

CUCKOOS

Order COCCYGES

Vol. I., p. 132; Vol. II., p. 76.

THE cuckoos of Malaya, numbering more than thirty forms, are a very varied assemblage, and it is difficult to give in a few words a non-technical diagnosis that will cover all the members of the family. The bill is fairly long and slightly curved, with the nostrils in a swollen membrane near the base. The wings are long, straight and pointed in the migratory forms, but short and rounded in the resident and jungle forms, such as the malkohas. The tarsus is stout, covered with plates in front and with a large slender claw to the hind toes in the ground-cuckoos (*Centropus*). Tarsi and feet slenderer in the more arboreal forms.

Fork-tipped feathers, or feathers with glistening shaft stripes, are not uncommon in many species, and others have the plumage metallic or glossed with metallic sheen. The orbits are frequently bare and brightly coloured. The sexes are alike in some cases, slightly or markedly different in others, and there is generally a distinct juvenile livery.

Many species are migratory, others strictly resident and sedentary. The migratory species are usually parasitic and lay in the nests of other birds, their eggs being adapted in colour to those of their hosts. Others make nests of their own, in which cases the eggs are usually chalky white, greenish or bluish.

Diet is in the main insectivorous, but some species eat fruit or seeds (*Robinson*, Vol. I., p. 132).

KEY TO THE MALAYSIAN LOWLAND CUCKOOS

1	{	Head with a long crest	<i>Clamator coromandus</i> , p. 137
	{	Head uncrested	2
2	{	Tarsus naked; wing as long as or shorter than the tail	3
	{	Upper part of tarsus feathered in front; wing longer than tail	12
3	{	Claws on all toes more or less alike	4
	{	Claw on hind toe lengthened and nearly straight	10

4	{	Upper parts boldly spotted	<i>Eudynamis scolopacea</i> subspp. (female and young), p. 152
		Upper parts not spotted	5
5	{	Mantle, bright chestnut	<i>Rhinortha chlorophæa chlorophæa</i> , p. 156
		Mantle, blue-black, metallic green or grey	6
6	{	With chestnut on the under parts	7
		With no chestnut on the under parts	8
7	{	Throat and breast, deep chestnut	<i>Phœnicophaius curvirostris erythro-</i> <i>gnathus</i> , p. 157
		Throat, pale chestnut; breast, grey	<i>Zanclostomus javanicus pallidus</i> , p. 154
		Throat and breast, grey; lower ab- domen, dark maroon-chestnut	<i>Rhopodytes sumatranus</i> , p. 156
8	{	Plumage, blue-black with no white tail tip	<i>Eudynamis scolopacea</i> subspp. (males), p. 152
		Plumage not entirely blue-black; tail broadly tipped with white	9
9	{	Smaller: tail much shorter, about 9 in.	<i>Rhopodytes diardi</i> , p. 155
		Larger: tail much longer, about 15 in.	<i>Rhopodytes tristis longicaudatus</i> , p. 154
10	{	Under wing coverts, chestnut	<i>Centropus bengalensis javanicus</i> , p. 153
		Under wing coverts, not chestnut	11
11	{	Hind claw about 0.5 in. and nearly straight	<i>Centropus rectunguis</i> , p. 152
		Hind claw about 0.75 in. and more curved	<i>Centropus sinensis</i> subsp., p. 153
12	{	Plumage above and below mostly glossy black	<i>Surniculus lugubris</i> subsp., p. 138
		Plumage otherwise	13
13	{	Small birds: wing less than 5 in.	14
		Larger birds: wing more than 5 in.	21
14	{	Under parts heavily barred	15
		Under parts without bars	20
15	{	Upper parts heavily barred with blackish	16
		Upper parts not barred with blackish	17
16	{	Centre tail feathers black with small rufous notches on the outer edges; bars on under parts thin lines	<i>Penthoceryx sonneratii</i> subsp., p. 143
		Centre tail feathers boldly barred or notched with rufous and black; bars on under parts much bolder	<i>Cacomantis</i> spp. (immature), p. 145

17	{	Back and wings, metallic violet	<i>Chalcites x. xanthorhynchus</i> (male), p. 147
		Back and wings, bright metallic green	<i>Chalcites maculatus</i> , p. 149
		Back and wings, dull greenish bronze	18
18	{	Forehead largely white; very little chestnut in the tail	<i>Chalcites m. malayanus</i> , p. 150
		Little or no white on the forehead; with much rufous in the tail	19
19	{	Chin to vent closely and boldly barred blackish and white	<i>Chalcites x. xanthorhynchus</i> (female), p. 147
		Barring obsolete, except on sides of body; throat streaked	
20	{	Crown and throat, pure grey, distinctly paler than the back	<i>Cacomantis merulinus</i> subsp. (adult), p. 145
		Crown almost concolorous with the back; throat washed with rufous	
21	{	Secondaries scarcely exceeding half the wing length	22
		Secondaries much longer, at least two-thirds the wing length	24
22	{	Tail with a subterminal black band	<i>Cuculus micropterus</i> , p. 142
		Tail with no distinct subterminal black band	23
23	{	Edge of the wing white; bars on the under parts blacker	<i>Cuculus saturatus saturatus</i> , p. 142
		Edge of the wing barred or freckled; bars on the under parts less black and less sharply defined	
24	{	Size very large: wing over 8.5 in.	<i>Hierococcyx s. sparverioïdes</i> , p. 138
		Smaller: wing less than 7.5 in.	
25	{	A distinct dark moustachial stripe; wing up to 6 in.	<i>Hierococcyx nanus</i> , p. 141
		No dark moustachial stripe; wing over 6.5 in.	

Clamator coromandus

The Red-winged Crested Cuckoo

Vol. I., p. 133.

Sexes alike. Upper parts, black glossed with blue or green, the head with a long crest, a narrow white collar across the nape, the outer tail feathers with small white tips. Primaries, inner secondaries and the coverts above them on the outer edge of the wing, chestnut. Chin and throat, rich buff; flanks and thighs, grey; vent and under tail coverts, black; breast and upper abdomen, white. Young birds have the feathers of the upper parts edged with rust-colour.

Total length, about 16 in. ; wing, 6.4 in.

A migrant from the north, fairly common on the small islands in the Straits of Malacca and along the west coast of the Peninsula in autumn and winter, but much rarer inland. There is no formal record from the east coast.

Surniculus lugubris brachyurus

The Short-tailed Black Drongo-Cuckoo

Vol. I., p. 140.

Plumage, black with a greenish or blue-green gloss. Thighs with some white feathers. Under tail coverts narrowly barred with black; a large white spot on the inner web of the primaries; outer tail feathers barred with white. Young birds are sparsely spotted with white, all over.

Total length, about 9.6 in. ; wing, 4.7 to 5.3 in.

This cuckoo, so like the small black drongos in appearance, is common in cultivated areas and secondary forest. It is one of the parasitic species and in the Peninsula the egg of this (or the slightly larger form mentioned below) has been found in the nest of a flycatcher-warbler, *Seicercus butleri*. Elsewhere, members of the genus are said to victimize drongos. The note is a whistled scale of six notes.

A slightly larger form, *S. l. dicruroides* (wing about 5.2 to 5.6 in.), occurs in the lowlands in winter and is resident in the mountains.

Hierococcyx sparverioides sparverioides

The Large Hawk-Cuckoo

Adults have the top and sides of the head dark grey passing into brown, with a faint purplish sheen, in certain lights, on the remainder of the upper parts. Tail, brownish grey banded with blackish; wing quills banded with white on the inner webs. Chin, blackish grey; throat, white, streaked with grey and tinged with rufous and becoming almost pure rufous on a broad but ill-defined zone across the breast. Remaining under parts, white, barred with blackish brown and sometimes with a little rufous wash. Young birds are quite different. They are brown above, barred with rufous; under parts, whitish buff, heavily and broadly streaked with blackish brown, the streaks breaking up into spots on the abdomen.

Total length, about 16 in. ; wing, about 9.25 in.

As a Malayan bird this cuckoo is known to me only by a small number of winter birds, presumably migrants from the north, taken in various parts of the lowlands. It is commoner in the north than in the south of the Peninsula.

Hierococcyx fugax fugax

The Malayan Hawk-Cuckoo

Cuculus fugax Horsfield, *Trans. Linn. Soc.*, xiii., 1821, p. 178 (Java).

Hierococcyx fugax, Shelley, *Cat. Birds, Brit. Mus.*, xix., 1891, p. 236 (part); Oates, *Cat. Birds' Eggs, Brit. Mus.*, iii., 1903, p. 104.

Hierococcyx fugax fugax, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 150.

Malay Name.—Sewah tĕkukor—literally, dove-hawk (generic). Other native names have been attributed to the hawk-cuckoos by certain authors, but I am a little doubtful about their exact application and omit them here. "Sewah tĕkukor" is also applied to the female of *Eudynamis*, the koel.

Description.—A medium-size cuckoo with a rufous-tipped tail: adults slaty grey above and mostly rufous below: immature birds are brown barred with rufous above, and whitish heavily streaked with brown on the under parts.

Adult.—Sexes alike. Entire upper parts and cheeks, slaty grey, darkest on the wing quills and palest on the cheeks: a few odd feathers on the nape sometimes white. Wing quills, except the innermost secondaries, broadly and deeply notched on the inner webs with white. Tail, tipped with rufous and broadly barred with four, visible, black bands: the subterminal band is much broader than the others, but otherwise the bands are slightly narrower than the grey interspaces. Lores, whitish; chin, dark grey; throat, whitish indistinctly streaked with grey and, perhaps, rufous. Under tail coverts, white. Remaining under parts, whitish with broad, long, arrow-shaped dark streaks, which on the fore neck and breast are edged with rufous. Perhaps the more heavily streaked and less rufous birds should be regarded as sub-adult. Under wing coverts and axillaries, white washed with rufous, the axillaries with faint grey bars. Edge of wing, white.

Juvenile.—Quite different. Crown, back and wings, dull dark brown, the feathers with very narrow whitish-buff or rufous-buff bars edged with dark-brown spots. Wing quills, indistinctly barred with dull rufous on the outer webs, heavily and deeply notched with whitish on the inner webs and tipped with whitish buff. Tail, banded as in the adult but the extreme tip white and the rufous area subterminal. Cheeks, chin and throat, dull black with very narrow whitish-buff fringes to the feathers. Remaining under parts, white with heavy black spots on the breast and smaller and fewer spots on the abdomen.

Immature.—Older birds have the crown slaty grey, the upper parts a brighter brown, indistinctly barred with rufous, and the under parts white heavily streaked with dark brown. Chin, blackish grey.

Soft Parts.—Iris, yellow (young birds) to orange-yellow, orange-chestnut or even hazel; orbital skin, rich yellow to yellowish green; bill, cere and gape, yellowish green to pale yellow, culmen and tip, black. Feet, yellow.

Dimensions.—Total length, about 11.5 in.; tail, 5.75 to 6 in.; wing, 6.6 to 7 in.; bill from gape, 1.2 to 1.3 in.; tarsus, 0.8 in.

Range in the Malay Peninsula.—From Bandon in Peninsular Siam south to Malacca. Pulau Rumbia in the Straits of Malacca. Great Redang Island, east coast Malay Peninsula.

Extralimital Range.—Tenasserim (once). Sumatra, the Rhio Archipelago, Billiton, Borneo, the Karimata Islands and Java.

Nidification.—Unknown in the Peninsula.

Habits.—Not uncommon and resident in the Peninsula, although one specimen was obtained in December 1918 on Pulau Rumbia in the Straits of Malacca from a stream of migratory birds. Collectors of the local museums have obtained a number of specimens in Peninsular Siam, Perlis, Perak and Pahang: Davison also secured it in the territory of Malacca, but there is no specific record from Johore or Singapore Island, although the species breeds on the Dutch island of Bintang, a few miles farther south. A half-grown juvenile from Bintang was collected in June and an older bird from Perak dated 2nd August also retains traces of the juvenile plumage. I know little of the habits, but Robinson, who observed the species at Kuala Tembeling, in Pahang, records: "The note of this bird, which may be rendered by the syllables *ka-ka-kakaka*, puzzled me for a long time; they were heard only just before and for a short time after dusk, and the natives insisted that they were uttered by a hawk, evidently confusing the bird with the *Lang sewa* (*Accipter virgatus*), to which it bears an extraordinary resemblance." In my experience birds in adult plumage are very rare in any part of the range. Curiously enough, adults of the migratory race, *nisicolor*, are common. The above description is drawn up from the only fully adult bird (a female) I have seen from the Malay States.

Hierococcyx fugax nisicolor

Hodgson's Hawk-Cuckoo

Cuculus nisicolor Blyth, *Journ. Asiat. Soc. Bengal.*, xii., 1843, p. 943 (Nepal).

Hierococcyx nisicolor, Oates, in Hume's *Nests and Eggs Ind. Birds*, ii., 1890, p. 383; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 214.

Hierococcyx fugax, Shelley, *Cat. Birds, Brit. Mus.*, xix., 1891, p. 236 (part).

Hierococcyx fugax nisicolor, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 151; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 151; Stuart Baker, *Nid. Birds Ind. Emp.*, iii., 1934, p. 349.

Malay Name.—Sewah tēkukor.

Description.—So very much like the preceding race, *H. f. fugax*, that a separate, detailed description is unnecessary. The two forms can be distinguished by the following characters:—

H. f. fugax.—The bill is noticeably more robust, measuring from the gape about 1.2 to 1.3 in.; the subterminal dark and pale bands on the tail are broader (that is, regarding the pale rufous tip and the adjacent broad black band as "terminal"); the under wing coverts and axillaries are immaculate or sparsely marked; the third and fourth primaries are usually about equal in length; and the pale bands on the under side of the wing average broader.

H. f. nisicolor.—The bill is less robust, measuring from the gape about 1.05 to 1.2 in. (the difference seems insignificant but is very noticeable when birds of the two races are compared); the subterminal dark and pale bands on the tail are narrower; the under wing coverts and axillaries are always

marked with dark transverse bands; the third primary is usually longer than the fourth; and the pale bands on the under side of the wing average narrower.

Adults of *nisicolor* before me are very variable in the colour of the under parts. Occasionally the under parts are heavily spotted with dark brown and washed with rufous; often, they are almost solidly rufous. Perhaps *fugax* would prove to be just as variable if a series of adults could be examined.

A further difference, although by no means a decisive one, is that the immature birds of *nisicolor* average rather brighter on the upper parts, both as regards the ground-colour and the rufous markings.

Range in the Malay Peninsula.—The whole length of the Peninsula from Siam to Singapore Island. The islands in the Straits of Malacca.

Extralimital Range.—Nepal and east to Kwangsi, wintering in the Malay Peninsula, Sumatra and adjacent small islands, and Java. Apparently not common in Tenasserim, Siam, or French Indo-China where it is only recorded from the south. Another subspecies (*H. f. hyperythrus*) found in Eastern Siberia, Manchuria, Chihli and Japan has been found in winter in South China, the Philippine Islands, Borneo (rare) and North Celebes.

Nidification.—Not known to breed in the Peninsula. An oviduct egg is described by Hume as "a broad oval, scarcely at all pointed towards the small end, and a little obtuse at the large end. The colour is a uniform olive-brown, and round the large end there is an indistinct zone of a darker shade; the shell is firm and smooth, but there is very little gloss on the egg; it measures 0.89 by 0.64 in." Mr Stuart Baker attributes to this species many eggs taken by him in North Cachar and the Khasia Hills from the nests of various flycatchers (especially *Cyornis* and *Niltava*) and short-wings (*Brachypteryx*).

Habits.—A common winter visitor to the Peninsula from October to January, migrants being especially numerous with other birds of passage on the small islands in the Straits of Malacca in October and November. In India, according to Mr Stuart Baker, this is a forest bird, feeding on insects, largely cicadas, and also fruit.

Hierococcyx nanus

The Small Hawk-Cuckoo

Vol. II., p. 82.

Crown, dark blackish grey; remaining upper parts, dark brown; an indistinct broken rufous collar across the nape. There are indications of paler brown bars on the upper parts, especially on the wing coverts, where they are pale rufous. Rump, lightly barred with paler brown. Wing quills, distinctly barred. Tail, grey, tipped with white and with three visible, broad, blackish bars. Under parts, creamy white with broad, blackish brown streaks. A broad moustachial stripe.

Total length, about 11 in.; wing, 5.7 in.

Our knowledge of this cuckoo in the Malay Peninsula is very imperfect. The few specimens that have been obtained are from old forest and secondary forest, from the lowlands and from submontane country. There is no record of the breeding habits.

*Cuculus micropterus***The Indian Cuckoo**

Head, neck, throat and upper breast, pale grey; remainder of upper parts, dark brown, the primaries barred with white on their inner webs. Tail with a broad, black subterminal area, a narrow white tip and a few large white spots on the centre line. Remaining under parts, white boldly barred with black. Young birds are quite different. They have the brown upper parts boldly barred with buff and the under parts cream-coloured, with broad blackish bars on the sides of the body and sometimes across the throat and breast.

Total length, about 13 in. ; wing, about 7.5 in.

A rare resident in the more open country of the lowlands but much commoner as a visitor in winter, when it occurs on the small islands in the Straits of Malacca. The species certainly breeds in the Peninsula, but I know of no local record of the egg. In other parts of the range, eggs attributed to this species have been found in the nests of babblers, chats and flycatchers.

*Cuculus canorus telephonus***The Common Cuckoo (Asiatic Race)**

Adults have the head, neck, breast and upper parts, including the wings, pale grey, the primaries barred with white on the inner webs. Tail almost black, white-tipped, notched with white on the inner webs of the feathers and with white spots on each side of the feather shafts. Remaining under parts, including under wing coverts and edge of the wing, white or buffy white, barred, rather irregularly, with grey-black. Females are usually tinged with rufous on the breast, and in adults of this sex there is a hepatic phase in which the upper parts are barred chestnut and blackish and the under parts are tinged with buff.

Total length, about 13 in. ; wing, usually 8.25 to 9.25 in.

The Asiatic race of the common cuckoo is a very rare winter visitor to the Peninsula. I have never seen a Malayan specimen in the flesh, and the species is not represented in the local museums.

*Cuculus saturatus saturatus***Gould's Cuckoo**

This is the bird more familiarly known as *Cuculus optatus* Gould, but Dr G. C. A. Junge has recently shown that *C. saturatus* Blyth is an earlier valid name for the species. Dr Junge furthermore recognizes two subspecies, the typical race (*C. s. saturatus*) found in Assam, Burma, South China, etc., and a slightly larger northern race (*C. s. horsfieldi*) of Japan, North China and East Siberia, etc.

The species is an uncommon winter visitor to the Malay Peninsula, where it occurs, on passage, on the small islands in the Straits of Malacca. On the proposed arrangement the few Malayan specimens I have seen belong to

the typical race, but the larger form seems to be common in some parts of Siam in the winter, and I have a specimen from Koh Lak, not far from our northern boundary. The general appearance is so like that of the common cuckoo (*Cuculus canorus telephonus*), that without care the two species can easily be confused. The present bird is slightly smaller (maximum wing length about 8.5 in., but the majority of specimens smaller). It also has the bars on the under parts blacker and, therefore, more distinct, and often slightly broader; and the edge of the wing, in the great majority of specimens, white, not barred as in *C. canorus*.

Penthoceryx sonneratii malayanus

The Banded Bay Cuckoo

Penthoceryx sonneratii malayanus Chasen and Kloss, *Bull. Raffles Museum*, 5, 1931, p. 84 (Kuala Lumpur, Selangor, Malay States).

Cuculus sonneratii, Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), ii., 1890, p. 382 (another subspecies); Shelley, *Cat. Birds, Brit. Mus.*, xix., 1891, p. 262 (part).

Penthoceryx sonneratii, Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 219 (part); Oates, *Cat. Birds' Eggs, Brit. Mus.*, iii., 1903, p. 115 (another subspecies).

Penthoceryx sonneratii venustus, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 152; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 159.

Penthoceryx sonneratii sonneratii, Stuart Baker, *Nid. Birds Ind. Emp.*, iii., 1934, p. 352 (another subspecies).

Malay Name.—Burong mati anak (*A. T. Edgar*).

Description.—A small cuckoo with upper parts brown and under parts white; the whole plumage banded with black.

Adult.—Sexes alike. Upper parts from forehead to tail coverts, and wing coverts, closely banded with dark brown and rufous and very faintly glossed with oily green. Primary coverts and wing quills, dark brown, the quills very faintly notched on the outer edge with rufous, the notches most distinct and tending to become bars on the secondaries. Inner webs of all quills, except the innermost secondaries, broadly edged with whitish rufous, with a few obsolete dusky bars. Forehead with a few white feathers; lores and an indistinct supercilium, broadest behind the eye, mixed black and white; posterior ear coverts, brown. Cheeks, entire under parts, axillaries and under wing coverts, white, barred with thin, brownish black, slightly wavy lines. Centre tail feathers, brownish black with an oily green gloss, the edges narrowly lined and notched with rufous; remaining tail feathers the same on the outer webs, the inner webs pale rufous, with broken dusky bars not reaching the edge of the feather and with a broad subterminal black band; all tail feathers broadly tipped with a white spot washed with rufous.

Immature.—In some birds, which I assume to be not fully adult, the upper

parts are paler and more rufous, the barring is more decisive and the inner secondaries are barred right across the feather.

Note.—The Malayan subspecies is smaller than the typical race from India and rather brighter than the dark Sumatran race (*P. s. fasciolatus*) to which a Singapore bird is best referred. The species, however, is not common in the Malay Peninsula and Sumatra, and the above observations are based on very small series.

Soft Parts.—Iris, greyish blue, grey, yellowish grey, yellow or brown; upper mandible, black; lower mandible, grey or greenish yellow with the tip black; feet, greyish or yellow-olive or greenish; soles, yellow. Local collectors have not noted a red outer circle to the iris recorded of the typical (Indian) subspecies by Mr Stuart Baker.

Dimensions.—Total length, 8.4 to 8.7 in.; tail, 4 to 4.2 in.; wing, 4.2 to 4.6 in.; tarsus, 0.6 in.; bill from gape, 1 to 1.1 in.

Range in the Malay Peninsula.—The whole length of the Peninsula from Peninsular Siam south to the islet of Pulau Ubin in the Johore Strait. Junk Zeylon, but no other coastal island and no definite record from Singapore Island.

Extralimital Range.—The typical form of this cuckoo inhabits India, Assam, Burma, Siam and French Indo-China, but where it meets the Malayan subspecies in Tenasserim and Siam is not yet known with certainty. Other subspecies are found in Ceylon, Sumatra, Borneo, Java, the Palawan group of islands and Tablas in the Philippines.

Nidification.—I can trace no record from the Malay Peninsula: in Sumatra natives told Dr E. Jacobson that this species lays its eggs in the nest of the tailor-bird (*Orthotomus sepium cineraceus*). The following notes are abstracted from Mr Stuart Baker's published account of the Indian subspecies. An oviduct egg is a broad oval, pale dull lilac in ground-colour with plenty of rufous-pink spots everywhere. The eggs, however, vary greatly. Some have the ground-colour pure white, others are minutely freckled, and others are very like certain types of *Alcippe* eggs. A rough average size is 0.77 by 0.63 in. The egg is laid in the nest of various small bulbuls, babblers, warblers, etc.

Mr A. T. Edgar has seen a juvenile, in Perak, attended by a pair of cuckoo-shrikes (*Lalage nigra*).

Habits.—Very few specimens of this cuckoo have been obtained during recent years. It is a lowland species, apparently commoner in the south of the Peninsula than in the north. I have no first-hand observations on its habits. Writing of the species in Ceylon, Legge records: "It is very shy, and chiefly affects the tops of trees, where it remains motionless for a long time, piping its curious far-sounding whistle, which may be syllabized as *whi-whip*, *whiwhip*—*whi-whip*, *whiwhip*. It is particularly noisy in the morning before 9 or 10 o'clock, and in the evening just before and at sunset, calling for a considerable time without intermission, and consequently making its presence known wherever it has taken up its abode. Their call notes are different from the whistle just mentioned: commencing in a low key, they suddenly

change to a higher, and then die away into scarcely audible sounds. When approached, they fly off to an adjacent tree, and commence calling anew. The diet of this species consists chiefly of Coleoptera, Mantidæ, and caterpillars."

Although I have examined so few Malayan specimens of this cuckoo, Mr A. T. Edgar maintains that it is quite common in the Peninsula. He writes: "I have heard it in the middle of Kuala Lumpur; in Singapore; in Ipoh and Taiping; and in Pahang (in July). It generally keeps to the tops of tall leafy trees; but I have also seen it, frequently, on low trees and even on bushes. It is most frequently heard in open country where there are plenty of trees, or in rubber estates, but I have a number of notes of hearing it in light jungle, and one or two referring to quite heavy jungle. It has two calls. One is a quadrisyllabic monotone whistle in a minor key, the notes quick and evenly spaced (for a long time before I knew what it was, I registered it as the 1, 2, 3, 4 bird). The other is a long rising call, starting with three or four slow notes, followed by three sets of four notes each, uttered more quickly, and climbing up the scale from the first note to the last. Very often the bird starts with this long call and then breaks into the 1, 2, 3, 4 call, which continues for a long time, and is very monotonous and irritating to a nervy listener. It calls most frequently in the spring, from March to May; less often in the beginning of the year and in summer; and in the autumn, for three or four months, I hardly hear it at all. It calls both by day and by night, while perched and on the wing, but mostly while perched. When calling, the head appears to be held normally, not thrown back. Sitiawan Malays call it *burong mati anak*."

Cacomantis merulinus threnodes

The Brain-fever Bird

Vol. I., p. 138; Vol. II., p. 82.

Head, neck, chin and throat, pale grey; back and wings, greyish brown with a bronzy sheen; tail, blackish tipped with white; the inner web of the outer feathers with oblique white bars; remainder of under parts, rich cinnamon-buff.

Immature birds have the upper parts rufous, regularly barred with black; and the under parts whitish, washed with rufous to a varying degree, especially on the throat, and marked with broken blackish bars.

Total length, about 8 in.; wing, about 3.9 to 4.2 in.; tail, about 4.4 in.

Common in the cultivated areas of the lowlands but less numerous in the forests, and north of about the latitude of Penang replaced by a slightly larger race, *C. m. querulus*, in which the rufous under parts are a little deeper in colour. The oft-repeated whistled scale of this cuckoo has earned for it the name of "brain-fever bird" among Europeans in Malaya. It is one of the parasitic cuckoos and is known to deposit its eggs in the nests of tailor-birds.

*Cacomantis variolosus sepulcralis***The Fan-tailed Cuckoo**PLATE 2 (*upper figure*)

Cuculus sepulcralis S. Müller, *Verh. Nat. Gesch. Land en Volk*, 1843, p. 177 (Java).

Cacomantis merulinus (part), Shelley, *Cat. Birds, Brit. Mus.*, xix., 1891, p. 268.

Cacomantis sepulcralis sepulcralis, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 153.

Malay Name.—Unrecorded.

Description.—A small cuckoo with the upper parts bronze and the under parts rufous. Very much like the much commoner brain-fever bird (*Cacomantis merulinus threnodes*), but the head almost uniform with the back, or not much paler; the throat and chin at least washed with rufous, not clear pale grey in colour; and the pale bars on the inner webs of the outer tail feathers mere notches, not reaching the shaft of the feather.

Adult.—Sexes alike. Top of the head, lower back, rump and upper tail coverts, dark ashy grey overlaid with bronze, less so and sometimes not at all on the head; tail coverts with very narrow paler fringes. Mantle and wings, greenish bronze, the wing quills with a sub-basal white patch on the inner web. Sides of head and chin, dark grey washed with rufous. Remaining under parts, axillaries and under wing coverts, except a median patch which is blackish, rufous; edge of the wing, white. Tail quills, brownish black, very faintly bronzed and with small whitish tips; both edges of the centre pair and the outer edges of the other feathers with small whitish or rufous notches; on the inner webs the notches are whitish, and tend to become bars not reaching to the shaft of the feather.

Immature.—Quite different. The entire upper parts irregularly but heavily barred dull pale rufous and brownish black, the bars on the centre tail feathers represented by mere deep notches on the edges of the feathers. Under parts whitish, perhaps washed with rufous on the chest, heavily barred with smoky black. In this plumage it very closely resembles the immature brain-fever bird (*Cacomantis merulinus threnodes*), but it can be distinguished by the longer tail, generally larger size, duller, less bright rufous upper parts, less buff-washed and more heavily barred under parts, and less deeply rufous notched centre tail feathers, except in a few abnormal individuals of both species in which the pattern on the centre tail feathers is broken up. One or two very young birds I am not prepared to allocate to species.

Soft Parts.—Iris, dusky yellow to brown; orbital ring, yellow; bill, black, the base of the lower mandible, yellow to reddish brown; feet, yellow; gape, pinkish in an immature bird.

Dimensions.—Total length, 9.3 to 9.9 in.; tail, 4.6 to 5.1 in.; wing, 4.3 to 4.5 in.; tarsus, 0.7 in.; bill from gape, 0.9 to 1 in.¹

¹ In Vol. I., p. 140, where it is stated that this species is slightly *smaller* than either of the local races of *Cacomantis merulinus*, "smaller" is a *lapsus calami* for "larger."

Range in the Malay Peninsula.—From Peninsular Siam including the coastal islet of Koh Muk down both coasts to Singapore Island. No formal record from any other coastal island.

Extralimital Range.—Sumatra and the adjacent islands of Simalur and Billiton; Borneo, Java, Bali, Lombok, Sumbawa, Flores, Sumba. Philippine Islands.

Nidification.—Not recorded from the Malay Peninsula. In Java recorded foster-parents include flycatchers (*Dendrobiastes*, *Rhipidura*, *Culicicapa*); a fork-tail (*Hydrocichla*); a chat (*Saxicola*); a warbler (*Megalurus*) and a shrike (*Lanius*).

Habits.—Judging from the small number of specimens obtained in recent years by casual collecting, this cuckoo is not common in the Malay Peninsula, where its status is that of a resident lowland species. Specimens have been examined from Peninsular Siam, Perak, Selangor, Pahang, the islet of Pulau Ubin in the Johore Strait and Singapore Island. In the two last-named localities it was obtained in the mangrove swamps, and Robinson has stated that it is more of a coastal bird than the much commoner and strikingly similar *Cacomantis merulinus threnodes*. It is certain, however, that it is also found in heavy jungle and among secondary growth in agricultural areas. In the field it must be very difficult to distinguish from its very much commoner relative, which is sometimes found in the same localities. I have no local record of the voice.

The bird figured in the plate is a male from the Klang Straits, Selangor.

Chalcites xanthorhynchus xanthorhynchus

The Violet Cuckoo

Cuculus xanthorhynchus Horsfield, *Trans. Linn. Soc.*, xiii., 1821, p. 179 (Java).

Chalcococcyx xanthorhynchus, Shelley, *Cat. Birds, Brit. Mus.*, xix., 1891, p. 289; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 154.

Chrysococcyx xanthorhynchus, Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 221.

Chalcites xanthorhynchus, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 161; Stuart Baker, *Nid. Birds Ind. Emp.*, iii., 1934, p. 353.

Malay Name.—Unrecorded.

Description.—A very small cuckoo, the male bright metallic violet, the abdomen barred dark and white. Female, greenish bronze above, barred below. Young birds barred chestnut and green above.

Adult male.—Entire upper parts, including wings and tail, head all round, chin, throat and breast, bright metallic violet with purplish reflections; outer secondaries, and perhaps a few inner primaries, with a small patch of white at the base of the inner web: the two outer pairs of tail quills tipped with white, the second feather least so, and the outermost feather also with three (visible) broad white bars, complete on the outer web, but only extending half-way across the inner web. Remaining lower parts, including axillaries

and under wing coverts, equally and broadly barred white and dark metallic violet, or blue-green.

Adult female.—Quite different. Upper parts, shiny greenish bronze with coppery reflections, darkening to almost purplish brown on the crown; edges of wing coverts narrowly and indistinctly rufous. A few whitish spots on the forehead and an indistinct broken supercilium of whitish spots. The two outer primaries narrowly edged with rufous, and all primaries and some outer secondaries with a median chestnut area on the inner web; inner primaries and secondaries except the innermost, white at the base of the inner web. Centre pair of tail feathers, greenish bronze, rather darker subterminally and narrowly tipped and edged with rufous. Other tail feathers, rufous barred with shiny green, the outermost feather white on the outer web and at the base of the inner web; outer three pairs of feathers tipped with white, decreasingly from the outermost; bars on the outer feathers blackish and very irregular. Lores, sides of head, and entire under parts, including axillaries and under wing coverts, white, barred with shiny dusky bronze-brown, the bars narrowest on the head and throat, gradually increasing in breadth on the breast and abdomen, and broadest on the under tail coverts.

Immature.—Young birds of both sexes are like the adult female on the under parts, but have the upper parts barred with pale rufous and metallic green. Males changing into the adult plumage have the immature plumage irregularly patched with the new bright metallic-violet feathers.

Soft Parts.—*Male*: iris and edge of eyelid, red; bill, yellow, red at the base; feet, olive. *Female*: iris and edge of eyelid, red; upper mandible, black, red at the base on the sides; lower mandible, yellowish brown, red at the base; feet, olive. *Immature*: iris, pale dirty green to brown; edge of eyelid, orange; upper mandible, dark brown, tip black; lower mandible paler, yellowish at base; gape, yellow to red; feet, dirty olive to olive-black.

Dimensions.—Total length, 6.5 to 6.75 in.; tail, 2.5 to 2.8 in.; wing, 3.7 to 4.1 in.; tarsus, 0.5 to 0.6 in.; bill from gape, 0.75 to 0.8 in.

Range in the Malay Peninsula.—From Peninsular Siam down both sides of the Peninsula to Pulau Ubin in the Johore Strait and Singapore Island. With the exception of an old record of doubtful value from Penang, there is no record of its occurrence on any other of the coastal islands.

Extralimital Range.—Assam, Eastern Bengal, Burma including Tenasserim, Siam (very few formal records and none from the north); South Annam and Cochin-China. The Nicobar and Andaman Islands. Sumatra and adjacent islets, the Natuna Islands and Borneo. Palawan birds may also belong to this subspecies.

Nidification.—No record from the Malay Peninsula. Elsewhere the egg has been found in the nests of spider-hunters (commonly), sunbirds, flower-peckers and fantail-warblers. The egg, which according to Mr Stuart Baker measures about 0.69 by 0.5 in., is said to approximate in colour to those of the foster-parent.

Habits.—This beautiful small cuckoo is a lowland species commoner in the north of the Peninsula than in the south. Normally it is a forest bird,

showing a marked preference for the tops of trees and ravines. It is said to feed on caterpillars, insects and spiders. The only examples of the species I have ever collected (on Banguay Island, North Borneo) were remarkably silent and rather shy.

Chalcites maculatus

The Emerald Cuckoo

Trogon maculatus Gmelin, *Syst. Nat.* i., 1788, p. 404 (Ceylon).

Chalcococcyx maculatus, Oates, in *Hume's Nests and Eggs Ind. Birds* (2nd ed.), ii., 1890, p. 387; Shelley, *Cat. Birds, Brit. Mus.* xix., 1891, p. 291; Oates, *Cat. Birds' Eggs, Brit. Mus.* iii., 1903, p. 117; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 154.

Chrysococcyx maculatus, Blandford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 222.

Chalcites maculatus maculatus, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 162; Stuart Baker, *Nid. Birds Ind. Emp.* iii., 1934, p. 353.

Malay Name.—Unrecorded.

Description.—A small cuckoo with the under parts boldly barred dark and white; upper parts, metallic green, the head pale rufous in females.

Adult male.—Head all round, throat, breast and entire upper parts, including wings and tail, highly metallic dark green, faintly bluish on the wing quills and elsewhere glossed with coppery bronze. The two outer primaries with a narrow spear-shaped centre of white; other wing quills with a large white patch at the base, on the edge, of the inner web. Outer two pairs of tail quills tipped with white, the outermost feather with three, visible, large spots on each web, the spots on each feather roughly opposite and thus forming broken bars. Under tail coverts, bright metallic green with a few large white spots; thighs, white. Remaining under parts, including under wing coverts and axillaries, white broadly barred with bronze-green.

Adult female.—Rather different. Top of head and nape, pale rufous with a few broken, blackish bars on the forehead; remaining upper parts, metallic green highly glossed with golden bronze, the general tone yellower and less dark green than the male, and tinged with purplish bronze on the nape and end of the tail. Inner webs of wing quills with a large patch of white washed with rufous. Centre two pairs of tail feathers, metallic green-bronze; the next feather tipped and broadly edged with rufous on the outer web and with obsolete dark bars touching the shaft; next feather rufous, black at the base, tipped with white, with a subterminal black band and two or three dark spots next the shaft; outermost feather, inner web rufous, outer web white with a black subterminal bar, a white tip and three, visible, large black spots on each web. Sides of head and entire under parts, white, heavily and evenly barred with blackish green-bronze.

Immature.—A sub-adult male differs from the adult in having the throat and breast barred like the remainder of the under parts, but clouded with glossy green: there are also irregular white markings on the sides of the head and fore part of the crown.

Soft Parts.—Irides, red-brown; bill, bright orange-yellow, tipped black; feet, dark brownish green (*Davison*).

Dimensions.—Total length, about 7 in.; wing, 4.3 to 4.35 in.; tail, 2.7 to 2.8 in.; tarsus, 0.6 in.; bill from gape, 0.8 to 0.9 in.

Range in the Malay Peninsula.—Peninsular Siam; Selangor; Malacca. No formal record from the east coast or from any of the islands.

Extralimital Range.—From Kumaun eastwards along the Himalayas to South Tibet, Assam, Cachar, Yunnan, Szechuen and Hupeh. Migrates south through Burma, Siam (north to south), French Indo-China (Tonkin to Cochin-China), Hainan and Sumatra (rare).

Nidification.—Not recorded from the Malay Peninsula. In Assam, according to Mr Stuart Baker, this cuckoo lays in the nests of sunbirds, spider-hunters, willow-warblers and fantail-warblers. The egg is said to be indistinguishable from that of the violet cuckoo (*Chalcites xanthorhynchus*).

Habits.—A rare bird in the Malay Peninsula and almost certainly only a seasonal visitor; it appears to be rather commoner in the north than in the south and is normally found in thick forest. Writing of the species in Tenasserim, *Davison* records: "This species has a very fine clear and, for the size of the bird, loud whistling call of three notes, rapidly uttered. It was very common on the higher portions of Mooleyit. The food of this species is entirely insects. It is chiefly a forest bird, though I killed one specimen in a garden at Moulmein. It is very seldom seen, as it keeps up in the higher branches of trees, but on the hills is continually heard, as, on moonlight nights at any rate, it calls at intervals throughout the night as well as the day." Local specimens are dated December and January.

Chalcites malayanus malayanus

The Malay Cuckoo

Cuculus malayanus Raffles, *Trans. Linn. Soc.*, xiii., 1822, p. 286 (Malay Peninsula).

Chalcococcyx malayanus, Shelley, *Cat. Birds, Brit. Mus.*, xix., 1891, p. 298 (part).

Chalcococcyx malayanus malayanus, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 154.

Malay Name.—Unascertained.

Description.—A small species with the upper parts bronzy green and the under parts broadly banded blackish and white. Outer tail feathers with much white on the inner webs; forehead largely white.

Adult.—Sexes alike. Entire upper parts, including crown from about the level of the eyes, wings and centre pair of tail quills, bronzy green, the feathers with paler, browner edges in certain lights. Top of head to about the level of the eyes and sometimes slightly beyond, an ill-defined supercilium, lores, sides of the head to far behind the eyes and including the ear coverts, chin and throat, white, the feathers barred or fringed with dusky, producing an irregularly barred or mottled effect. Remaining under parts, white

regularly barred with dusky bronze. Wing quills, white, sometimes tinged with a little rufous on the bases of the inner webs. Outer tail feather, dusky green tinged with rufous on the outer web and notched with white at the base; inner web, blackish with four broad bars or spots from edge to shaft. Next feather, outer web bronzy green, inner web black, tipped with white and barred with rufous. Remaining feathers, except centre pair, bronzy green, dusky subterminally, a white spot on the tip of the inner web, and the base of the inner web washed with rufous. *Young birds* are said to have the under wing coverts unbarred.

Soft Parts.—Iris, pale reddish brown; edge of the eyelid, vermilion; bill and feet, black; soles, yellowish (*A. T. Edgar*). Iris, reddish with a whitish line outside the pupil; eye-wattle, vermilion; bill, black; feet, greenish (*H. C. Robinson*).

Dimensions.—Total length, about 6.25 in.; wing, 3.85 in.; tail, 2.5 in.; tarsus, 0.65 in.; bill from gape, 0.75 in.

Range in the Malay Peninsula.—The lowlands of Patani, Perak, Selangor, Malacca and Pahang. There are some very old records from other places, but the localities given are not improbably merely those from which the skins were exported.

Extralimital Range.—Sumatra, Borneo, the Maratua Islands off the east coast of Borneo, and Java. The species also occurs in the Philippine Islands, including the Sulu Islands, and Celebes.

Nidification.—There is no record from the Malay Peninsula. In Java the egg has been found in the nest of a flycatcher (*Gerygone*): it is described as bronze-coloured.

Habits.—This small cuckoo is rare in the Malay Peninsula, but is likely to turn up anywhere in the lowlands. The few specimens I have examined have been obtained in the winter months.

Mr A. T. Edgar recently forwarded a Perak specimen with the following interesting note: "The call is a distinctive one, which I have heard on several occasions, usually about April, but did not until recently recognize as belonging to this bird. It is a four-note whistle, the first note long, the next two short, the fourth sometimes rather longer and drawn-out: the whole call a melancholy cadence, the notes not quick and regular like one of the calls of *Penthoceryx*, but slow, uneven, and sounding as though uttered with an effort. When I have heard it, the bird has been in gardens, in open, rough country, or in thickets of *Melastoma*." The food seems to consist mainly of beetles and hairy caterpillars (species of *Hesperidæ* and *Eupterotidæ* have been recognized). Like other small cuckoos, it usually calls from the tops of trees. Mr Edgar describes the flight as dipping and rather indirect.

Chalcites basalis

The Bronze Cuckoo

In general appearance and size much like the last-mentioned species (*C. malayanus*), but the forehead without white, the throat streaked, the

remaining under parts less distinctly barred, the centre of the abdomen quite white and the tail with more rufous.

A very rare visitor to the extreme south of the Malay Peninsula. The species breeds in South Australia and is one of the very few Malaysian birds known as a migrant *from the south*. I have collected it in the North Natuna Islands in September, and a Singapore bird is dated July. It is also rare in Sumatra and Borneo, but commoner in Java and the Lesser Sunda Islands. Like other migratory species, it will be dealt with in greater detail in our next volume.

Eudynamis scolopacea malayana

The Malayan Koel

Vol. I., p. 137.

Adult male.—Plumage entirely black, glossed with blue-green.

Adult female.—Upper parts, dark brown, heavily spotted with rufous and barred with the same colour on wing and tail quills. Under parts, buff, streaked with blackish on the throat and fore neck and barred with blackish elsewhere.

Total length, about 16.5 in. ; wing, 7.75 to 8.6 in.

The rather smaller typical form (*E. s. scolopacea*), with the wing running up to 8 in. and in which the female is marked with white and not buff or rufous,¹ is also common in the Peninsula. This race appears to be a visitor from the north, but I am not yet certain of the status of Malayan birds and have no evidence that any race is resident in the south of the Peninsula.

Both forms are far commoner on the small islands in the Malacca Strait, where they occur together from October to April, than on the mainland. *E. s. malayana* certainly breeds as far south as Kelantan, where the eggs have been found in a crow's nest.

Centropus rectunguis

The Malaysian Crow-Pheasant

Centropus rectunguis Strickland, *Proc. Zool. Soc.*, 1846, p. 104 (Malacca) ; Shelley, *Cat. Birds, Brit. Mus.*, xix., 1891, p. 343.

Malay Name.—Unrecorded specifically. Bubut ; but-but (generic).

Description.—Very like the common crow-pheasant (*Centropus sinensis bubutus*), but smaller ; wing about 6.5 in. against 8.5 to 9.5 in. and the hind claw only about 0.5 in. in length and nearly straight, whereas in *C. s. bubutus* it measures about 0.75 in. and is more curved.

Adult.—Sexes alike. Eyelid with strong black lashes. Mantle and wings, deep chestnut-bay. Remaining plumage, black with glistening stiff shafts to the feathers on head, neck and breast, and highly glossed with purplish violet on nape, breast and tail, and bottle-green on the head and remaining under parts.

¹ Robinson has reversed the characters of the females of the two races in Vol. I.

Immature.—In a young bird the under parts are fairly regularly barred with dirty white and dull black; the chestnut upper parts are barred with dull black; top of head and nape, brown with obsolete blackish bars.

Soft Parts.—Iris, red; bill and feet, black (*Davison*).

Dimensions.—Total length not known exactly, but probably about 16 in.; wing, 6.5 in.; tail, 7.5 to 8.5 in.; tarsus, 1.8 in.; bill from gape, 1.65 to 1.7 in. Females are probably rather larger than males.

Range in the Malay Peninsula.—The lowlands of the mainland. Perak (Pondok Tanjong, Larut); Selangor (Rantau Panjang; Ginting Bidei); Pahang (Kuala Tahan); Malacca territory. There is an old, but very doubtful, record from Penang.

Extralimital Range.—Sumatra and Borneo.

Nidification.—Unknown. A juvenile from Selangor is dated 17th May.

Habits.—A very rare or locally distributed bird, of which very little is known. The few specimens obtained have been collected in heavy forest. The other Malayan forms of the genus prefer more open country.

Centropus sinensis bubutus

The Southern Coucal, Crow-Pheasant, or Lark-heeled Cuckoo

Vol. I., p. 134.

Sexes alike. Head, neck, under parts, under wing coverts and tail, black, glossed with blue and green. Mantle and wings, bright pale chestnut. Young birds have the chestnut upper parts barred with black and the breast and abdomen covered with indistinct, almost spot-like, short bars.

Total length, about 21.5 in.; wing, 8.4 to 9.5 in.; tail, 12 to 12.5 in.; tarsus, 2.15 in.; bill from gape, 1.8 in. Females are slightly larger than males.

A common bird in the lowlands wherever there are open, grass-covered spaces.

North of about the latitude of Penang it is replaced by a slightly smaller subspecies, *C. s. intermedius* (wing, 7.25 to 8.25 in.), in which the chestnut upper parts are rather deeper in colour.

Mr A. T. Edgar describes a nest found in the Malay States as a large globular structure of dry "bertam" leaves, covered and partially concealed by the green bracken fronds around it, which had been broken and pulled down, and in some cases lightly interwoven with the roof of the dome. The nest was almost on the ground, in bracken on the bank of a big drain running through flat jungle. An egg taken in January measured 1.44 by 1.24 in.

Centropus bengalensis javanicus

The Lesser Coucal, Crow-Pheasant, or Lark-heeled Cuckoo

Vol. I., p. 135.

Adult.—Head and neck all round, under parts and tail, shining black, glossed with green or bluish green. Mantle, dark reddish brown with straw-coloured shaft stripes. Wings, pale rufous-brown, turning to dark brown on

the tips and on the inner secondaries. Under wing coverts, chestnut, perhaps with a few black feathers.

Immature.—Quite different. Under parts, whitish tinged with buff; upper parts, pale buffy brown washed with rufous on the wings, heavily streaked on the head and mantle and barred on the remaining under parts, and the tail, with black.

Total length, about 14.5 in.; wing, 5.3 to 5.6 in. in males and 6.1 to 6.7 in. in females.

Common in grass-land almost everywhere in the lowlands of the Malay Peninsula.

In Lower Perak Mr A. T. Edgar describes the nest as a domed structure made entirely of dry grass and placed three feet from the ground in thick, coarse grass (*lalang*) on the edge of a patch of scrub. Season, March to May (*Edgar* and *Ryves*).

Zanclotomus javanicus pallidus

The Malayan Red-billed Malkoha

Vol. II., p. 77.

Upper parts, grey, palest on the head and deepening on the tail, which is tipped with white, to almost steely blue. Throat and fore breast, pale chestnut; lower abdomen and vent, deep chestnut; remainder of under parts, grey, perhaps washed with buff. Chin, forehead and a narrow stripe over the eye streaked with white.

Total length, about 18 in.; wing, 6 in.

Common in the lowland forest and in the south of the Peninsula, also numerous in the hills, especially in the drier places and where there is bamboo forest. It also frequents secondary forest in the lowlands. There is no Malayan record of the eggs. A Sarawak nest has been described as a flimsy affair placed in a thick bush in scrub jungle.

Rhopodytes tristis longicaudatus

The Large Malayan Green-billed Malkoha

Vol. II., p. 79.

Head, neck and under parts, grey, darkest on the abdomen; back, wings and tail, glossy blue-green, the wing quills bluish; tail feathers, broadly tipped with white; bill, bright green; rugose skin round the eye, red.

Total length, 19 to 24 in.; wing, 5.75 to 6.5 in.; tail, about 15 in.

Common in low country in secondary forest and cultivated areas in the north of the Peninsula, but farther south, in the Federated Malay States, it is normally a bird of the hill forests, especially where there is bamboo, although I have seen a specimen from the Perak lowlands (*Dindings*). There is no record from south of Selangor. There is no Malayan record of the nest. From Central Siam it has been described as a small platform of sticks placed in a small tree in secondary jungle.

Rhopodytes diardi

The Small Green-billed Malkoha

PLATE 2 *Alcedo figure**Melias diardi* Lesson, *Traité d'Orn.*, 1830, p. 132 (Sumatra).

Rhopodytes diardi, Shelley, *Cat. Birds, Brit. Mus.*, xix., 1891, p. 390; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 233; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 157; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 180; Stuart Baker, *Nid. Birds Ind. Emp.*, iii., 1934, p. 363.

Malay Name.—Burong chenok (generic).

Description.—A slender, grey bird, glossed with green above; tail long and white-tipped; bill conspicuously green; a bright red area round the eye. Very like the large green-billed malkoha (*Rhopodytes tristis longicaudatus*) described in Vol. II., but much smaller (wing about 5 against 6 in.; tail about 9 against 15 in.) and with the abdomen blackish, not grey.

Adult.—Sexes alike. Head all round, nape and under parts from chin to upper abdomen, ashy grey, slightly darker and faintly tinged with olive on the crown, and paler or whiter on the chin and throat, the head with scattered, black, hair-like feathers forming faint dark streaks. An obsolete, white supercilium, mixed with black, is scarcely noticeable in some birds. Lores narrowly black next to the nostril. A large patch round the eye, rugose and crimson in life, yellowish in old skins. Remaining upper parts, wings and tail, dark metallic bottle-green with bluish reflections. Abdomen, thighs, under tail coverts and under wing coverts, dull black with a faint green gloss.

Immature.—I have seen no bird of this species differing from the adult in plumage.

Soft Parts.—The irides vary from dark brown through red to bluish white or white; orbital area, crimson; edge of eyelids, black; bill, apple-green, sometimes bluish at the base of the mandible; feet, slate or greenish slate.

Dimensions.—Total length, 14 to 15 in.; tail, 8.2 to 8.9 in.; wing, 4.9 to 5.2 in.; tarsus, 1.2 to 1.4 in.; bill from gape, 1.3 to 1.5 in.

Range in the Malay Peninsula.—The whole length of the Peninsula from north to south on both sides, including Singapore, but not recorded from any other island.

Extralimital Range.—South Tenasserim; Sumatra. There is a single old record from French Indo-China. A closely allied race (*R. d. borneensis*) inhabits Borneo.

Nidification.—According to Mr Stuart Baker, nests containing two eggs have been taken in early March in Perak. The nests are described as “very shallow saucers of fine twigs, about six to eight inches in diameter and one to two inches deep. The lining is of green leaves, and the nests were built in bushes in scrub and other jungle.” The same author gives the average size of the white eggs as 1.26 by 1 in.

Mr V. W. Ryves describes a Selangor nest found in January as follows:

"Nest of dead twigs, similar to a pigeon's nest except that a few green leaves were used as a lining. Clutch, two; eggs, chalky white and much stained."

Habits.—A fairly common species in the lowlands of most parts of the Peninsula, but more numerous in the south than in Peninsular Siam, where it is largely supplanted by the larger species *Rhopodytes tristis longicaudatus* described in our second volume. It is now not common in Singapore, and it is several years since I saw a specimen on the island. It is found in a variety of situations from the heavy forest of the foothills down to the swampy jungle and secondary growth of the lowlands, and I have seen a specimen killed in a garden in Malacca town, but this is an unusual occurrence. It is also fond of bamboo clumps, and in Sumatra has been recorded as very common in swampy jungle along the sea-coast. The food consists largely of insects (grasshoppers, mantids, butterfly pupæ, etc.). It is usually met with in pairs, preferring to slip away through the dense undergrowth and creepers rather than to take flight, which it does in a weak manner, sailing to the next tree or cover. It is a curiously silent bird and I have no note of its voice.

The bird figured in the plate is a male from Gurun, Kedah.

Rhopodytes sumatranus

The Rufous-bellied Malkoha

Vol. II., p. 80.

Head, neck, throat and breast, grey, turning to maroon-chestnut on the lower abdomen and under tail coverts. Remainder of upper parts, including wings and tail, dark glossy bottle-green with blue reflections. Bill, bright green; rugose skin round the eye, orange to red.

Total length, about 16 in.; wing, 6 in.

Normally a forest bird, especially the damper forests, but sometimes seen in secondary growth and rarely in open country. In some districts it is numerous in the mangrove belt, a habitat in which it still persists on Singapore Island. There is no record of the nest and eggs from the Peninsula.

Rhinortha chlorophæa chlorophæa

Raffles's Green-billed Malkoha

Vol. I., p. 142.

Male: head, neck, back, wings, throat and breast, chestnut, richest on the upper parts; rump and tail, blackish with indistinct paler bars; tail with a broad white tip; abdomen, etc., dark grey to blackish brown.

Female: rather different. Head, neck and under parts, pale grey, washed with chestnut on the breast and abdomen. Back, wings and tail, chestnut, the tail with a subterminal black band and tipped with white.

Total length, about 13 in.; wing, 4.6 in.

Common in the lowland forests and less so in secondary growth. I have never seen it in mangrove. As Robinson aptly remarks, it looks more like a

