

TROGONS

Order TROGONES

Vol. I., p. 129; Vol. II., p. 69.

THE trogons are a very distinct order and can easily be recognized by the following characters. Bill short and stout, broad at base, the culmen much arched and with a subterminal notch; nostrils in a deep depression near the base, hidden by bristles. Wing short and rounded, with ten primaries, shorter than the tail, which is graduated, the feathers with very squared tips in the adults. Tarsi short and feeble; toes, four, two directed forwards and two backwards.

Plumage brilliant, with much scarlet or yellow in the local species, the wing coverts always with narrow black and white vermiculations. Sexes different, females much duller. A distinct juvenile plumage.

Nests, in holes of trees or branches, unlined; eggs, two to four in number, white or creamy white in Asiatic species, glossy and very round, rather like those of owls; young hatched helpless.

The order contains about sixty species, spread over the tropical portions of Asia, Africa, Central and South America and some of the West Indian Islands, but not in Australasia (*Robinson*, Vol. I., p. 129). Five forms are found in the lowlands of the Peninsula, all inhabitants of dense jungle.

KEY TO THE MALAYAN LOWLAND TROGONS

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|---|---|---|--|
| 1 | { | Under parts entirely brown | <i>Pyrotrogon o. orrhophaeus</i> (female), |
| | | | p. 132 |
| | { | Abdomen, yellow | <i>Pyrotrogon oreskios uniformis</i> , |
| | | | p. 133 |
| 2 | { | Abdomen, pink to red | 2 |
| | | Rump, red or washed with red | <i>Pyrotrogon duvauceli</i> , p. 132 |
| 3 | { | Rump, brown | 3 |
| | | Smaller: wing less than 4.5 in. | <i>Pyrotrogon o. orrhophaeus</i> (male), |
| 4 | { | Larger: wing about 5.5 to 6 in. | p. 132 |
| | | White tips to outer tail feathers much mottled with black | <i>Pyrotrogon diardi sumatranus</i> , |
| | | White tips to tail feathers not mottled | p. 130 |
| | | | <i>Pyrotrogon k. kasumba</i> , p. 130 |

*Pyrotrogon diardi sumatranus***Blasius's Trogon**

Vol. II., p. 72.

Male: head, throat, chest and a collar running nearly round the nape, black; wings, black; the wing coverts with thin, wavy, white cross-lines and vermiculations; remainder of upper surface and centre tail feathers, yellowish brown, brightest on the rump, the tail feathers tipped with black. Remaining tail feathers, black, the outer three pairs with mottled black and white ends. Remaining under parts, bright pinkish scarlet.

Female: less deeply red on the under parts, and the head and breast brown, not black. Markings on the wing coverts, buff, not white.

Total length, about 12 in.; wing, 5.7 in.

Although it is found only in forest, this trogon is widely distributed in the lowlands of the Peninsula. It is by no means common, but perhaps more numerous in the south than in the north.

In Perak Mr A. T. Edgar has found the nests in deep jungle, four and eight feet from the ground, in holes in very old, much-rotted tree stumps. "The nest holes appeared to have been excavated by the trogon. In one case the hole was remarkably small, about four and a half inches in diameter at the entrance, not much more from front to back and about the same in depth, from the lower rim of the entrance. It must have been very uncomfortable for the sitting trogon. The eggs were laid on the soft rotting chips of wood, and were creamy white, round and glossy. The shell was close-textured but not tough." Average size, 1.13 by 1.01 in. Eggs in May; nestlings in March.

*Pyrotrogon kasumba kasumba***The Red-naped Trogon**

PLATE I

Vol. II., p. 71.

Trogon Kasumba Raffles, *Trans. Linn. Soc.*, xiii., 1822, p. 282 (Sumatra).

Harpactes kasumba, O.-Grant, *Cat. Birds, Brit. Mus.*, xvii., 1892, p. 483.

Pyrotrogon kasumba, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 146.

Malay Name.—Burong kəsumba (generic).

Description.—One of the larger trogons, the male with black head, yellowish-brown back and bright red under parts, and the female with brown back, yellow-brown under parts and greyish breast. Specific characters, and those distinguishing this species from the very similar Blasius's Trogon (*Pyrotrogon diardi sumatranus*), are a narrow white band separating the black breast from the red under parts in the male, and the broad white, not freckled, tips to the outer tail feathers in both sexes.

Adult male.—Head, chin and chest, black; ear coverts and a broad band on the nape, scarlet. Upper parts, ochreous cinnamon; remaining under parts, pinkish scarlet, very slightly paler on abdomen and under tail coverts:

a narrow white band completely divides the black from the red areas. Thighs, greyish black, some of the feathers tipped with buff. Primaries and primary coverts, black, the former whitish at the extreme base and narrowly edged with white, sometimes broken, on the outer edge. Wing coverts and secondaries, black, the latter white on the hidden bases, narrowly barred with slightly wavy thin lines. Middle pair of tail feathers, ochreous chestnut, narrowly tipped with a black bar; remaining tail feathers, black, the three outer pairs with the terminal one-third obliquely white. A small minority of males has a narrow bar of scarlet on the rump.

Adult female.—Quite different. Top of head, dark olive-brown, lightening to yellowish brown or olive-brown on the sides of the head and the remaining upper parts, and almost ochreous on the rump and upper tail coverts. Tail as in the male. Chin, throat and chest, brownish grey sharply defined against the brownish buff of the remaining under parts. Wings as in the male, but the cross-barring slightly heavier and buff, not white.

Immature.—Birds of both sexes are, at first, like the adult female, but the buff bars on the wings are broader and about the same width as the black interspaces. The centre tail feathers are more pointed, less square at the tips than in the adult and sometimes lack the black terminal bar. Birds in the mixed plumage of both sexes are males assuming the adult plumage for the first time.

Soft Parts.—*Adult male*: iris, dark brown or reddish chestnut; bare skin on head, violet-blue; bill, tip blue, culmen and edges black; feet, violet-blue. Dr E. Jacobson's notes on a Sumatran male are as follows: iris, very dark brown; bill, cobalt-blue, culmen and tip black; orbital skin above the eye, light sky-blue, underneath lavender-blue, on the lower eyelid a dirty pinkish patch. *Female*: iris, brown; bare skin on head, blue; bill, distal half and all culmen black, base blue; feet, blue-grey.

Dimensions.—Total length, about 12.5 in.; wing, 5.5 to 6 in.; tail, 6.5 to 7 in.; tarsus, 0.55 in.; bill from gape, 1 to 1.15 in.; culmen, 0.8 in.

Range in the Malay Peninsula.—From Bangnara in Patani south to Singapore Island.

Extralimital Range.—Sumatra. A Bornean race only differs in slightly smaller average size.

Nidification.—Unknown.

Habits.—This trogon is found in the thick, low-country jungle on both sides of the Peninsula and is commoner, or easier to obtain, in the south than in the north. Specimens have been collected at low levels on Mt Ophir on the Malacca-Johore boundary, and on Bukit Tampin in Negri Sembilan, but it seems never to ascend the hills above about 1500 to 2000 feet. As late as 1921 a few pairs were still to be found in secluded isolated patches of forest on Singapore Island, but it is doubtful if the species still exists on the island. I have also seen specimens from the islet of Pulau Ubin in the middle of the Johore Strait. Like its congeners, it is a sluggish bird, usually seen alone or in pairs, sitting motionless on a branch among dense foliage, very often near the trunk of a large tree.

The birds figured in the plate are a male and female from Pahang.

*Pyrotrogon duvauceli***The Red-rumped Trogon**

Vol. I., p. 129.

Male: head, black; under parts, rump and upper tail coverts, bright scarlet; back, ochreous cinnamon; wing coverts, black with thin white wavy cross-bars. Centre tail feathers, pale chestnut with black tips; other tail feathers, black, the outer three pairs white at the tip.

Female: head, olive-brown; breast, brownish orange turning to pink on the abdomen, etc.; remaining upper parts, pale yellowish brown washed with red on the rump and upper tail coverts; wing coverts, barred with buff, more coarsely than in the male.

Total length, about 9.5 in.; wing, 4.2 in.

This trogon is common in the lowlands of the Peninsula wherever there is forest, but it is not found in mangrove, cultivation or open country, and rarely in secondary forest. The white eggs have been taken from a "hollow in an old stump standing beside a stream in evergreen forest" in Perak.

*Pyrotrogon orrhophæus orrhophæus***The Cinnamon-rumped Trogon**

Pyrotrogon orrhophæus Cabanis and Heine, *Mus. Hein.*, iv., 1863, p. 156 (Malacca).

Harpactes orrhophæus, O.-Grant, *Cat. Birds, Brit. Mus.*, xvii., 1892, p. 493.

Pyrotrogon orrophæus, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 148.

Malay Name.—Burong kěsumba (generic).

Description.—Very like the much commoner red-rumped trogon (*Pyrotrogon duvauceli*) described in Vol. I., p. 129, but the male with the lower back and rump concolorous with the ochreous-cinnamon mantle, not bright red, and the female brown above and below, not pink on the abdomen or lower back.

Adult male.—Head and neck all round, jet-black; whole of under surface, brilliant scarlet becoming rather paler on the abdomen and under tail coverts; mantle and back, rich ochreous-cinnamon. Primaries and primary coverts, black, white at the extreme base, and the primaries freckled or narrowly lined with white on the outer web; secondaries, with narrow zigzag bars of white on the outer webs, the inner feathers on both webs; wing coverts, except for an ochreous patch on the inner edge of the wing, black with narrow, zigzag, almost parallel bars of white on both webs. Tail, with the central pair of feathers pale chestnut tipped with black, the next two pairs uniform black, the outermost three pairs black at the base, the terminal half obliquely white, most extensively on the outer web; thighs blackish.

Adult female.—Quite different, with no red in the plumage. Upper parts from forehead to tail coverts, dull brown, slightly darker on the head and just perceptibly paler on the upper tail coverts: lores and area round the eye, bright rust-colour. Sides of head and the throat, brown with some almost

black feathers. Under parts, rusty buff; tail as in the male, but the terminal black bar on the centre tail feathers very narrow. Wing quills and coverts as in the male, but the barring coarser and the narrow bars rufous-buff, not white.

Immature.—No specimens are available for description.

Note.—In addition to the difference noted above, the present species also differs from *Pyrotrogon duvauceli* in that the male is rather less deeply scarlet on the under parts, with the white bars on the wings slightly thinner: the female is of a darker, duller brown, but with the area surrounding the eyes of a much brighter reddish brown. The few specimens I have examined do not confirm an observation that this is a larger species than *P. duvauceli*, but the bill is certainly more robust, or swollen.

Soft Parts.—I have never examined a Peninsular example of this bird in the flesh.

Dimensions.—Total length, about 10 in.; wing, 4.2 to 4.4 in.; tail, 5.2 to 5.6 in.; tarsus, 0.5 in.; bill from gape, 0.8 in.

Range in the Malay Peninsula.—From the neighbourhood of Taiping in Perak south to the territory of Malacca.

Extralimital Range.—Sumatra. A very closely allied subspecies is found in Borneo.

Nidification.—Unknown.

Habits.—This trogon is a rare bird in the Malay Peninsula, where it is only found in the thick forest of the lowlands, not ascending the hills, on both sides of the southern portion, living side by side with the very similar red-rumped trogon (*Pyrotrogon duvauceli*). Most of the known specimens are Malacca trade skins and they are therefore of doubtful exact provenance, although almost certainly from in, or near, the actual territory of Malacca. Very few specimens have been obtained in recent years, collectors from the local museums having obtained only odd birds near Taiping in Perak, and in the lowlands of Central Pahang near the Krau river. Davison's collectors got specimens at Klang in Selangor and near Malacca. Hume and Davison record that they obtained numerous specimens from the neighbourhood of Malacca and Singapore, but I know of no reliable record actually from the island of Singapore. The species will, almost certainly, turn up in Johore where it may be not uncommon. It is likely that a specimen recorded by Müller from the Peninsula came from the neighbourhood of Junk Zeylon, but there is no proof of this.

Nothing has been recorded of the habits, which, however, are scarcely likely to differ much from those of *Pyrotrogon duvauceli*.

Pyrotrogon oreskios uniformis

The Malayan Orange-breasted Trogon

Vol. II., p. 70.

Male: head, neck and chest, yellowish olive; remaining under parts, bright orange; upper parts and centre tail feathers, bright chestnut; remaining tail feathers, black, the three outer pairs with white ends.

Female: head and breast, greyish brown; remaining under parts paler than in the male; upper parts, olive-brown; bars on the wings, *buff*, not white, and broader than in the male.

Total length, about 11.75 in.; wing, 5 in.

In the south of the Peninsula this trogon is common in the submontane forests as far south as the Negri Sembilan hills. In the north, and occasionally elsewhere, it frequents heavy forest almost at sea-level. There is no record of **the nest** from the Malay Peninsula: elsewhere the bird nests in holes in trees.