### Order TROGONES

Vol. I., p. 129.

Trogons are fairly numerous in the mountainous parts of the Malay Peninsula, and one species, abundant on the hills, is not found at all in the low country, though others only just attain an altitude of 2500 ft., and will be described in full, later; the following key will suffice for the identification of all species that will be met with in or near the hill stations.

### KEY TO THE SPECIES

(	Abdomen, yellow or orange-yellow .		Pyrotrogon	oreskios	uniformis,
1	Abdomen, buffy brown .		p. 70 Pyrotrogon	kasumba	(female),
2 {	Abdomen, red or pink		p. 71	2	
	Smaller, wing less than 5 in.  Larger, wing more than 5 in.			3 4	
	Head and throat, black; abdom	ien red .	Pyrotrogon p. 71	d. duvauc	eli (male),
3	Head and throat, brown; a	abdomen `	Pyrotrogon	d. duvaucei	di (female),
4	pink Outer tail feathers, partly white	speckled	p. 71	_	
	Outer tail feathers, partly	uniform		5	
	white without speckling . Head and breast, black; nape, I	pink .	P. diardi	6 sumatranı	us (male),
5 -	Head, breast and nape, brown	•	p. 72 P. diardi	sumatranus	s (female),
6	(Head and breast, black; a r	red nape	p. 72   <i>Pyrotrogon</i>	kasumbo	<i>i</i> (male),
	band Head, breast and nape, dull red		$\int   ext{p. 71} \ Pyrotrogon$		
	•		(male), p	p. 73	_
	Head, breast and nape, brown	•	(female)		ocepimiens.
	6g				

## Pyrotrogon oreskios uniformis

### The Malayan Orange-breasted Trogon

Pyrotrogon oreskios uniformis, Robinson, Journ. Fed. Malay States Mus., vii., 1917, p. 149 (Trang); Stuart Baker, Faun. Brit. Ind., Birds (2nd ed.), iv., 1927, p. 321.

Harpactes oreskios, Sharpe, P.Z.S., 1888, p. 280; Oates, in Hume's Nests and Eggs Ind. Birds (2nd ed.), ii., 1890, p. 342; Ogilvie-Grant, Cat. Birds, Brit. Mus., xvii., 1892, p. 494.

Pyrotrogon oreskios, Oates and Reid, Cat. Birds' Eggs, Brit. Mus., iii., 1903, p. 100, pl. 2, fig. 1; Grant, Journ. Fed. Malay States Mus., iii., 1908, p. 45; Robinson, op. cit., ii., 1909, p. 176.

Malay Name.—Burong kĕsumba (the generic name for all trogons; lit. "pink bird").

**Description.**—Adult male.—Head, neck, throat and chest, olive-yellow, brighter on the chin; mantle, back, rump and middle pair of tail feathers, rusty chestnut-bay, not brighter on the rump; tail feathers sometimes (but not always) with a narrow black tip, second and third pairs entirely black, the three outer pairs black, with the terminal third of the inner web, and most of the outer web, white, the line of division between black and white being diagonal. Primaries and primary coverts, black, the former white at the base and with narrow white edges to the outer webs. Outer webs of secondaries and wing coverts, black, with pure white bars about half the width of the interspaces, these bars being straight and not vermiculated; under wing coverts and axillaries, greenish grey. Under surface, below the chest, rich orange, paler on the middle of the belly and under tail coverts; a patch on the flanks, greenish olive, as also the thighs.

Adult female.—Head, greyish brown; mantle and back, sandy olive-brown, the rump, pale rusty. Secondaries and wing coverts with pale buff (not white) bars, as broad as the interspaces. Below, with the throat and chest greyish, with an olive-green cast; the rest of the under surface, lemon-yellow, orange near the greyish chest.

Juvenile.—With the upper surface mingled rusty buff and olive-green; under surface, below the breast, yellowish white; secondaries and wing coverts, golden buff, with narrow blackish bars; outer secondaries, blackish, edged with pale buff on the outer web.

**Soft Parts.**—Iris, grey or greyish purple or brown; bill and orbital skin, smalt, the culmen, black; feet, dull lake, smalt or pale lead, the soles, pinkish.

**Dimensions.**—Total length, II'5 to I2 in.; wing, 4'9 to 5'I in.; tail, 5'9 to 6'9 in.; tarsus, 0'5 to 0'55 in.; bill from gape, 0'85 to I in.; culmen, 0'6 in.

Range in the Malay Peninsula.—Extending over the whole length of the Malay Peninsula, from the northern border to as far south as the hills of Negri Sembilan; also on Bukit Besar in the Patani States and on Kedah Peak, Terutau, Langkawi and Junk Zeylon. The species appears to be absent from the Larut range.

**Extralimital Range.**—North, through Tenasserim to Pegu and the Karen Hills; Siam and French Indo-China; Sumatra. Replaced by closely allied forms in the mountains of Borneo and in Java.

Nidification.—Not on record from the Malay Peninsula. In Tenasserim the bird nests in holes excavated in rotten trees. Two or three eggs (very rarely four) are laid. The shape is very variable, some eggs being very round and others more pointed. The shell is rather glossy and the colour a uniform pale cream or café-au-lait. The average dimensions of the large series in the British Museum are 1'05 by 0'83 in. Stuart Baker gives an average of 1'03 by 0'85 in. The breeding season in Tenasserim is from the middle of February to the end of April. A half-grown bird from Pulau Langkawi is dated 16th February.

**Habits.**—In the southern portion of the Malay Peninsula this trogon is found in damp, evergreen jungle, at an elevation of from 2000 to 4000 ft., rarely higher or lower. In the more northern districts, and occasionally in Selangor, it is found at much lower heights, often only 200 or 300 ft., but always in hilly country, and sometimes affects much drier and more open jungle.

The present species is found in the lower trees, especially those much overgrown with parasitic vegetation, and is very sluggish and tame, and though of such brilliant coloration by no means conspicuous. The perch is usually on a liana, near the trunk it encircles. The food, like that of other trogons, is insects of various orders, and the bird is an extremely silent one.

# Pyrotrogon kasumba

## The Red-naped Trogon

This species is one of the larger forms, with a wing of about 5.7 in. It is readily recognizable by a narrow, blood-red band on the nape, and a white line separating the black of the throat from the red of the breast in the male; the female has the head brown, the throat and chest, greyish, and the belly, buffy brown.

The species is not common, but is widely spread throughout the Peninsula, from Patani to the south of Johore, in low-country jungle, and will be described in a later volume. It has been met with, however, on the slopes of Mount Ophir, on the Malacca-Johore boundary and on Bukit Tampin, Negri Sembilan, at about 1500 ft., and is therefore mentioned here. Outside the Peninsula it occurs in Borneo and Sumatra.

Its habits are those of the other species of the genus.

# Pyrotrogon duvauceli duvauceli

#### The Red-rumped Trogon

Vol. I., p. 129.

This species has already been fully described; it only remains to state that it is essentially a low-country bird, though Butler obtained a single, very young bird at 3500 ft. on the Larut Hills. Between 500 and 2000 ft. it is quite the commonest species of the genus almost everywhere within our limits.

## Pyrotrogon diardi sumatranus

#### Blasius's Trogon

Harpactes diardi sumatranus, Blasius, Mitt. d. Geogr. Ges. u. des Naturh. Mus., Lubeck, Reihe II., Heft x., 1896, p. 95 (Sumatra).

Pyrotrogon diardi neglectus, Forbes and Robinson, Bull. Liverpool Mus., ii., 1900, p. 34; Hartert, Nov. Zool., ix., 1902, p. 544.

Harpactes diardi (nec Temm.), Gould, Mon. Trogonidæ (2nd ed.), 1875,

pl. 38; Ogilvie-Grant, Cat. Birds, Brit. Mus., xvii., 1892, p. 482 (part).

Pyrotrogon diardi sumatranus, Snouckaert van Schauberg, Ibis, 1922, p. 665; Robinson and Kloss, Journ. Nat. Hist. Soc. Siam, v., 1923, p. 147 (Kao Luang, 2000 ft.).

Malay Name.—As other species of trogon.

**Description.**—Adult male.—Head, chin, throat and chest, black; the occiput, dark claret, bounded below by a pale pink collar; rest of the upper parts, rusty brown, brighter on the rump. Middle pair of tail feathers, rusty chestnut, with a terminal band of black; remainder, black, the outer three pairs, with their terminal half white, minutely freckled with white, with a uniform, narrow white tip. Primaries and primary coverts, black; the extreme bases of the former white, and their outer webs inconspicuously margined with white; outer webs of secondaries and wing coverts, black, finely and irregularly vermiculated with narrow, undulating white bars. Under surface, below the breast, pinkish scarlet, sometimes separated from the black of the breast by an inconspicuous white line; under wing coverts and thighs, blackish grey, the feathers of the latter narrowly tipped with scarlet.

Adult female.—Head, dark brown; back and mantle, olive-brown; rump and upper tail coverts, brighter rust-brown; throat and chest, pale rusty brown, darker on the chin. Tail and wings as in the male, but the frecklings on the tail feathers finer, and with less black, the vermiculation on the secondaries and wing coverts also coarser, the white replaced by buffy brown. Scarlet of the under surface paler and pinker; the lateral under tail coverts tinged with rufous.

Immature male.—With the tail feathers pointed, and the white portions of the outer feathers less freckled with black; the middle pair sometimes without a black tip. Wing coverts and secondaries as in the female. Black of the chest much mixed with sandy rufous, as in the female.

Juvenile.—Of both sexes are like the adult female, but have the pink under surface even paler, and the wing coverts and secondaries coarsely and more evenly barred with sandy buff.

**Soft Parts.**—"Iris, light chestnut or dark orange-red; orbital skin, heliotrope; cheeks, pale sky-blue; on the lower eyelid, a dirty-white patch; upper mandible, dark cobalt-blue, sometimes with a violet cast, culmen, tip and tomia, black; lower mandible, cobalt-blue, tip and tomia, black; feet, rosy lavender to greyish lavender; claws, blackish" (*Jacobson*). "Iris,

hazel; orbital skin, bright violet; bill, culmen, tip and tomia, black; remainder, cobalt; feet, brownish lilac " (Kloss).

**Dimensions.**—Total length, about 12 in.; wing, 5.6 to 5.8 in.; tail, 6.5 to 6.7 in.; tarsus, 0.5 to 0.6 in.; bill from gape, 1.15 in.; culmen, 0.8 in.

Range in the Malay Peninsula.—From Kao Luang in Nakon Sri Tammarat to the southern extremity; Junk Zeylon (?); Singapore 1 and Pulau Ubin.

**Extralimital Range.**—Sumatra; the typical form from Borneo, *P. d. diardi* (Temm.), differs only in having the whole head to the base of the bill dull crimson.

Nidification.—Not known from the Malay Peninsula.

**Habits.**—This species is found in heavy jungle, but only exceptionally ascends the hills as high as 3000 ft., being recorded from that elevation on Gunong Tahan, and at rather lower heights on the hills of Peninsular Siam. Like its congener, *P. kasumba*, it is a bird of heavy, low-country jungle, and is not a very common bird in the Federated Malay States, though, judging from the number that occur in the old Malacca trade-skin collections, it must have been at one time exceedingly abundant in that territory and in Johore. The habits are those of the genus.

## Pyrotrogon erythrocephalus erythrocephalus

### The Red-headed Trogon

Trogon erythrocephalus, Gould, P.Z.S., 1834, p. 25 (Rangoon).

Harpactes erythrocephalus, Sharpe, P.Z.S., 1888, p. 280; Ogilvie-Grant, Cat. Birds, Brit. Mus., xvii., 1892, p. 488; Blanford, Faun. Brit. Ind., Birds, iii., 1895, p. 200; Oates, in Hume's Nests and Eggs Ind. Birds (2nd ed.), ii., 1890, p. 339.

Harpactes hodgsoni, Hume and Davison, Stray Feath., vi., 1878, p. 66.

Pyrotrogon crythrocephalus crythrocephalus, Oates and Reid, Cat. Birds' Eggs, Brit. Mus., iii., 1903, p. 97; Stuart Baker, Faun. Brit. Ind., Birds (2nd ed.), iv., 1927, p. 318.

Malay Name.—Burong kĕsumba.

**Description.**—Adult male.—Head, all round, throat and upper surface, pinkish crimson-lake, brightest on the nape, inclining to blackish on the throat, the extreme point of the chin, black. Rest of the upper surface, rusty chestnut, inclining to olive on the mantle, brighter on the rump and upper tail coverts. Wing coverts, outer webs of secondaries and scapulars, greyish black, with fine wavy vermiculations of white, narrower than the interspaces. Primary coverts and primaries, black, the latter margined with greyish white on their outer webs and with their bases white; under wing coverts and axillaries, brownish grey. Tail, with the centre pair of feathers deep chestnut, with narrow black tips; the next two pairs black, with the greater part of the outer webs chestnut, not reaching the tip; the three outer pairs black, the

<sup>1</sup> The specimens bearing this locality in the British Museum are not authenticated by any precise particulars or collector's name, and have the appearance of Malacca trade skins.

terminal third of the outer web white, the inner web squarely tipped with white for about two-thirds of an inch. Beneath, a very narrow, ill-defined band of white between the chest and the belly, formed by the bases of the feathers; rest of the under surface, bright scarlet, paler on the middle of the abdomen, pinker on the under tail coverts; thighs, rusty, the feathers grey at the bases.

Adult female.—Differs from the male in having the head the same colour as the back; the throat and breast rather more ochreous chestnut than the head; the feathers just above the white pectoral band tipped with scarlet in old birds; the scarlet of the under surface more pinkish. Vermiculations of the wing coverts and secondaries finer and more irregular than in the male, the white replaced by ferruginous buff.

Immature male.—Young birds are at first like the female on the head and breast, but have the tail feathers pointed, not squarely truncate as in the adults. The secondaries and wing coverts are edged with white, and coarsely toothed with rufous buff. Still younger birds have the outer webs of the secondaries regularly barred with black and buff, and the wing coverts very broadly edged with golden buff, with black bars and no fine vermiculations. Crimson of the lower surface much paler.

Immature female.—Appears to follow the male in the sequence of plumages.

**Soft Parts.**—"Iris, brown, light red or crimson; orbital skin and eyelid, with base of bill, deep smalt, with a purplish tinge; legs and feet, deep fleshy pink, the claws, horny" (Davison and Bingham).

**Dimensions.**—Total length, about 12 in.; wing, 5'4 to 5'6 in.; tail, 7'4 to 7'9 in.; tarsus, 0'5 to 0'55 in.; bill from gape, 0'8 to 0'9 in.; culmen, 0'65 in.

Range in the Malay Peninsula.—The Larut Hills and the Peninsular main range, from Gunong Kerbau south to Ulu Langat, Selangor.

**Extralimital Range.**—From Nepal, south through Assam and Manipur to Central Tenasserim. North and South-East Siam. Several other very closely allied races occur in Sumatra, Annam, Tonkin and Southern China.

Nidification.—There are no records from the Malay Peninsula. In Assam, Baker describes it as breeding from April to August in deep forest in large natural hollows, in trees from five to twelve feet from the ground, though some holes are excavated by the birds themselves; the eggs, two to four in number, are blunt, broad ovals, often very spherical, in colour a pale buff or café-au-lait, never white. The average dimensions are 1°13 by 0°94 in. Oates and Bingham give very similar accounts of the nesting habits, and of eggs from Pegu and Tenasserim.

**Habits.**—In the Malay Peninsula this trogon is confined strictly to the mountains, and is never found below 3000 ft., though its upper limit is 5000 ft. or over. It is rather local, but wherever it does occur is fairly common. Its favourite haunts are damp, shady gullies, and, like others of the genus, it is a sluggish, inactive bird, frequenting the lower trees, but flying round the edges of clearings in the early morning and late afternoon, especially in misty

weather. Stuart Baker says its call is a low "mew," but I have never heard it utter any note.

Note.—The distribution of this trogon is discontinuous, and it has not yet been obtained in the area between the north of Perak and Central Tenasserim. The Malay bird is rather smaller than that inhabiting the Himalayas, but rather larger and perhaps not so bright as that found on the mountains of Sumatra, which has been named S. e. flagrans (S. Muell.).