

# PIGEONS AND DOVES

## Order COLUMBIFORMES

Vol. I., p. 6.

AT high levels in the Malay Peninsula, with the exception of the big fruit-pigeon, *Ducula badia*, whose deep booming note is often heard, members of this order are not particularly abundant in individuals, or perhaps escape notice owing to the thickness of the vegetation. Species, however, are fairly numerous, and include representatives of three families—viz. *Trogonidæ* or fruit-pigeons, birds of arboreal habit, with the soles broadened, usually of bright colours; *Macropygiinæ* or cuckoo-doves, a sub-family of the *Columbidæ*, in which the soles are normal, the tail of twelve feathers, much graduated, and the colours rufous or brown, with metallic gloss; *Chalcophaps indica*, the emerald dove, the representative of the *Peristeridæ*, in which the tarsus is longer than in the other families.

### KEY TO THE SPECIES HERE DESCRIBED

- |   |   |   |   |   |
|---|---|---|---|---|
| 1 | { | With green in the plumage . . . . .   | 2 |   |
|   | { | With no green in the plumage . . . . .  | 8 |   |
| 2 | { | Green in plumage metallic . . . . .   |   | <i>Chalcophaps i. indica</i> , p. 21            |
|   | { | Green in plumage not metallic . . . . .   | 3 |   |
| 3 | { | Bill, slender, crown of head, crimson<br>or purple; male, white beneath . . . . .                             |   | <i>Ptilinopus jambu</i> , p. 11                 |
|   | { | Bill, coarser; crown of head, green<br>or grey; plumage beneath, mainly<br>green or yellowish green . . . . . | 4 |   |
| 4 | { | Tail feathers graduated; middle pair<br>sometimes pointed . . . . .   | 5 |   |
|   | { | Tail feathers nearly equal; middle<br>pair never pointed . . . . .  | 6 |   |
| 5 | { | Central tail feathers narrowed and<br>lengthened . . . . .  |   | <i>Sphenurus s. seimundi</i> , p. 12            |
|   | { | Central tail feathers not narrowed or<br>specially lengthened . . . . .                                       |   | <i>Sphenurus sphenurus robinsoni</i> ,<br>p. 14 |
| 6 | { | Bill, coarse; larger, wing, 7.5 in. or over   |   | <i>Butorion capellei capellei</i> , p. 15       |
|   | { | Bill less coarse; smaller, wing, 5.75 in.<br>or less . . . . .  | 7 |   |

7	}	Hard portion of bill reaching feathers of forehead, orbits broadly naked, base of mandible crimson . . . . .	<i>Treron c. curvirostra</i> , p. 15
		Hard portion of bill not reaching feathers of forehead; orbits not naked; base of mandible not crimson . . . . .	<i>Treron olax olax</i> , p. 16
8	}	Tail nearly square; larger, wing over 8.75 in. . . . .	<i>Ducula badia badia</i> , p. 16
		Tail much pointed; smaller, wing less than 7.25 in. . . . .	9
9	}	Outer tail feathers, grey; larger, wing more than 6.5 in.; breast feathers not bifurcated . . . . .	<i>Macropygia unchall unchall</i> , p. 18
		Outer tail feathers, rufous; smaller, wing less than 5.75 in.; breast feathers bifurcated . . . . .	<i>Macropygia ruficeps</i> , subsp., p. 19

*Ptilinopus jambu*

**The Pink-headed Fruit-Dove**

PLATE I (upper figure, male; lower, female)

*Columba jambu*, Gmel., *Syst. Nat.*, ii., 2, 1788, p. 784 (Java error= Sumatra).

*Ptilopus jambu*, Sharpe, *P.Z.S.*, 1887, p. 432; Salvad., *Cat. Birds, Brit. Mus.*, xxi., 1923, p. 80; Hartert, *Nov. Zool.*, ix., 1902, p. 539; Robinson, *Journ. Fed. Malay States Mus.*, i., 1905, p. 51; *id. op. cit.*, ii., 1909, p. 169.

**Malay Names.**—Punai jambu; punai gading.

**Description.**—*Adult male.*—Top of the head to level of the eyes, sides of the face, malar region and a narrow line across the upper throat, deep crimson-lake, more pinkish on the back of the crown; chin and middle of the throat, very deep maroon, almost black. Whole upper surface, deep grass-green, the feathers with inconspicuous bronzy edges; hinder part of ear coverts, sides of neck and abdomen, ivory-white, more yellowish on the sides of the chest and abdomen; on the middle of the breast a large patch of pale rose; sides, flanks, thighs and under wing coverts, greyish green; under tail coverts, deep chocolate. Tail, above, bronzy green, with a yellowish green apical band; below, blackish grey, with a pale grey tip. Lesser median and greater secondary coverts like the back. Primaries and their coverts, black, the outer webs bluish green, the outer five primaries somewhat scalloped on their outer webs towards the tips, the first primary abruptly attenuated for the terminal three-quarters of an inch; secondaries and tertials, bluish black on the inner webs, greenish on the outer, narrowly bordered towards the tips, as are also the inner primaries, with buffy white.

*Adult female.*—Top of the head and periocular region, dull purplish,

mixed with green; throat stripe, chocolate. Throat and breast, dark greyish green, rest of under parts greyish; the middle of the abdomen ivory-white; under tail coverts, cinnamon-buff. The first primary is not attenuated at the tip.

*Immature male*.—Like the adult female, but the crown green, the throat stripe paler and more diffused. The adult plumage is acquired by a gradual moult.

*Immature female*.—Duller than the adult, with the base of the bill dark.

**Soft Parts**.—Iris, rich chocolate, almost red, with a very narrow ring of whitish next the pupil; bill, rich orange; feet, dull maroon-red.

**Dimensions**.—*Male*: total length, 10·5 in.; wing, 5·75 in.; tail, 3·8 in.; tarsus, 0·8 in.; bill from gape, 0·75 in.; culmen, 0·6 in. *Female*: total length, 9·6 in.; wing, 5·2 in.; tail, 3·3 in.; tarsus, 0·75 in.; bill from gape, 0·7 in.; culmen, 0·6 in.

**Range in the Malay Peninsula**.—From Perlis southwards to Johore; Penang; small islands in the Straits of Malacca; Singapore; Tioman Island.

**Extralimital Range**.—Sumatra; Borneo; Banka and Billiton.

**Nidification**.—The nest and eggs of this bird have not been described. Other members of the genus build a nest of twigs of the usual flimsy type in trees, and lay one or, rarely, two glossy white eggs.

**Habits**.—This very beautiful fruit-dove is very local in its range, though wherever and whenever it does occur it is common, and at certain seasons it will probably be found at all the hill-stations, up to an altitude of about 4000 ft. It appears to perform local migrations, and at the Semangko Pass rest-houses has frequently been known to fly into the windows on dark and windy nights, while on occasion it has been captured at light both in Kuala Lumpur and Singapore. During the autumnal migration it is very common on the small islands and lighthouses in the Straits of Malacca, while Whitehead also records that it appears at Labuan during the S.E. monsoon (June), but it is not met with in other months. Smedley obtained a single female on Tioman Island in May. At times it appears to be not uncommon in the mangroves.

The bird is shy and retiring in its habits and is not social, like the green pigeons, keeping to the shelter of thick foliage, amongst which it is very difficult to discern. The note is a low soft "coo" which is not often uttered. Flight is swift and powerful, with a noisy clapping of the wings.

The male figured was obtained at Kuala Teku, Tahan river, Pahang, on 31st July, and the female from above the Semangko Pass, Selangor-Pahang boundary, on 24th February.

### *Sphenurus seimundi seimundi*

#### Seimund's Pintail Green Pigeon

*Sphenocercus* sp., Robinson, *Journ. Fed. Malay States Mus.*, ii., 1909, p. 168.

*Sphenocercus seimundi*, Robinson, *Bull. Brit. Orn. Club*, xxv., 1910, p. 98 (Semangko Pass, Selangor-Pahang boundary); Robinson and Kloss, *Ibis*,

1910, p. 672, pl. x.; Robinson, *Journ. Fed. Malay States Mus.*, v., 1914, p. 25 (Gunong Kerbau).

**Malay Name.**—Punai gunong.

**Description.**—Tail feathers much graduated, centre pair much elongated and pointed; bill very stout; region between cere and eye, naked.

*Adult male.*—General colour, green above, tinged with ochraceous on forehead, brighter on rump; a flush of dove-grey on the mantle; angle of wing, black, the lesser inner coverts, maroon, the outer and greater wing coverts, black, the latter edged with pale yellow towards the tips, forming a double bar on the wing, with similar edges to the secondaries. Primaries and secondaries, slaty black, the primaries, except the first and the innermost, finely beaded on the outer web, with yellowish white; inner aspect of wing, pale slate, the axillaries and under wing coverts, darker slate. Middle pair of tail feathers, uniform slate, gradually darkening to the tips, remainder, slate, tinged with greenish at the base; median area, blackish, tips, slate; lower aspect, blackish, with pale slate tips. Beneath, throat and breast as the back; sides of the neck with a patch of pinkish ochraceous connected with a flush of the same colour on the breast; lower abdomen, *pure white*, the flanks and sides of the vent and thighs, dark green, with broad bright yellow tips; under tail coverts, bright yellow, dark olive-green at the extreme base, and with narrow dark green shaft stripes.

*Adult female.*—Like the male, but the tail shorter, a darker green above; no maroon shoulder patch or pinkish ochraceous neck patches; under tail coverts with the dark green centres much more extensive, carried down as wedges, nearly to the tips of the feathers.

**Soft Parts.**—Iris, outer ring, pink, inner, heliotrope; tip of bill, greenish lead, the remainder, the cere and the orbital skin, purplish cobalt, darker above the eye; feet, crimson-lake; claws, lead-colour.

**Dimensions.**—Total length, about 11.5 in.; wing, *male*, 5.9 to 6.2 in.; *female*, 5.9 to 6.1 in.; tail, *male*, 6 to 6.5 in.; *female*, 5.5 to 5.8 in.; tarsus, 0.7 in.; bill from gape, 1 to 1.05 in.; culmen, 0.85 in.

**Range in the Malay Peninsula.**—The mountains of the main range from Gunong Kerbau, Perak, to the Semangko Pass, Selangor, also, on one occasion, on Pulau Rumpia, one of the Sembilan Islands, off the Perak river estuary.

**Extralimital Range.**—The bird described is apparently indigenous to the Malay Peninsula. A recently described form from the mountains of Annam, *Sphenocercus seimundi modestus*, is, however, very closely allied, differing only in the rather lighter colour above, and the absence of the pinkish ochraceous patches on the sides of the neck.

**Nidification.**—Unknown.

**Habits.**—We know extremely little of the habits of this handsome green pigeon, which has been obtained only at three localities. At the Semangko Pass it is occasionally not uncommon, flying across the valley from one hill to another usually at a very great height, so that it is generally impossible to obtain specimens. Our Dyak collectors found it not rare on Gunong Kerbau, at a height of between 4500 and 5000 ft., and obtained a small series from high trees on which they were feeding. Curiously enough, the first specimen

ever obtained was secured from amongst a flight of *Treron vernans*, on a small island some miles out to sea. Possibly, like the mountain imperial pigeon, this species also resorts to the sea at certain seasons. We have, however, obtained no further specimens at low elevations.

*Sphenurus sphenurus robinsoni*

**The Malayan Wedge-tailed Green Pigeon**

*Sphenocercus robinsoni*, Ogilvie-Grant, *Bull. Brit. Orn. Club*, xix., 1906, p. 12 (Gunong Tahan); id. *Journ. Fed. Malay States Mus.*, iii., 1908, p. 53; Robinson, *Journ. Fed. Malay States Mus.*, ii., 1909, p. 168.

**Malay Name.**—Punai bukit.

**Description.**—Tail, wedge-shaped, the middle feathers not specially elongated or pointed; space between cere and eye feathered.

*Adult male.*—Head, light yellowish green; mantle, washed with grey; back, scapulars, rump and upper tail coverts, darker olive-green; angle and inner margin of wing and scapulars, dark maroon. Primaries and secondaries, slaty black, very faintly edged with whitish, but with no conspicuous bars of yellow on the wing; inner aspect of wing, grey, the third primary conspicuously scooped on the inner web; axillaries and under wing coverts, darker grey. Tail feathers, bronzy olive-green, all but the centre pair with a broad sub-terminal black band viewed from above; inferior aspect blackish, with a paler grey tip. Beneath, olive-green, more yellow on the middle of the abdomen; the flanks and thighs dark green, with pale yellow edges to the feathers; under tail coverts reaching the tips of the tail feathers—the lateral ones with dark green centres and pale yellow edges, the larger ones pale cinnamon towards the base, pale primrose-yellow towards the tips, and at the edges usually with a dark green stripe along the shaft.

*Adult female.*—Like the male, but rather lighter above, with no flush of grey on the mantle or maroon on the scapulars or shoulders. Primaries more brownish, under tail coverts with heavier green centres and no cinnamon tint on the longest ones.

*Immature male.*—Have the maroon on the shoulders and the cinnamon on the under tail coverts reduced.

*Immature female.*—Indications of pale yellow fringes to the feathers of the upper parts; median and greater wing coverts with pale yellow edges, forming a distinct double bar on the wing.

**Soft Parts.**—Iris, pale blue, the outer ring, pink; bill, purplish mauve, greenish horn at tip; feet, lake; soles, yellowish.

**Dimensions.**—Total length, about 12 in.; wing, 6·5 in.; tail, 4·7 to 5; tarsus, 0·9; bill from gape, 0·9 to 1; culmen, 0·7 in. Females slightly smaller, with a shorter tail.

**Range in the Malay Peninsula.**—Mountains of Perak, Selangor and Pahang.

**Extralimital Range.**—Confined to the Malay Peninsula. Related to forms

from Sumatra and Java, and more remotely to races from the Himalayas and French Indo-China.

**Nidification.**—Unknown.

**Habits.**—No more is known about this than the preceding species. It has been met with sparingly from Maxwell's Hill to the summit of Gunong Ijau, in the Larut Hills, is fairly numerous near the summits of Gunong Ulu Kali and Gunong Mengkuang Lebar, in Selangor, and on my first visit to Gunong Tahan was abundant for a few days at moderate elevations, 3000 to 4500 ft., but has never been obtained since. Both this and the preceding bird feed on lofty trees, growing on steep slopes, and in the Malay Peninsula are therefore rarely seen, and, even when seen, with difficulty shot and retrieved. It is possible that they are, in certain areas, as common, or nearly as common, as their representative forms in Java and Sumatra.

The present species has a rather deep whistling "coo," varied by a curious grunting note. Flight is exceedingly swift and powerful—much more rapid than the smaller green pigeons of the genus *Treron*. On the two or three occasions on which I have fallen in with them the parties have been small in number, never exceeding a dozen. It may be hoped that a revival of interest in the ornithology of the Malay Peninsula may elicit further specimens and more information about the very interesting birds of this genus—two of the most outstanding members of our avifauna.

*Butreron capellei capellei*

**The Larger Thick-billed Green Pigeon**

**Malay Names.**—Punai berkok lëngguak, lëngkua.

This is the biggest of all the green pigeons, distinguished at a glance by its size, large head and coarse bill, and by the pale orange patch on the breast of the male. It keeps to heavy jungle and flies in large flocks, feeding on very high trees. It is not often seen at any elevation, but, like many other species, makes use of the Semangko Pass as a highway from one feeding-ground to another, and is occasionally seen on Fraser's Hill.

It will be described in detail in Volume III. of this work.

*Treron curvirostra curvirostra*

**The Smaller Thick-billed Green Pigeon**

**Malay Name.**—Punai daun.

This is the green pigeon that, until recent years, has been more generally known as *Treron nipalensis*. In the male the head is grey, the neck, all round, green; the back scapulars and wing coverts are chestnut. There is a bright yellow bar on the wing, and the under surface is green, with the under tail coverts cinnamon. The female is a duller bird; the chestnut of the back is replaced by green, and the under tail coverts are whitish, centred with dark

green. Both sexes have a deep crimson patch at the base of the lower mandible, and the bare skin round the eye of an apple-green colour. Total length, about 10 in., a little smaller than the common pink-necked green pigeon of the coastal zone (Vol. I., p. 9).

This green pigeon is a jungle- and orchard-loving species, often found in numbers on the banks of the big rivers, but not coming much into very open country. It is occasionally, but not often, found on the hills, generally in February or March, sometimes migrating at night in large numbers through the Semangko Pass, Selangor-Pahang boundary. The late Mr C. J. Wilson obtained it near the summit of Penang Hill.

It and the more northern subspecies, *Treron curvirostra nipalensis*, will be fully described in Volume III. of this work.

*Treron olax olax*<sup>1</sup>

**The Little Green Pigeon**

Vol. I., p. 11.

**Malay Name.**—Punai siul.

Male, with the head and neck grey, the rest of the upper surface, maroon; the tail slaty; under surface, green, with an orange patch on the breast and the under tail coverts chocolate. Female, mainly green, the crown grey, the under tail coverts cinnamon, with the bases and centres dark green. The smallest of the family, total length about 8 in.

Fairly common in the foothills throughout the Peninsula, as far north as Peninsular Siam, but met with in the high hills, at the Semangko Pass only, in February 1904, when it flew to light in company with *Treron curvirostra* and *Ptilinopus jambu*.

*Ducula badia badia*

**The Mountain Imperial Pigeon**

*Columba badia*, Raffles, *Trans. Linn. Soc.*, xiii., 1922, p. 317 (Sumatra).

*Carpophaga badia*, Sharpe, *P.Z.S.*, 1887, p. 443; Salvad., *Cat. Birds, Brit. Mus.*, xxi., 1893, p. 218; Hartert, *Nov. Zool.*, ix., 1902, p. 539; Robinson, *Journ. Fed. Malay States Mus.*, i., 1905, p. 50.

*Ducula badia*, Butler, *Journ. Straits Branch, Roy. Asiat. Soc.*, No. 32, 1899, p. 29.

*Ducula badia badia*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 32; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 202.

**Malay Name.**—Pergam bukit.

<sup>1</sup> There is still much doubt as to the proper generic name for this and three other Malayan species of green pigeon—viz. *vernans*, *bicincta* and *fulvicollis*—and, of course, their subspecies. That for *curvirostra* is not in question. It is generally admitted that *Osmotreron*, hitherto in general use, is inadmissible, but opinion is divided as to whether the generic name, *Dendrophassa*, should be used for these four species, or whether they should be united with *curvirostra* under the older name *Treron*. Readers must be prepared for much variation in the nomenclature under which these birds are referred to.

**Description.**—*Adult male.*—Sexes alike. Top and sides of the head, lavender-grey, the hind neck, vinaceous; mantle, upper back, lesser and median wing coverts, chestnut-maroon, brighter on the edges of the feathers, the bases blackish; lower back, much darker maroon, the upper tail coverts almost black. Primaries, secondaries and greater wing coverts, blackish brown, browner on the inner secondaries and wing coverts, the latter obscurely edged with maroon. Tail above, blackish brown, with a broad terminal band, dark grey; beneath, dark ashy, the terminal band much paler. Beneath, chin and throat whitish, rest of the under surface, vinaceous grey, lower part of belly and thighs tinged with rusty buff; under tail coverts, pale whitish buff.

*Immature.*—Much less vinaceous on the head and neck, the lower back dark slaty grey, with no maroon tinge, and the wing coverts lighter, edged with a rusty brown, not maroon.

**Soft Parts.**—Iris, white to ashy, "always with a dark grey outer ring" (*Jacobson*), orbital skin, crimson-lake; bill and cere, pinkish maroon, the tip, whitish horn; feet, pinkish claret; claws, horn.

**Dimensions.**—Total length, 16 to 17 in.; wing, 9 to 9.5 in.; tail, 7 to 7.5 in.; tarsus, 1 in.; bill from gape, 1.15 in.; culmen, 0.9 in. The sexes do not differ materially in size.

**Range in the Malay Peninsula.**—Not recorded from Peninsular Siam; from N. Perak to Southern Selangor and in Malacca, but not recorded from Negri Sembilan, Johore, or any of the islands; Pahang.

**Extralimital Range.**—The extreme south of Tenasserim and certain of the islands of the Mergui Archipelago, Sumatra, Borneo and Java. The locality Yunnan, recorded by Ogilvie-Grant (*Ibis*, 1900, p. 605), is an error, Captain Wingate's specimens proving to be *D. b. griseicapilla*.

**Nidification.**—This handsome pigeon breeds on most of the high mountains of the Malay Peninsula above 4000 ft., generally near the summits or ridges, the season being from December to February. The nest is a very unsubstantial one, consisting of only a few sticks, and is usually placed in a stunted tree, sometimes among the leaves of a pandanus. There is almost invariably only one egg, a regular oval in shape, white, very slightly pitted and somewhat glossy. The dimensions average 1.72 by 1.28 in.

**Habits.**—This imperial pigeon is the commonest of its species on the higher mountains, and occurs on nearly all the hills of the main range, on the Larut Hills and on Gunong Tahan in Pahang, probably, also, on Mount Ophir on the Malacca-Johore border, but not apparently on Kedah Peak. At certain seasons, from March onwards, it visits the coasts, as the Malays say, in search of salt, and then occurs in large numbers in the mangrove swamps from the neighbourhood of Penang south to Selangor, and at one time to Malacca. It is then, especially in the Perak estuary and near Tanjong Karang, in Selangor, trapped in large numbers in wicker cages, baited with fresh water.

In the hills the birds are much in evidence, flying in small parties of four or five from one summit to another, usually at a great height. The food is fruit and seeds, often of a very large size, swallowed whole, but in the mangroves



leaves and shoots and unopened buds are also largely eaten. The call, constantly heard in the early morning, especially on a misty day, is a resonant booming note, deeper than that of the green imperial pigeon, which has great carrying power.

For the pot, the bird is indifferent, the flesh being dry and often rather bitter, perhaps owing to some item in its food.

*Macropygia unchall unchall*

**The Larger Malaysian Cuckoo-Dove**

*Columba unchall*, Wagler, *Syst. Av.*, *Columba*, sp. 38, 1827 (Java).

*Macropygia sp.*, Sharpe, *P.Z.S.*, 1887, p. 443.

*Macropygia leptogrammica*, Salvad., *Cat. Birds, Brit. Mus.*, xxi., 1893, p. 341; Robinson, *Journ. Fed. Malay States Mus.*, i., 1905, p. 54; Ogilvie-Grant, *op. cit.*, iii., 1908, p. 53.

**Malay Name.**—Tekukor api besar or tekukor api gunung.

**Description.**—*Adult male.*—Top and sides of the head, buffy grey, strongly shot with greenish and amethystine reflections; back and sides of the neck with the feathers blackish at the bases, their tips strongly metallic greenish and amethystine, with ochraceous bars. Mantle, back, rump, upper tail coverts and lesser and median wing coverts, blackish, irregularly barred with dark chestnut-rufous. Primaries, secondaries and primary coverts, blackish brown, the primaries, except the outermost, with faint whitish edges to the outer webs. Inner aspect of wing, grey, the under wing coverts and axillaries blackish grey, faintly tipped with chestnut. Three outer pairs of tail feathers, greyish, with a broad diagonal subterminal bar of black, the next two pairs blackish, with faint indications of rufous chestnut bars, the median pair regularly barred with black and dull rufous, the rufous bars bent towards the tip of the feather at the shaft. Beneath, chin and throat, pale vinaceous buff; chest and breast, vinaceous, each feather with two bars of black and strongly shot with amethystine reflections. Sides and flanks mingled vinaceous and grey; middle of the belly and vent, pale ochraceous buff; under tail coverts, pale cinnamon.

*Note.*—With advancing age birds tend to become more and more uniform beneath, losing the dark bars, but the series of local Malayan specimens available for study is limited.

*Adult female.*—Forehead and throat, whitish buff; crown and nape, blackish grey with purplish amethystine reflections. Rest of the upper surface as male, but the rufous chestnut bars narrower and more irregular. Wings as in the male. Tail, with a rufous spot on the inner web of the outer three pairs of feathers, largest on the outer pair. Under surface, buff, thickly barred with brownish black, less so on the middle of the abdomen, the breast with a faint greenish lustre. Under tail coverts as in the male.

*Immature.*—Always more barred and with more rufous rusty on the base of the tail feathers than in the adults.

*Nestling.*—Almost naked, thinly clad in golden-buff down.

**Soft Parts.**—Iris, amethystine, with an inner ring of white; eyelid, crimson, the orbital skin, purplish slate; bill, black; claws, brownish black.

**Dimensions.**—*Male*: total length, 15.5 in.; wing, 6.8 to 7 in.; tail, 7 to 7.2 in.; tarsus, 0.9 in.; bill from gape, 0.85 to 1 in.; culmen, 0.7 in. *Female*: rather smaller; wing, 6.5 in.

**Range in the Malay Peninsula.**—Along the main range from South Perak to South Selangor and on the Larut Hills. Not yet recorded from Pahang.

**Extralimital Range.**—High mountains of Java, Sumatra, and probably Mount Muleyit in Tenasserim. A larger form occurs throughout the Himalayas and is represented in French Indo-China, South China and Hainan; but the species is so variable that subspecific separation is difficult, and in some cases fallacious.

**Nidification.**—In the high mountains of Selangor breeds from December to March, building a flimsy nest of sticks in a sapling ten or twelve feet from the ground, sometimes on the crown of a pandanus, usually near the crest of a ridge. There is rarely more than one egg, which is a regular oval, evenly pointed at both ends, slightly glossy and somewhat pitted, pearly white in colour and averaging 1.30 by 0.97 in.

**Habits.**—Decidedly rare in Malaya, being found only on the higher parts of the Larut Range, on Cameron's Highlands, at above 4000 ft., and at about the same elevation on Gunong Ulu Kali and Gunong Mengkuang Lebar, in Selangor. It is met with in parties of three or four, feeding on the ground, amid tangled vegetation, usually in damp places. When alarmed it takes to flight, with a noisy clapping of the wings, but soon settles again. The note is a very deep "coo" ending in a curious kind of gurgle.

*Macropygia ruficeps*, subsp.

**The Little Malayan Cuckoo-Dove**

*Macropygia ruficeps* (nec Temm.), Stoliczka, *Journ. Asiat. Soc. Bengal*, xxxix., 1870, p. 331 (Prov. Wellesley); Butler, *Journ. Straits Branch, Roy. Asiat. Soc.*, No. 32, 1899, p. 30; Hartert, *Nov. Zool.*, ix., 1902, p. 540; Stuart Baker, *Ind. Pigeons and Doves*, 1913, p. 247.

(?) *Macropygia assimilis*, Hume, *Stray Feath.*, ii., 1874, p. 441 (Tenasserim Hills, N. E. of Moulmein); *id. op. cit.*, viii., 1879, pp. 68, 110.

**Malay Name.**—Tekukor api.

**Description.**—*Adult male.*—Tail, very much graduated; bill, relatively long and slender; top and sides of the head, cinnamon-rufous, rest of upper surface, dark chestnut-brown, paler on the mantle and upper tail coverts, the feathers edged with paler rufous, those of mantle obscurely barred and shot with metallic greenish and lilac reflections. Primaries and secondaries, brownish black, all except the outermost primary broadly edged on the inner web with chestnut, the under wing coverts and axillaries, chestnut. The two centre pairs of tail feathers, dark sienna-brown, remaining four outer pairs, rufous, with a black diagonal subterminal band extending up the feather

towards the base on the inner web. Beneath, cinnamon-chestnut, paler on the throat, darker on the sides and flanks; the feathers of the breast, bifid, broadly tipped with whitish buff and with a black spot on either web, more conspicuous in younger specimens.

*Adult female*.—Top of head, chestnut-brown; rest of upper surface, dark brown; nape, sides of the neck and mantle, barred and freckled with buff. Throat, pale rust-colour; breast, rufous chestnut, with large black spots on either web of each feather. Abdomen, dull yellowish ochraceous brown. Flanks, chestnut. Other parts as in the male, but the wing coverts more broadly edged with rufous chestnut.

*Immature male*.—At first like the female, gradually assuming the plumage of the adult; the amount of whitish buff on the tips of the pectoral feathers apparently increasing continuously with age.

**Soft Parts**.—"Iris, varied, sometimes grey, sometimes grey with an inner ring of blue, others pearly white; bill, pinkish red or pale purplish brown; legs and feet, dark brownish red" (*Davison*).

**Dimensions**.—Total length, 10.5 to 11 in.; wing, 5.3 to 5.6 in.; tail, 5.7 to 6.2 in.; tarsus, 0.7 in.; bill from gape, 0.6 in.; culmen, 0.5 in.

**Range in the Malay Peninsula**.—From Province Wellesley to Southern Selangor and Negri Sembilan and in Pahang. Not recorded from Malacca territory, Johore, or from any of the adjacent islands.

**Extralimital Range**.—The species was originally described from Java, and races from the islands farther east, and from Borneo, Sumatra and Tenasserim, have all received names. The bird is found also in French Laos and in N. Siam.

**Nidification**.—Wray records a nest found high in the Larut Hills as consisting of a few twigs on the top of a small palm about five feet high, in other cases the nest is described as a small pad of moss. Stuart Baker states that Mr Kellow found the bird breeding in the hills near Taiping, in January and February and, rarely, in May, the clutch consisting of one egg, or very rarely two. The eggs are ellipses in shape, of a very pale cream or *café-au-lait* colour, and the average size is given as 1.17 by 0.83 in.

**Habits**.—This cuckoo-dove is fairly common in heavy jungle throughout the central parts of the Malay Peninsula, though it has not yet been recorded from any part of Peninsular Siam. It has a wide range in altitude, from 200 ft. to over 5000 ft., but probably moves up and down a good deal with the ripening of certain berries. It is in the main a ground-feeder, and like other members of the genus is very fond of chillies, and will invade Sakai and Malay clearings where these are grown. It travels in small parties of five or six individuals, and when feeding on the ground continually gives utterance to a very peculiar and monotonous "*coo*," whose sameness is quite different from any other local pigeon. When alarmed, flight is extremely powerful and rapid, accompanied by much clapping of the wings, but is usually low, and never very long continued. The species is one of the best of its family for the table, but, like so many tropical game birds, the flesh is apt to be rather dry.

*Note.*—The bird from the Malay Peninsula does not precisely agree with any of the named forms, but the differences from the Sumatran bird on the one hand and from the duller browner Tenasserim race (*M. v. assimilis*) are not great. For the present I leave it under a binomial appellation.

*Chalcophaps indica indica*

**The Bronze-winged or Emerald Dove**

Vol. I., p. 12.

**Malay Names.**—Punai tana, punai dekut, lembok.

*Male.*—Forehead, bluish white, becoming lead-colour on crown; back, metallic bronzy brown, with two grey bands on rump; scapulars and wings, bronzy emerald-green, with a white patch at angle of wing; beneath, purplish vinous.

*Female.*—Beneath, brownish chestnut; the sides of the neck freckled with greyish, the mouth more chestnut; no white patch on the shoulder. Total length, 9 to 10 in.

This dove will probably be found on all the hills and hill stations of the Malay Peninsula quite abundantly, at any rate in localities not frequented by the aboriginal Sakai, at lower elevations up to about 3000 ft., but distinctly rarer higher up. It has been obtained at nearly 5000 ft. on Gunong Mengkuang Lebar, on Bukit Kutu, and in the neighbourhood of Fraser's Hill, Selangor. On Cameron's Highlands it is rare or absent, but round the Tea Gardens and between them and Maxwell's Hill in the Larut Hills it is numerous. We did not meet with it on Kedah Peak, but it is known from the hills of Penang Island and Terutau. On Kao Luang, in Nakon Sri Tammarat, Mr Pendlebury found it at nearly 5000 ft., and on Gunong Tahan it was not uncommon between 4000 and 4500 ft.