

KINGFISHERS

Family ALCEDINIDÆ

Vol. I., p. 93.

FROM the nature of the country, kingfishers, which, in the majority of species, are dependent on streams, are not commonly found in the hills of the Malay Peninsula, while many of the Malayan species are in any event open-country or salt-water forms. Others are more strictly jungle birds, and these occasionally range for some distance up the hillsides, especially in damp ravines. The key includes all species that are at all likely to be met with, while the three forms that are of even occasional occurrence are described in full.

KEY TO THE MONTANE SPECIES OF MALAY KINGFISHERS

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|---|---|--|---|--|
| 1 | { | With three toes only; bill uniformly coloured; size small, wing less than 2.5 in. | 2 | |
| | { | With four toes; bill generally parti-coloured; size larger, wing more than 2.5 in. | 3 | |
| 2 | { | Mantle and scapulars, black, washed with blue | | <i>Ceyx erithaca erithaca</i> , p. 42 |
| | { | Mantle and scapulars mostly rufous | | <i>Ceyx rufidorsa rufidorsa</i> , p. 43 |
| 3 | { | Plumage without regular transverse banding | 4 | |
| | { | Plumage with regular transverse banding | | <i>Carcineutes pulchellus pulchellus</i> , p. 43 |
| 4 | { | Larger, wing over 4 in.; with a broad rufous collar on hind neck | | <i>Caridagrus concretus</i> , p. 45 |
| | { | Smaller, wing less than 4 in.; with only a very narrow collar (or none) on hind neck | 5 | |
| 5 | { | Ears coverts, rusty red | | <i>Alcedo atthis bengalensis</i> , p. 46 |
| | { | Ears coverts, blue or blackish | 6 | |
| 6 | { | Larger, wing more than 3.25 in. | 7 | |
| | { | Smaller, wing less than 2.75 in. | | <i>Alcedo meninting meninting</i> , p. 46 |
| 7 | { | Beneath, white, with a blue pectoral collar | | <i>Alcedo euryzona</i> (male), p. 46 |
| | { | Beneath, rufous, nearly uniform | | <i>Alcedo euryzona</i> (female), p. 46 |

*Ceyx erithaca erithaca***The Indian Three-toed Kingfisher**

Alcedo erithaca, Linn., *Syst. Nat.* (10th ed.), 1758, p. 115 (Bengal).

Ceyx tridactyla (Pall.), Sharpe, *Mon. Alcedinid.*, 1868, p. 119, pl. 40; id. *Cat. Birds, Brit. Mus.*, xvii., 1892, p. 174; Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 13.

Ceyx erithaca erithaca, Laubmann, *Ornith. Monatsb.*, xxxi., 1923, p. 89.

Ceyx tridactylus tridactylus, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 260.

Malay Name.—Pekaka api.

Description.—Sexes alike. Mantle and scapulars black, strongly washed with deep ultramarine blue; back, rump, upper tail coverts and head, orange-red, with a strong gloss of lilac, brightest on the tail coverts; wing coverts and primaries, blackish brown, the coverts and the inner secondaries edged with dark blue, outer web of the first primary, orange; inner aspect of the wing blackish, the quills with a broad rufous margin on the inner webs; under wing coverts and axillaries, orange-yellow; tail, orange. At base of bill an oblong spot of deep bluish black; behind the ear coverts a large spot of deep ultramarine, bordered beneath by a large patch of glistening yellowish white. Beneath, with the chin and upper throat whitish, deepening into bright orange-yellow, deepest on the breast and flanks, rich lemon-yellow on the lower throat and middle of the belly.

Immature.—Birds that are apparently not adult are duller above, with less lilac gloss; the tail is tipped with blackish, which is often extensive on the outer feathers; the white throat and breast are more clearly defined, and so is the darker breast, which is more rusty orange; without the strong lemon-chrome tint on the belly.

Soft Parts.—Iris, dark or dark hazel; bill and feet, vermilion, claws, darker. Baker, *loc. cit.*, quotes the iris as crimson in adult birds—a very unusual colour in a kingfisher.

Dimensions.—Total length, 4'9 to 5'4 in.; wing, 2'1 to 2'5 in.; tail, 0'9 to 1'1 in.; tarsus, 0'3 in.; bill from gape, 1'5 to 1'6 in.; culmen, 1'25 to 1'4 in.

Range in the Malay Peninsula.—Over its whole length; Junk Zeylon, the Langkawi group and Penang Islands, but only doubtfully in Singapore.

Extralimital Range.—Southern India and Ceylon; the Himalayas, Assam, Burma and parts of Siam to Hainan.¹ Sumatra. A slightly differentiated race occurs in the Andaman and Nicobar Islands.

Nidification.—There are no records of the breeding of this little kingfisher in the Malay Peninsula. According to Baker it breeds in Assam in April and May, June and July, excavating holes from 1½ to 2 in. in diameter, and up to 2 ft. in length, in the sandy banks of small streams and ravines in evergreen jungle. The actual nesting-chamber is 5 to 6 in. in diameter, some-

¹ I am unable to trace reliable records for either the Philippines or Cochinchina, as quoted by Baker (*loc. cit.*).

times lined with a few fish-bones. The clutch is from four to seven, usually five, and many eggs are said to be longer and more pointed than is usual with kingfishers. The average dimensions are given as 0.74 by 0.61 in.

Habits.—Very widely spread over the whole Peninsula, from sea-level to over 3000 ft., though of course rare in the hills, being dependent on the presence of running water. The species is sometimes found in mangrove forest, and seems at times to travel along the coast, as we have obtained large numbers at the One Fathom Bank Lighthouse and also on the Aroa Islands in the middle of the Straits of Malacca. In the Malay Peninsula it is rarely seen in open country, and usually occurs singly or in pairs along the banks of small streams. Occasionally, however, it is found far from water. It feeds in part on fishes and crustaceans, and Baker says that it also takes spiders, and I have seen it flying over the surface of the water and snapping up grasshoppers, winged ants and May-flies floating downstream. The note is a very feeble acid trill, uttered on the wing. Flight is extremely swift and twisting, and the bird seems rarely at rest. When it does perch it sits very erect, with the bill pointing upwards or forwards, not hunched up like *A. bengalensis*.

Ceyx rufidorsa rufidorsa

The Malay Red-backed Three-toed Kingfisher

This little kingfisher is about the same size as the preceding, and differs from it only in having the mantle and scapulars almost entirely red, ~~or, if partially black, with no blue streaks or wash.~~

The distribution in the Peninsula is from Bandon in Peninsular Siam to Johore, and in Junk Zeylon and Singapore Island. On occasion it is found on the lower slopes of the higher hills. Its habits are the same as those of its congener, but it is everywhere a decidedly rarer bird.

Carcineutes pulchellus pulchellus

The Malaysian Banded Kingfisher

Dacelo pulchellus, Horsfield, *Trans. Linn. Soc.*, xiii., 1921, p. 175 (East Java).

Carcineutes pulchellus, Sharpe, *Mon. Alcedinid.*, 1868, p. 251, pl. 96; Kelham, *Ibis*, 1881, p. 381; Sharpe, *Cat. Birds, Brit. Mus.*, xvii., 1892, p. 198; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 139.

Carcineutes pulchellus amabilis (part), Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 280.

Malay Name.—Pekaka rimba or kaing kaing rimba.

Description.—Sexes markedly different. Tail graduated, the outer feathers short; nape, slightly crested.

Adult male.—A broad frontal band, the sides of the face and ear coverts, and a collar on the hind neck, deep chocolate-chestnut; crown, cobalt-blue,

darker in front, the feathers with black bases and irregular white bars, producing a mottled effect on the middle of the crown; rest of the upper surface with regular transverse bars of glossy black and white, and with broad pale blue tips to the feathers. Primary coverts and primaries, black, the inner ones and the secondaries barred and toothed with white, and with white tips. Inner aspect of quills, dull black, the inner webs margined with pale sulphur-yellow; under wing coverts and axillaries, pale buff. Tail, above, regularly barred with black and purplish blue, the blue bands becoming white on the outer webs, under surface, black, barred with white on the inner webs of the feathers. Beneath, with the throat and breast pure white, lower breast and flanks, orange-buff; middle of the abdomen and under tail coverts, white.

Adult female.—With no blue in the plumage. General colour above, pale ochreous brown, regularly banded with black, broadest in the secondaries, narrowest on the tail. Primaries as in the male, under wing coverts and axillaries, whitish. Bases of the feathers of the head, whitish, sides of face and ear coverts as the upper parts. Under surface, white, the breast and flanks irregularly spotted and barred with black.

Immature male.—Sides of the face and jaw with the chestnut feathers barred with black; under surface with spots and bars of black on the flanks.

Immature female.—With the under surface much more heavily and irregularly barred, only the throat being immaculate white.

Soft Parts.—Iris, dark grey or brownish grey, hazel or dull yellow; orbital skin and gape, orange; bill, vermilion; tarsi and feet, greenish or yellowish brown or ochre; claws, darker. *Immature*: have the upper mandible brownish black with reddish edges, the lower mandible, orange-red with yellowish tip.

Dimensions.—Total length, 8 to 8.5 in.; wing, 3.2 to 3.4 in.; tail, 2.6 to 3 in.; tarsus, 0.5 to 0.6 in.; bill from gape, 1.7 in.; culmen, 1.3 to 1.5 in.

Range in the Malay Peninsula.—Throughout its length, and on the islands of Junk Zeylon and the Langkawi group. Doubtful from either Penang or Singapore. Birds stated to be from the latter locality in the Hume Collection in the British Museum are certainly Malacca trade skins.

Extralimital Range.—Java, Sumatra, and the extreme south of Tenasserim.

Nidification.—Baker states that the breeding season is from February to May. Eggs from near Taiping, Perak, are stated to have been taken from holes made in the banks of small streams in open forest, near heavy jungle. The average dimensions of the eggs are given as 0.96 by 0.81 in. In Sumatra, Mr E. Jacobson found the nest in a tunnel in the globular nest of a species of tree-termite (*Eutermes*), and shot the male parent. The clutch consisted of two eggs.

Habits.—Common throughout the Peninsula, but only in heavy jungle, and only rarely in the hills above 3000 ft., though up to 2000 ft. or over it is quite abundant. It is generally met with in pairs, as often as not in dry jungle, far from water, as well as near streams; in habit it is a very much more sluggish bird than most of its relations, though flight is very swift. It is quite often seen on the ground and on fallen timber, and its food seems to consist of millipedes,

centipedes, cockroaches and insects found in rotten wood, as well as crustacea and small fish, though these latter are an unimportant item in its diet. The call is a harsh staccato disyllabic note, uttered when at rest as well as on the wing.

Caridagrus concretus

The Chestnut-collared Kingfisher

Dacelo concreta, Temm., *Pl. Col.*, 1835, pl. 346 (Sumatra).

Halcyon varia, Eyton, *P.Z.S.*, 1839, p. 101.

Halcyon concreta, Sharpe, *Mon. Alcedimid.*, 1870, p. 219, pl. 83; Sharpe, *P.Z.S.*, 1887, p. 432; id. *Cat. Birds, Brit. Mus.*, xvii., 1892, p. 139; Ogilvie-Grant, *Journ. Fed. Malay States Mus.*, iii., 1908, p. 49.

Caridagrus concretus, Blanfórd, *Faun. Brit. Ind., Birds*, iii., 1895, p. 138; Stuart Baker, *op. cit.* (2nd ed.), iv., 1927, p. 279.

Malay Name.—Pekaka rimba besar.

Description.—Sexes slightly different. *Adult male.*—A superciliary streak of cinnamon-buff extending round the base of the bill; lores, black; crown, olive-verditer green, brighter bluish on the occiput; from base of the upper mandible a band of black surrounding the nape; beneath this a band of chestnut-rufous, broader and deeper on the nape; a broad malar stripe of deep blue; mantle, blackish blue; scapulars and upper wing coverts, deep ultramarine blue; lower back and rump, shining cobalt-blue, deeper ultramarine on the longer and lateral upper tail coverts. Primaries and secondaries, brownish black, edged with blue on the outer webs. Inner aspect of wing, dark slaty, the under wing coverts and axillaries, orange-buff. Tail, dark blue, slaty black beneath. Beneath, ferruginous, paler on the throat, the middle of the belly and the under tail coverts.

Adult female.—Back and wings, greenish olive, the scapulars and wing coverts with large terminal spots of pale ochraceous buff, otherwise as the male.

Immature.—Both sexes resemble the adults, but are duller in colour; the male has whitish buff spots on the scapulars and wing coverts.

Soft Parts.—Iris, dark or hazel-brown; bill, bright yellow, the greater part of the upper mandible dark horn; tarsi and feet, pale chrome, tinged with green in the female.

Dimensions.—Total length, about 9 in.; wing, 4'3 to 4'7 in.; tail, 2'4 to 2'7 in.; tarsus, 0'67 in.; bill from gape, 2'2 to 2'3 in.; culmen, 1'7 to 1'8 in.

Range in the Malay Peninsula.—Throughout its length, but rarer in the north; possibly Penang Island, and certainly in Singapore up to about 1910.

Extralimital Range.—The extreme south of Tenasserim, Borneo and Sumatra.

Nidification.—Unknown. From the material adherent to the bills of some birds it is probable that this species excavates its breeding holes in the nests of tree-termites, as is recorded for *Carcinectes p. pulchellus*, or in rotten tree-trunks. The subject is an interesting one for investigation.

Habits.—Widely spread over the whole of the Peninsula in heavy low-country or submontane jungle ranging up the mountains to a maximum elevation of about 3000 ft., but common at 2000 ft. A heavy thick-set and rather stolid bird, this kingfisher is less tied to water than any other species, and probably does not feed on fish at all. Like *Carcineutes pulchellus*, it is often found on dead timber, standing and fallen, and sometimes on the ground—where Davison says it feeds on lizards and wood-lice. It certainly eats small ground-snakes, *Typhlops* and *Doliophis*. I am not acquainted with any note, but Davison records “a sort of low chuckle.”

Alcedo atthis bengalensis

The Common Kingfisher

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The small size, the lighter coloration both above and below, and the rufous, buff ear coverts distinguish this bird from all other local kingfishers.

May occasionally be found as high as 3000 ft., in gullies and mountain streams, but of only accidental occurrence.

Alcedo meninting meninting

The Deep Blue Malayan Kingfisher

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Differs from *A. a. bengalensis* in its very deep ultramarine blue above and the dark rufous orange of the lower surface.

To be met with under similar conditions to the preceding.

Alcedo euryzona

The Broad-zoned Kingfisher

Alcedo euryzona, Temm., *Pl. Col.*, livr. 86, 1830, text to pl. 508 (Java); Sharpe, *Mon. Alcedinid.*, 1870, p. 29, pl. 8; Robinson, *Journ. Fed. Malay States Mus.*, ii., 1909, p. 172; Robinson and Kloss, *Ibis*, 1911, p. 33; id. *Journ. Nat. Hist. Soc. Siam.*, v., 1923, p. 124; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 259.

Alcedo nigricans, Blyth, *Journ. Asiat. Soc. Bengal*, xvi., 1847, p. 110 (Malacca).

Malay Name.—Pekaka bukit.

Description.—Sexes very different. *Adult male.*—Head, sooty black, the feathers narrowly tipped with dull blue; lores, black, with a rufous or buffy spot above them; sides of head and malar stripe, dull blue, the latter brighter, obscurely barred with blackish, ear coverts almost black; on each side of the neck a pale ferruginous spot, the feathers with white bases; scapulars and lesser upper wing coverts, uniform black, the median and greater wing coverts, black, with blue edgings and brighter blue tips. Primaries and secondaries, black, the innermost with dull blue edgings on the outer webs; under wing

coverts and axillaries, pale buff, the outer coverts, near the edge of the wing, black. Tail feathers, black, with very inconspicuous dark blue edges; back and rump, shining silvery blue, the longest upper tail coverts deeper cobalt-blue. Beneath, chin and throat, white, with a faint buffy tinge, the feathers of the lower throat with black edges succeeded by a broad band of greenish blue, the feathers with broad white centres and blackish edges at the base; rest of the under surface, white, strongly tinged with rufescent on the flanks and under tail coverts, the flanks with obscure black streaks.

Adult female.—Like the male above, but the stripes on the sides of the neck deeper ferruginous; beneath, chin and throat pale ferruginous; breast deeper rust, with broad black bases to the feathers, belly, rather paler; under wing coverts and axillaries deeper coloured than in the male.

Immature males.—Have the white of the under parts much more strongly tinged with buffy ferruginous, the blue pectoral band narrower and the white centres to the feathers larger; bill with the tip whitish.

Note.—Very old birds tend to get darker on the upper surface, the blue transverse bars to the feathers of the crown becoming almost obsolete.

Soft Parts.—Iris, dark hazel; bill, blackish on upper mandible, dull reddish towards the base of the upper mandible, much more vermilion in the female; feet, vermilion or flesh, black in young birds. There seems to be much variation in the colour of the feet. Specimens obtained by myself in Bandon, Peninsular Siam, certainly had them rather pale flesh, while some of Davison's birds are recorded as pale vermilion.

Dimensions.—Total length, 6·5 to 7 in.; wing, 3·3 to 3·5 in.; tail, 1·7 to 1·9 in.; tarsus, 0·4 to 0·47 in.; bill from gape, 2·1 to 2·3 in.; culmen, 1·6 to 1·8 in.

Range in the Malay Peninsula.—Known from Bandon, in Peninsular Siam, south to Negri Sembilan and Malacca.

Extralimital Range.—North to Muleyit in Tenasserim; Sumatra, Borneo and Java. On the available material the species is not separable into local races.

Nidification.—Mr W. A. T. Kellow found this kingfisher breeding on the banks of small streams in dense jungle in the foothills near Taiping, Perak, between 1000 to 2000 ft., early in February. The clutches were of four or five eggs (*Baker*).

Habits.—This kingfisher is everywhere a rare bird. In the Malay Peninsula it has been obtained in several localities in Peninsular Siam, on the Larut Hills near Taiping, near Kuala Lipis and Bentong, Pahang, at the foot of Gunong Tahan, Pahang, and on hill streams in Negri Sembilan. It is not found in low flat country or near the sea, but always near the high mountains, sometimes at quite low elevations, ascending the hill streams and gullies as far as there is running water and small fish, on which, as well as on small crustacea, it feeds. It is very wild and restless in its habits, never staying long in one place and not perching in the meditative manner of other small kingfishers of the genus. The note is that of the common *Alcedo bengalensis*, but louder and harsher, and not so frequently uttered.