

BROADBILLS

Order EURYLAIMIFORMES

Vol. I., pp. 158-165.

THE broadbills have already been characterized in the first volume of this work, and there is no need to repeat what has there been said. Of the eight forms that are recorded from the Malay Peninsula, six may be met with at times in the hill country, and, of these, two are hardly known at a lower elevation than 2500 ft., and then only at the foot of higher mountains.

KEY TO THE MALAYAN SPECIES OF BROADBILLS

1	{	Nostrils quite concealed by plumes; bill not flattened; colour mainly green; tail decidedly shorter than wing	} <i>Calyptomena viridis continentis</i> , p. 118
		Nostrils quite bare; bill much flattened	2
2	{	Tail much longer than wing; colour mainly green	} <i>Psarisomus dalhousiæ</i> , p. 118
		Tail, at most, equal to wing; colour not green	3
3	{	With a gorget of glistening feathers, sometimes interrupted; plumage beneath, lavender-grey or whitish	} 4
		With no glistening gorget; plumage not lavender beneath	5
4	{	Crown of head, purer grey	} <i>Serilophus lunatus rothschildi</i> , p. 120
		Crown of head, more clay-colour	} <i>Serilophus lunatus stolidus</i> , p. 121
5	{	Bristles at gape long and conspicu- ous; plumage, red and black	} <i>Cymbirhynchus macrorhynchus</i> <i>malaccensis</i> (Vol. I., p. 160)
		Bristles at gape absent or feeble; with no bright red in plumage	6
6	{	Larger, bill very coarse; a bare space beneath eye	} <i>Corydon sumatranus sumatranus</i> , p. 121
		Smaller, bill finer; space beneath eye feathered	7
7	{	Head, black	} <i>Eurylaimus ochromalus ochromalus</i> (Vol. I., p. 163)
		Head, purplish claret-coloured	} <i>Eurylaimus javanicus harterti</i> , p. 121

*Calyptomena viridis continentis***The Malay Green Gaper or Broadbill**

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Though common on the lower slopes of the mountains, almost everywhere in the Malay Peninsula, this gaper does not attain an altitude of more than 3000 ft. Waterstradt is said to have obtained it at 2000 to 5000 ft. on Gunong Tahan, but the higher figure is certainly erroneous.

Mr Seimund met with it in some numbers on Gunong Kledang, near Ipoh, at 2700 ft.

*Psarisomus dalhousiæ***The Long-tailed Broadbill**

PLATE 9

Eurylaimus dalhousiæ, Jameson, *Edinburgh Nat. Phil. Journ.*, xviii., 1835, p. 389 (North India).

Psarisomus dalhousiæ, Sclater, *Cat. Birds, Brit. Mus.*, xiv., 1888, p. 458; Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), ii., 1890, p. 289; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 11; Butler, *Journ. Straits Branch, Roy. Asiat. Soc.*, No. 32, 1899, p. 23; Oates and Reid, *Cat. Birds' Eggs, Brit. Mus.*, iii., 1903, p. 161, pl. 2, fig. 16; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iii., 1926, p. 472, pl. 7.

Malay Name.—Burong hujan hujan ijau or burong tadah hujan ijau.¹

Description.—*Adult male.*—A narrow, frontal line, anterior lores and the extreme point of the chin, greenish yellow; feathers around and below the eye, brighter yellow; behind the eye and in front of the ear coverts a patch of elongated feathers, pale yellow, greenish at the tips; on each side of the neck, but separated from the above, a larger patch of similar feathers, more yellowish at the base and whitish at the tips, connected on the lower throat by a narrow line of silky white feathers, sometimes tinged with blue, and on the nape by a similar line of blue, separating the black of the head from the green of the mantle. On the middle of the crown, a large patch of silvery cobalt, the hinder feathers rather broadened and elongated; rest of the head and nape, ear coverts and sides of the head, behind the eyes, deep lustrous black; rest of upper surface, including scapulars, outer webs of secondaries and their tips, deep grass-green; primary coverts, black, green on their outer webs; primaries, black, their outer webs shining cobalt-blue at the bases, then dark dull blue, green at the tips; inner aspect of wing, black, with a white speculum towards the base of the primaries, formed by white spots of increasing extent on the inner webs; under wing coverts blackish, edged and tipped with dark green; tail above, blue, brighter at the tip, all feathers, except the central pair, with their inner webs, blackish, the outermost edged with green; lower surface of tail, black. Throat, bright chrome-yellow; rest

¹ Being an almost purely montane species, this bird is known to few Malays; it is, however, generally, recognized as a broadbill.

of the lower surface, pale green, more or less tinged with blue on the belly ; thighs, dark grey, feathers tipped with green.

Adult female.—Like the male, but with a concealed spot on the nape formed of feathers with bright yellow bases and narrow blue tips.

Immature.—The whole of the head dark green, with a slightly brighter green frontal band, the neck patches represented by a few very narrow and pointed pale yellow feathers. Beneath, dull bluish green ; throat, brighter yellowish green.

Soft Parts.—Not recorded of the Malayan form. Of the almost identical Sumatran race: iris, greenish, "iridescent green, or pink mixed with green or greyish brown or greenish grey or grey, with yellowish grey inner ring" (*Jacobson*); orbital skin, yellowish green; bill, green, the tip, robin's-egg blue; lower mandible, mostly chrome; feet, dull apple-green. *Immature*: "upper mandible, blackish, or blackish with a green cast; edges, yellowish green; lower mandible, light greyish green" (*Jacobson*).

Dimensions.—Total length, 10 to 11 in.; wing, 3.75 to 4 in.; tail, 4.7 to 5.6 in.; tarsus, 1 to 1.1 in.; bill from gape, 1.15 in.; culmen, 0.7 in.

Range in the Malay Peninsula.—From Central Perak to Southern Selangor, and in Pahang.

Extralimital Range.—Of very wide range; from the Western Himalayas to Assam, and south through Manipur to Tenasserim, Western Siam and French Indo-China, Sumatra and Borneo.

Throughout its range this beautiful broadbill is very constant in its characters, and differences in coloration between the insular and mainland birds do not hold when large series are examined. Sumatran birds have, on average, longer tails than Himalayan ones, and rather shorter wings. Malayan birds are intermediate, and individual specimens can be referred indifferently to either race. It is perhaps best, therefore, to disregard any subspecific distinctions.

Nidification.—Not recorded from the Malay Peninsula. In Assam, breeds from April to as late as the end of August, and builds the usual, untidy pear-shaped nest of the family, always near water. The clutches vary from four to eight in number of eggs, which are very variable in type, "sometimes pure white; others are white boldly and handsomely blotched with light or deep reddish brown; others vary from the palest cream or pink to warm salmon-pink with the same variation in the blotches." Average size, 1.08 by 0.76 in. (*Baker*).

Habits.—This bird is recorded from the Larut Hills, from Gunong Kerbau, Fraser's Hill and the region round the Semangko Pass, and Gunong Menang Gasing in the Ulu Langat district of Selangor, and also from comparatively low elevations on Gunong Tahan. Elsewhere it has not been met with below 2700 ft., and is commonest about a thousand feet higher. The situations affected are always in deep jungle, often on the sides of small watercourses or gullies or on the edges of windfalls, where there are many creepers on the trees, up which the bird climbs, its actions being like that of a parrot or of the barbet, *Psilopogon pyrolophus*. The diet is mainly insects, these being sometimes, but not often, caught on the wing, but fruit and berries are also eaten. The only sound I have heard it utter is a loud, clanging call, but Baker states that

"it has a soft, chirring note when feeding, a not unmusical but rather shrill whistling call, and several harsh tin-kettley notes when annoyed or disturbed."

The bird figured, three-quarters natural size, is a female from Gunong Menang Gasing, Selangor.

Serilophus lunatus rothschildi

Rothschild's Broadbill

Serilophus rothschildi, Hartert and Butler, *Bull. Brit. Orn. Club*, vii., 1898, p. 50; id. *Nov. Zool.*, v. 1898 (Gunong Ijau, Perak); Butler, *Journ. Straits Branch, Roy. Asiat. Soc.*, No. 32, 1899, p. 22; Hartert, in Wytzman, *Gen. Av., Eurylæmid.*, 1905, p. 5, pl. 5; Robinson, *Journ. Straits Branch, Roy. Asiat. Soc.*, No. 57, 1910, p. 13; id. *Journ. Fed. Malay States Mus.*, ii., 1909, p. 185.

Malay Name.—Burong tada hujan or burong hujan hujan.

Description.—*Adult female.*—Forehead and anterior part of the crown, bluish grey, darkening to dull brownish grey on the occiput and mantle; back, rump and upper tail coverts, chestnut, duller on the back; starting in front of the eye, and reaching as far as the hind neck, a glossy, black, superciliary streak broadening posteriorly, the feathers somewhat elongate; lores, grey; ear coverts, grey, faintly tinged with brown, a white ring round the eye; first primary, black, faintly white on the shaft at the extreme tip; third and fourth primaries, with the tips broadly white on the inner web, much truncated, with the ends of the shafts projecting; fifth primary with hardly any white tip; remaining primaries and secondaries, glossy black on the outer webs, the ends emarginate, faintly white and blue on the shafts, and with an increasingly large tip of chestnut on the inner web; wing, externally, with a bluish grey speculum across the base of the quills; edge of the wing, grey, under wing coverts, blackish, axillaries, pale grey; inner aspect of quills, blackish, a diagonal bar of white across the bases, formed by an increasingly large spot on the inner webs. Tail feathers, black, broadly tipped with white, the white extending farther up as a narrow edging on the outer webs. Under surface, delicate lavender-grey, paler on the throat, whiter on the abdomen and under tail coverts. A narrow gorget on the breast, formed of glistening silver tips to the feathers; thighs, glossy black.

Adult male.—Like the female, but without the gorget.

Immature.—Not materially different from the adult, but the occiput and mantle darker and browner, and the chestnut on the inner secondaries and tertials duller and less extensive.

Soft Parts.—"Iris, brown or dark, spotted with green; orbital skin, greenish yellow; bill, bluish grey, the base, Indian yellow, the tomia, whitish; the feet, yellowish olive or yellowish green" (*Kloss*); "claws, milky blue" (*A. L. Butler*).

Dimensions.—Total length, 6 to 6.5 in.; wing, 3.4 to 3.6 in.; tail, 2.5 to 2.7 in.; tarsus, 0.75 to 0.8 in.; bill from gape, 0.95 in.; culmen, 0.55 in.

Range in the Malay Peninsula.—From Temengoh in North Perak, south to the mountains of Southern Selangor; peculiar to the Malay Peninsula.

Extralimital Range.—Closely allied races occur in Peninsular Siam, Tenasserim, Yunnan, South China, Hainan and Sumatra. The differences are, in all cases, small and unimportant.

Nidification.—The nesting habits of the Malayan race are unknown, but are certain to resemble those of the typical form from Tenasserim, which in turn are described by Baker as like those of the family, though, as might be expected, the nests are smaller and neater, and are often in quite low bushes. In Tenasserim the breeding season is from March to as late as July. "The eggs number four or five, and are white very faintly tinged with cream, sparsely speckled at the larger end with tiny spots of reddish purple, at the smaller end the specks are even less numerous." Average dimensions, 0.93 by 0.68 in.

Habits.—At Temengoh, the northern limit of its range, this bird has been obtained at an altitude not exceeding 500 ft., but in localities farther south it ranges from 2000 to 4000 ft., but not higher. So far as our experience goes, it is found only in forest where there is a large amount of bamboo, in this respect agreeing with the woodpecker, *Gecinulus*, and the babbler, *Turdinus loricatus*. It is, like other members of the genus, a sluggish and rather stupid bird, associating in pairs or small parties, searching the boughs and leaves for insects, sometimes hovering and catching its food on the wing. Butler says that the note is a clear little whistle, like "pee-u," but it is certainly a quieter and generally more unobtrusive bird than most of its relatives, which is perhaps the reason that it is so little known in the Malay Peninsula, the examples that have been obtained to date numbering less than a score.

Note.—In the mountains of Bandon and Trang, Peninsular Siam, a transitional form between *S. t. rothschildi* and the typical race, *S. l. lunatus*, is met with. It differs from the latter in having deeper-coloured inner secondaries and tertials, and less fulvous ear coverts, and from the former by the more fulvous, less grey crown and ear coverts, and paler rump and secondaries. It has been named *S. lunatus stolidus*, R. and K.

Corydon sumatranus sumatranus

The Dusky Broadbill

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This broadbill occasionally strays as high as 3000 to 4000 ft., and has been met with on Bukit Kutu and Fraser's Hill in Selangor, on the Batang Padang mountains in South Perak, and on the Negri Sembilan hills. The general dark coloration, relieved only by the bright, flame-coloured patch on the back and the pinkish horn bill, readily distinguish it from all its relations.

Eurylaimus javanicus harterti

Van Oort's Banded Broadbill

Vol. I., p. 164.

Of similar distribution to the preceding, and also of rare and accidental occurrence in the hills. General coloration, purplish claret; the longer scapulars, pale lemon-yellow.