more primitive ones, are found in forests; either lowland, as in the Congo and Amazon basins, or montane, as in New Guinea. Some, like the well-known Corncrake *Crex crex* of Eurasia, are found in grassy uplands. An endemic rail once occurred on Ascension Island, which is scarcely more than a barren heap of cinders in the middle of the South Atlantic. The Laysan rail *Porzana palmeri* lived out its foreshortened existence on a low sandy island only 1.4 square miles



Heads of rails to show variation of bill shape. (1) Luzon rail *Rallus mirificus*, (2) Takahē *Porphyrio mantelli*, (3) Spotted crake *Porzana porzana*, (4) Weka rail *Gallirallus australis* and (5) the Crested coot *Fulica cristata*.

in area. Rails, obviously, are extremely adaptable; still, it is true that the more familiar Holarctic members of the family are encountered in marshes, ponds and lakes.

Most of the Holarctic species, despite their seemingly feeble flight, perform considerable migrations, usually at night, retreating in winter to the southern portions of their range or to Africa and South America. Some, like the purple gallinules, are notorious oceanic wanderers and may turn up thousands of miles away from their normal ranges. Vertical movements in response to seasonal food supply are recorded for the flightless Takahe *Porphyrio mantelli* of New Zealand.

**Feeding.** In their food habits rails are for the most part unspecialized. Many species subsist on a wide variety of animal life such as insects, worms, snails, crustacea, fish and amphibians, with varying amounts of plant food also included. The gallinules tend to include more vegetable matter in their diet; some, such as the Takahe and the Tasmanian native-hen *Gallinula mortierii*, are almost entirely grazers of green herbage. Coots feed by diving for submerged vegetation. Some species are opportunistic and may feed upon the eggs and young of other birds or upon carrion. Purple gallinules are known to grasp and hold food in one foot while eating.

**Nesting and the Young.** Except for a few species that frequent open areas, most rails are secretive and difficult to observe; consequently our knowledge of their behaviour is limited and probably not representative of the family as a whole. Courtship behaviour appears to be simple, and may consist of duetting, displaying the undertail coverts, pursuits, and suggestive posturing. Either sex

may initiate courtship. Nests are built on the ground, in reeds, or on floating mats of vegetation. The aberrant *Himantornis* is reported to nest in trees. Clutch size varies from 2–16 but is usually fairly large. Eggs are white to dark tan in ground colour with darker brown splotches and speckles; in a few species they are immaculate. Both sexes incubate. The young are covered with down and are able to leave the nest with the parents within a few hours after hatching, although they may return to the nest at night. Several species build nursery nests in which the young are brooded for their first few weeks. Young are fed by the parents until proficient at capturing their own food.

**Behaviour.** At least some rails are highly territorial. Certain gallinules engage in spectacular fights, leaping up in the air and lashing out with the feet at invaders. Coots are particularly belligerent, even towards unrelated waterbirds. The nest may be defended pugnaciously and distraction displays are recorded for several species. The vocalizations of rails are not melodic, usually consisting of raucous cackles, whinnies, grunts and clucks.

**Economic Importance.** Rails are generally regarded as quite edible, although they seldom constitute a significant portion of human diet. An exception may have been the extinct flightless species *Nesotrochis deboayi* known only from bones found in Indian kitchen middens and caves in Puerto Rico and the Virgin Islands. Good sport is made of rail shooting in some places, especially on the east coast of the USA where, in the last century, the Sora *Porzana carolina* was taken in prodigious numbers and was highly esteemed as food. Its popularity has declined, however, and rail hunting is now practised by relatively few individuals. Purple gallinules are at times destructive to rice crops in the southern USA and in northern South America, control measures having been taken at least in Surinam. The larger species of Australia and New Zealand is likewise known for its occasional depredations on crops.

**Composition.** There are about 140 recent species of rails, at least 10 of which are extinct. In addition there are another 18 or so island species which probably became extinct in the period since the

Variety of shape and plumage in rails. (1) Inaccessible Island rail *Atlantisea rogersi*, (2) Madagascar rail *Rallus madagascariensis*, (3) Australian spotted crake *Porzana fluminea*, (4) Banded land rail *Gallirallus philippensis*, (5) White-spotted crake *Sarothrura elegans*, (6) Red-winged woodrail *Aramides calopterus*, (7) Purple gallinule *Porphyrio porphyrio* and (8) the Nkulengu rail *Himantornis haematopus*.



beginning of European exploration and are known only from bones or travellers' accounts. For these 158 species, 40 genera are recognized, 5 of which are extinct. The family Rallidae is divided into two subfamilies. One, the Himantornithinae, contains only the primitive species *Himantornis haematopus* of west African forests, which differs markedly from other rails in details of its skeleton, natal down, appearance, and habits. The typical rails, Rallinae, are a rather homogeneous group and the more divergent forms are closely interconnected by intermediate forms so that further division into tribes is impractical. Two groups showing pronounced morphological adaptations are the purple gallinules *Porphyrio* in which the hindlimb is modified for walking on floating vegetation, and the coots *Fulica* in which the pelvis and hindlimb are modified for diving.

S.L.O.

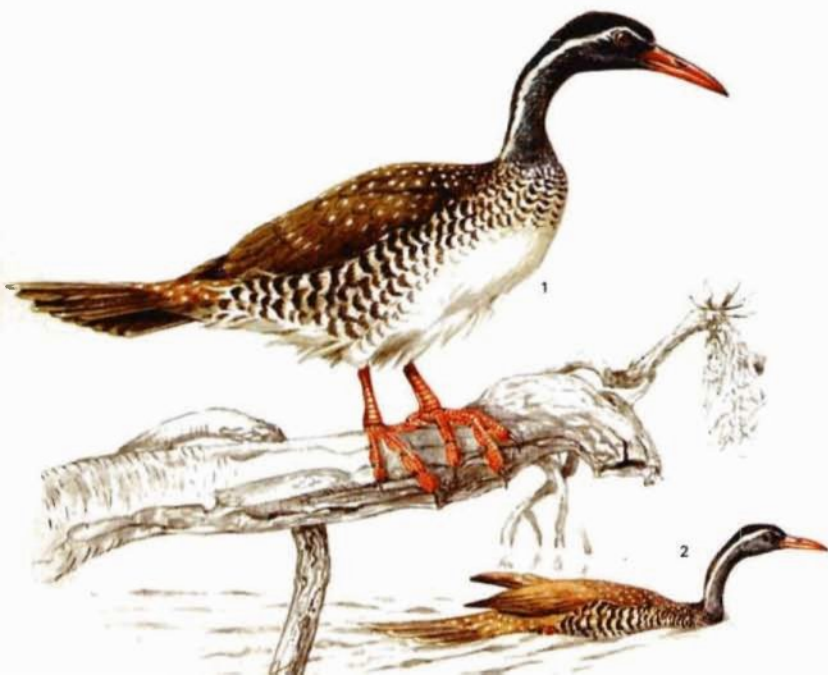
## SUN GREBES

The family Heliornithidae includes three species: the Sun grebe *Heliornis fulica*, the Masked finfoot *Heliopais personata*, and the African or Peter's finfoot *Podica senegalensis*. The species vary from 12–24½ in (31–62cm) in length. They have a long thin neck, small head and a strong bill that is rather long and tapers from base to tip. The wings are short and rounded, the tail moderately long and broad, the legs short, and the toes lobed as in coots (species of the genus *Fulica* Rallidae).

The plumage is brown or blackish-green on the upperparts, with white spots in the African finfoot, and light buff on the underparts. The neck and head are at least partly black, marked with white stripes that are conspicuous in two species, but faint in the African finfoot. The bill, legs and iris are brightly coloured in most forms. The feet of the Sun grebe being bright yellow with black stripes, those of the African finfoot bright red, and those of the Masked finfoot bright green. In the Masked finfoot the iris is bright yellow in the female and brown in the male, a tendency towards brighter colouration of females that also shows in the brighter plumage markings of females of all three species. However, females are slightly smaller than males and it seems likely that they fulfil the usual roles in nesting.

The African finfoot differs from the other two species in having a prominent 'spur' on the carpal joint of the wing and stiffer shafts to

The African finfoot *Podica senegalensis* showing the lobed feet (1). Finfoots are good swimmers and swim low in the water (2).



the tail feathers. The Masked finfoot is unique in having a prominent knife-like ridge on the base of the culmen (a ridge on the upper edge of the upper mandible) which appears to be developed only during the breeding season.

**Distribution.** The Heliornithidae has a wide range in the tropics, inhabiting the Neotropical, Ethiopian and Oriental zoogeographical regions.

The smallest species, the Sun grebe ranges from southern Mexico southwards through central America to Panama. It is widely distributed in tropical parts of South America, occurring south to northern Bolivia, Paraguay and the Misiones region of Argentina. Although absent from the West Indies, it has occurred as a straggler on Trinidad.

The larger Masked finfoot occurs only in southern Asia, from Bengal and Assam to the Malay peninsula and Sumatra. The African finfoot is the largest species and confined to Africa, excluding Madagascar and the offshore islands. Its four subspecies, which differ mainly in size, range from tropical West Africa to tropical parts of the eastern Cape Province of South Africa.

All three species are thought to be entirely sedentary, although young birds presumably make short dispersal movements. Their habitats are the vicinity of tropical lakes and rivers, waters surrounded by dense forest or scrub being preferred. The Masked finfoot sometimes occurs in swampy forests with very little open water. All three species are usually scarce, but tend to be commonest in wild and secluded regions. They adapt readily to life in river rapids and easily survive floods and spates of lowland rivers.

**Behaviour.** Sun grebes swim readily, although they usually remain close to the cover of marginal vegetation. They seem well adapted for diving, but infrequently do so, preferring to escape from predators by scuttering along the surface of the water. On land they clamber with agility among fallen trunks and branches and sometimes perch high up in trees near water.

Their food includes frogs, worms, crustaceans, molluscs and insects. It has been suggested that fish are also eaten, but there seems to be no reliable record of this. Most of the diet seems to be obtained on land or in shallow water, but their shyness and general scarcity makes observation difficult.

The voices and behaviour of all three species are poorly known. The Sun grebe has been recorded giving a double or triple barking call, the Masked finfoot has been thought to be the source of a strange bubbling note, and the African finfoot has been credited with such varied calls as hoarse croaks, a booming note, shrill screams and growling noises, some of which might well have been made by other birds.

Nests are built among vegetation, often on branches of dead trees or among flood debris. They are flat structures of sticks or reeds and contain clutches of two to five rounded eggs. The eggs have a cream ground colour and blotches of brown or purplish-brown. Incubation is carried out by both sexes and the newly hatched young are downy. It is not known when they leave the nest, nor which parent tends them.

**Composition.** The three species of sun grebes appear to be closely related to the rails (Rallidae), but their peculiar appearance combines resemblances to grebes (Podicipedidae), cormorants (Phalacrocoracidae), darters (Anhingidae) and ducks (Anatidae).

D.T.H.

## KAGU

The Kagu *Rhynochetos jubatus* was first discovered in the 1850s. It is 22 in (56cm) long and the loose plumage is light ash-grey above, washed with brownish on the back and wings; and pale buffish-grey below. It has a large shaggy erectile crest of pale grey feathers.

## PASSERIFORMES

BROADBILLS – *Eurylaimidae*  
 WOODCREEPERS – *Dendrocolaptidae*  
 OVENBIRDS – *Furnariidae*  
 ANTBIRDS – *Formicariidae*  
 ANTPIPITS – *Conopophagidae*  
 TAPACULOS – *Rhinocryptidae*  
 COTINGAS – *Cotingidae*  
 MANAKINS – *Pipridae*  
 TYRANT FLYCATCHERS – *Tyrannidae*  
 SHARPBILLS – *Oxyruncidae*  
 PLANTCUTTERS – *Phytotomidae*  
 PITTAS – *Pittidae*  
 NEW ZEALAND WRENS – *Acanthisittidae*  
 ASITYS – *Philepittidae*  
 LYREBIRDS – *Menuridae*  
 SCRUB-BIRDS – *Atrichornithidae*  
 LARKS – *Alaudidae*  
 SWALLOWS – *Hirundinidae*  
 WAGTAILS AND PIPITS – *Motacillidae*  
 CATERPILLAR BIRDS – *Campephagidae*  
 BULBULS – *Pycnonotidae*  
 FAIRY BLUEBIRDS AND LEAFBIRDS – *Irenidae*  
 SHRIKES – *Laniidae*  
 VANGAS – *Vangidae*  
 WAXWINGS – *Bombycillidae*  
 PALMCHAT – *Dulidae*  
 DIPPERS – *Cinclidae*  
 WRENS – *Troglodytidae*  
 MOCKINGBIRDS AND THRASHERS – *Mimidae*  
 HEDGE SPARROWS – *Prunellidae*  
 THRUSHES – *Turdidae*  
 BABBLERS – *Timaliidae*  
 OLD WORLD WARBLERS – *Sylviidae*  
 AUSTRALIAN WREN WARBLERS – *Maluridae*  
 OLD WORLD FLYCATCHERS – *Muscicapidae*  
 PENDULINE TITS – *Remizidae*  
 LONG-TAILED TITS – *Aegithalidae*  
 TITMICE – *Paridae*  
 NUTHATCHES – *Sittidae*  
 AUSTRALIAN TREECREEPERS – *Climacteridae*

TYPICAL CREEPERS – *Certhiidae*  
 FLOWER PECKERS – *Dicaeidae*  
 SUNBIRDS – *Nectariniidae*  
 WHITE-EYES – *Zosteropidae*  
 AUSTRALIAN CHATS – *Ephthianuridae*  
 AUSTRALIAN HONEYEATERS – *Meliphagidae*  
 BUNTINGS AND AMERICAN SPARROWS – *Emberizidae*  
 AMERICAN WOOD WARBLERS – *Parulidae*  
 HAWAIIAN HONEYCREEPERS – *Drepaniidae*  
 VIREOS – *Vireonidae*  
 AMERICAN BLACKBIRDS AND ORIOLES – *Icteridae*  
 CHAFFINCHES AND LINNETS – *Fringillidae*  
 WAXBILLS – *Estrildidae*  
 TYPICAL WEAVERS – *Ploceidae*  
 STARLINGS – *Sturnidae*  
 OLD WORLD ORIOLES – *Oriolidae*  
 DRONGOS – *Dicruridae*  
 WATTLEBIRDS – *Callaeidae*  
 MUDNEST-BUILDERS – *Grallinidae*  
 WOOD-SWALLOWS – *Artamidae*  
 BELL-MAGPIES – *Cracticidae*  
 BOWERBIRDS – *Ptilonorhynchidae*  
 BIRDS OF PARADISE – *Paradisaeidae*  
 CROWS, JAYS AND MAGPIES – *Corvidae*

An order containing more than a third of all living families and over half the living bird species. The passerines are the so-called perching birds and have feet adapted to cling to branches, reeds or even man-made objects such as telephone wires, in such a way that the grip automatically tightens when the bird falls backwards. Passerines include all those birds noted for their ability to sing, and are sometimes called the 'song birds' as a result

### BROADBILLS

The broadbills form a small but extremely attractive group, the Eurylaimidae, of Old World suboscine passerines. As their name suggests, the bill in most species is broad and heavy. Early classifiers usually placed these birds with the Old World flycatchers Muscipidae; indeed, it was not until well into the present century that the African species were recognized as broadbills. With the discovery that they had a primitive syrinx and a primitive condition of the tendons of the feet, broadbills were placed with the families of suboscines rather than with the more specialized oscine songbirds. They are now generally considered to be the most primitive living group of passerines and are most probably relicts of an ancient

larger and more widespread assemblage. Although the family appears to be a natural one, the genera are rather diverse and not particularly closely related. Once accorded their own suborder, members of the Eurylaimidae have been shown in fact to differ little from other primitive suboscines such as the cotingas Cotingidae of the New World, to which they may be distantly related.

In size, the broadbills range from small to medium-large (5–11 in (12.7–30cm)). Bill width is usually great, although in the green broadbills *Calypotomena*, the bill is not of such abnormal proportions. In contrast, that of the Dusky broadbill *Corydon sumatranus* is the widest and most grotesque of any of the Passeriformes, having almost the appearance of the bill of a frogmouth Podargidae. The legs are short, the feet normally

developed, with the third and fourth toes fused for over half their length. The tail varies from quite short, as in Grauer's broadbill *Pseudocalyptomena graueri*, to long and graduated in the Long-tailed broadbill *Psarisomus dalhousiae*, with the remaining forms falling somewhere in between. Colouration is variable. The Dusky broadbill is predominantly dull black; the species of *Smithornis* are brownish and streaked; and the remaining species exhibit a beautiful array of colours including deep maroon, yellow, blue and dazzling green. The sexes are alike in the four genera containing the Dusky, Long-tailed, Grauer's, and the Black-and-red broadbill *Cymbirhynchus macrorhynchus*. In the females of the green broadbills the feathers are duller both in colour and gloss. In the Wattled broadbill *Eurylaimus steerei* the male is purplish below, where the female is white. In the Banded broadbill *E. javanicus* and the Black-and-yellow broadbill *E. ochromalus*, the males have a complete breast band, lacking in the females, whereas in the Collared broadbill *Serilophus lunatus* the reverse is true, the females of most races possessing a silvery crescent on the breast which is absent in the males. In two of the species of *Smithornis* the crown of the males is black and in the females it is grey or brown. In *Smithornis* and the Dusky broadbill there are patches of white or orange display feathers concealed in the back.

Broadbills are usually described as lethargic, tame, almost stupid birds, often not even responding to the sound of a gun shot. Some are solitary and sit still for long periods; others, like the Long-tailed broadbill, move about actively in small flocks, sometimes climbing parrotlike up small vines.

**Distribution.** The Eurylaimidae are confined to forests of the Old World tropics. They are most numerous in southeast Asia, from Indochina and Malaya south to Borneo and Java, with one species in the Philippines and two ranging into India and Nepal. The three

Five species of broadbill. (1) Dusky broadbill *Corydon sumatranus*, (2) Long-tailed broadbill *Psarisomus dalhousiae*, (3) Green broadbill *Calyptomena viridis*, (4) female Collared broadbill *Serilophus lunatus*, (5) and (6) female and male Black-and-yellow broadbills *Eurylaimus ochromalus*.



The hanging nest with the side entrance is typical of broadbills. Shown here are the male (1) and female (2) of the Green broadbill *Calyptomena viridis* and (3) the same species displaying the large gape which gives broadbills their common name.

species of *Smithornis* and Grauer's broadbill are found in Africa south of the Sahara.

Several species have very restricted ranges. Whitehead's broadbill *Calyptomena whiteheadi* and Hose's broadbill *C. hosei* are found only on a few mountains in Borneo. Grauer's broadbill, which was not discovered until 1908 and for a long time was known from a single specimen only, is confined to a narrow belt of montane forest about 150mi (240km) long, in central Africa. None of the broadbills is migratory, but some undergo seasonal local movements. They are forest birds, being found in dense undergrowth as well as in treetops, and seem to prefer the proximity of water.

**Feeding.** The diet consists mainly of insects gleaned from leaves and branches. Some species catch insects in flight. Beetles, cicadas, caterpillars, grasshoppers, mantises, ants, spiders, snails and even tree frogs have been recorded in their diet. Seeds, fruits, and buds are also taken.

**Nesting and the Young.** Displays and courtship behaviour are poorly known. The males of the Red-sided broadbill *Smithornis rufolateralis* perform a short circular flight, covering about a foot from their perch. During this flight a toadlike croaking is made with the primaries. The function of this display is not known. Both sexes of the African broadbill *S. capensis* are said to perform similar displays. Nests are built low down, usually over a stream. These are attached to a single pendent vine and are large, bulky, pear-shaped structures of leaves, roots, stems, and grass, often decorated with spider webs. The nests have been described as looking like a mass of



debris left after a flood. The entrance is on the side, usually with an overhanging porch. The clutch size is 2–3 in most species, 4–8 in the Long-tailed and Collared broadbills. The eggs are immaculate creamy white in *Smithornis* and *Calyptomena* and speckled, sometimes intensely, with chestnut, brown, or purple in the other genera. Both sexes partake in nest building and incubation. In the Dusky broadbills several individuals may share in building the nest.

Vocalizations vary considerably within the family. The Long-tailed broadbill gives a shrill whistling call and goes about in noisy flocks. Other broadbills are commonly silent but a variety of coos, jay-like notes, hoarse grumbles, grinding noises, wheezes, cicada-like churring, liquid bubbling and ringing sounds, or repeated unmelodic notes have been attributed to the various species.

**Composition.** There are 14 species of broadbills, divided into 8 genera, 5 of which contain one species only. The genus *Calyptomena* has at times been placed in its own subfamily, but seems no more distinctive than some of the other genera. Several internal features suggest that *Smithornis* is the most advanced genus of the family. The Wattled broadbill *Eurylaimus steerei* is restricted to the Philippines and is unique in possessing a ring of fleshy wattles about the eyes, for which it was once separated in its own genus *Sarcophanops*. The species of the two African genera *Smithornis* and *Pseudocalyptomena* are the smallest in size but do not appear to be closely related. The three species of *Calyptomena* are distinct in having peculiar tufts of feathers enveloping the bill, somewhat in the manner of a cock-of-the-rock *Rupicola* (Cotingidae). S.L.O.



Black-and-red broadbill *Cymbirhynchus macrorhynchus* feeding on caterpillars.

## WOODCREEPERS

Woodcreepers or woodhewers are climbing relatives of the ovenbird family (Furnariidae), and so closely related to them that some ornithologists regard them both as members of a single family. Long outer toes and thickened tail-feather shafts, climbing adaptations of woodcreepers, differentiate them from ovenbirds.

Woodcreepers vary in length from 5.5–14 in (14–36 cm), and look like enlarged versions of the Brown creeper *Certhia familiaris* of northern latitudes. They are brown with russet overtones, especially on the wings and tail; many are streaked with buff or white or



Six species of woodcreeper showing bills adapted in various ways for capturing insects in trees. (1) Red-billed scythebill *Campylorhamphus trochilirostris*, (2) Strong-billed woodcreeper *Xiphocolaptes promeropyrhynchus*, (3) Olivaceous woodcreeper *Sittasomus griseicapillus*, (4) Straight-billed woodcreeper *Xiphorhynchus picus*. Below are (5) Barred woodcreeper *Dendrocolaptes certhia* and (6) Wedge-billed woodcreeper *Glyphorhynchus spirurus*.

barred with black; one species is almost white underneath. Males are coloured like females, but at times are slightly larger or longer-winged. Unlike clambering ovenbirds, which normally keep their tails slightly off the trunks, woodcreepers usually perch vertically with the spines at the tips of their tails resting on the trunks.

Woodcreepers display striking variation of bill shape, from short and wedge-tipped in the Wedge-billed woodcreeper *Glyphorhynchus spirurus* to a long sword in the Long-billed woodcreeper *Nasica longirostris* and thin scimitars up to 3 in (8 cm) long in the Scythebill *Campylorhamphus falcularius*. Bills are usually dark, but those of some are red, while those of Long-billed woodcreepers and a few others are yellowish. Their feet are generally dark, short but strong with long and strong toes and claws. The eyes are usually medium-sized and reddish-brown, and the wings moderately long and pointed. The flight is fast and direct or downward, sometimes with brief periods of gliding or hurtling.

**Distribution.** Woodcreepers live in the shade or edges of tropical forests and woodlands from northern Mexico to central Argentina on the mainland of South America, and on the islands of Trinidad and Tobago. None reach Chile or the Antilles. They are most numerous in moderately wet forests of lowland regions where up to 15 species occur together in some areas; fewer species occur in montane habitats, wet or dry forests, and toward the edges of the geographic range. Narrow-billed woodcreepers *Lepidocolaptes angustirostris* are said to migrate to the Buenos Aires region during summer.

