

## DIURNAL BIRDS OF PREY: VULTURES, OSPREYS, EAGLES, KITES, HARRIERS, BUZZARDS, HAWKS AND FALCONS

### *Order ACCIPITRIFORMES*

Vol. I., p. 59; Vol. II., p. 24.

THE birds of this order are sometimes grouped as "raptores." They are all carnivorous, but while some feed on carrion, others prefer to catch their food alive, in which latter case mammals, birds, reptiles, fishes and insects are taken by the various species. In structure all the birds of prey are well adapted to their mode of living. The beak is short, stout, strongly hooked at the end and with sharp cutting edges. Often the edges of the upper mandible, near the tip, are provided with one or two small conical projections ("teeth"). At the base of the bill is the fleshy band ("cere") in which the nostrils are placed. The robust feet are provided with strong, curved claws, and by the combined use of beak and feet the birds seize, kill and rend their prey. The tarsi are often feathered right down to the base of the toes, only the toes themselves remaining bare.

The size varies from that of a sparrow in the tiny pygmy falcons to the well-known vultures and eagles. Females are usually larger than males. The plumage is usually dull and the feathers are never of bright primary colours although the "soft parts" may be yellow, orange or red. The wing of eleven primaries is usually long and pointed, and flight is powerful. The tail varies in shape. Often it is square or nearly so, but forked and wedge-shaped tails are also common. Sometimes the head is crested. Occasionally the sexes differ in colour, but in many other species they are alike. Young birds have a distinctive juvenile plumage in the great majority of cases.

The various species have very different methods of hunting. The bold peregrine dashes into the middle of a flying flock and seizing a bird in its feet flies away with apparent ease. The kestrel hovers aloft with head bent down, waiting for small living things to betray their presence by a slight movement in the field below. The long-winged harrier quarters a field as systematically as a schoolboy searching for larks' eggs.

The common type of nest is an untidy mass of sticks placed in a tree. In some cases the eggs are uniformly coloured, often white, but bold markings of rich brown are also commonly met with. The young are helpless when hatched and remain in the nest a relatively long time.

The **order is a large** one and spread over the entire world. In the Malay Peninsula **it is well** represented by forty forms, all of which can be seen in, or **at least from**, the lowlands. The local list includes four vultures, three **harriers**, **five** sparrow hawks and goshawks, one true buzzard, nine eagles **or eagle-like birds**, one buzzard-eagle, three fishing eagles, the brahminy kite, **two other kites**, five perns, one falconet (also known as the pygmy falcon), **the peregrine falcon**, two kestrels and two forms of the osprey.

**Most of** these are seasonal visitors from the north and rare enough to be **regarded** as accidental stragglers in the Peninsula.

#### KEY TO THE MALAYAN LOWLAND DIURNAL BIRDS OF PREY

(excluding Vultures)

|   |  |  |
|---|--|--|
| 1 | Cutting edge of upper mandible with two sharply pointed conical "teeth" near the end . . . . . | 2  |
|   | With only one similar "tooth" <sup>1</sup> in the same place . . . . .                         | 3  |
|   | With no "teeth" . . . . .  | 4  |
| 2 | Larger: wing about 12 in.; upper parts mainly brown . . . . .                                  | <i>Aviceda jerdoni jerdoni</i> , p. 48   |
|   | Smaller: wing about 9 in.; upper parts mainly black . . . . .                                  | <i>Aviceda leuphotes</i> , p. 46         |
| 3 | Very small: wing about 4 in.; upper parts, black . . . . .                                     | <i>Microhierax fringillarius</i> , p. 49 |
|   | Medium size: wing less than 11 in.; upper parts, pale rufous . . . . .                         | <i>Falco tinnunculus</i> subspp., p. 51  |
|   | Very large: wing over 12 in.; upper parts, dark brown to grey. . . . .                         | <i>Falco peregrinus calidus</i> , p. 49  |
| 4 | Legs feathered to base of toes; toes bare . . . . .  | 5  |
|   | Legs and toes bare, or with only the upper part of the tarsus feathered . . . . .              | 11                                       |
| 5 | Head with no lengthened occipital crest . . . . .  | <i>Aquila clanga</i> , p. 34             |
|   | Head with a distinct occipital crest . . . . .   | 6  |
| 6 | Claws much curved; inner claw shorter than outer toe with claw . . . . .                       | 7  |
|   | Claws much straighter; inner claw longer than outer toe with claw . . . . .                    | <i>Ictinaëtus malayensis</i> , p. 34     |
| 7 | Feathering of leg continued on to basal joint of middle toe . . . . .                          | 8  |
|   | Legs feathered to base of toes only . . . . .  | 9  |

<sup>1</sup> Not to be confused with a gently curved irregularity ("festoon") on the cutting edge of the upper mandible.

- 8 { Larger : wing, roughly 16.5 in. . . *Spizaëtus nipalensis fokiensis*, p. 35  
 { Smaller : wing, roughly 12 in. . . *Spizaëtus alboniger*, p. 37
- 9 { Primaries exceeding secondaries by  
 { less than length of tarsus } *Spizaëtus cirrhatus limnaetus*, p. 35  
 { Primaries exceeding secondaries by  
 { more than length of tarsus . . . 10
- 10 { A long occipital crest; adults black  
 { above, bright chestnut below;  
 { young birds brown above, white  
 { below } *Hieraaëtus kienerii formosus*, p. 32  
 { Occipital crest absent or rudimentary;  
 { plumage brownish } *Hieraaëtus pennatus pennatus*, p. 31
- 11 { Lores almost naked, or with bristly  
 { hair-like feathers . . . 13  
 { Lores covered with short, close-set,  
 { normal feathers . . . 12
- 12 { Bill much compressed; plumage } *Machærhamphus alcinus alcinus*,  
 { black with white throat } p. 44  
 { Bill normal; plumage mainly buff to  
 { brown . . . . . *Pernis apivorus* subsp., p. 45
- 13 { Tarsus long: at least twice length of  
 { bill from gape . . . 14  
 { Tarsus short: less than twice length  
 { of bill from gape . . . 21
- 14 { Back of tarsus reticulate (*Circus*) . . . 15  
 { Back of tarsus scutellate (*Accipiter*) . . . 18
- 15 { Culmen from end of cere to point  
 { measured in a straight line less  
 { than 0.75 in. . . . . *Circus melanoleucus*, p. 22  
 { Culmen measured as above more  
 { than 0.75 in. . . . . 16
- 16 { Thighs, white . . . . . *Circus spilonotus* (male), p. 20  
 { Thighs, rufous . . . . . 17
- 17 { Middle tail feathers uniform silvery  
 { grey . . . . . *Circus æruginosus* (male), p. 19  
 { Middle tail feathers normally uni-  
 { formly brown } *Circus æruginosus* (female and  
 { } immature), p. 19  
 { Middle tail feathers normally barred } *Circus spilonotus* (female and im-  
 { } mature), p. 20
- 18 { A distinct nuchal crest formed by  
 { several lengthened feathers . . . *Accipiter trivirgatus indicus*, p. 23  
 { With no nuchal crest . . . 19

- Outer toe with claw about as long as  
the middle toe without claw . . . . . 20
- 19 { Middle toe very long, and without the  
claw much longer than the outer  
toe and claw . . . . . *Accipiter gularis gularis*, p. 27
- 20 { Fourth primary longest: under parts  
heavily barred in adults . . . . . *Accipiter badius bifasciatus*, p. 25  
Third primary longest: under parts  
with a few obsolete bars in adults. . . . . *Accipiter soloënsis*, p. 27
- 21 { Tail forked . . . . . *Milvus migrans govinda*, p. 42  
Tail not forked . . . . . 22
- 22 { With a wide, long conspicuous crest  
covering the crown and nape . . . . . *Spilornis cheela bassus*, p. 39  
Without such a crest . . . . . 23
- 23 { Smaller birds: wing less than 14 in. . . . . 24  
Larger birds: wing more than 14 in. . . . . 25
- 24 { Plumage, black, white and grey . . . . . *Elanus cæruleus vociferus*, p. 42  
Plumage mainly brown, streaked and  
barred . . . . . *Butastur indicus*, p. 39
- 25 { Tarsus, all round, covered with small  
hexagonal scales (reticulate) . . . . . *Circaëtus ferox ferox*, p. 37  
Tarsus with enlarged scales (scutel-  
late) either back or front . . . . . 26
- 26 { Cutting edge of the bill almost  
straight (*i.e.* excluding the ter-  
minal hook); feet rather long and  
lightly built } *Buteo burmanicus burmanicus*, p. 29  
The edge of the bill "festooned"  
(*i.e.* with two marked convexities);  
feet very short and stout . . . . . 27
- 27 { Entire under parts, or breast, or  
abdomen, pure white . . . . . 28  
Under parts, buff to variegated brown . . . . . 31
- 28 { Back and wings, reddish chestnut . . . . . *Haliastur indus intermedius* (adult),  
p. 41  
Back and wings, grey or brown . . . . . 29
- 29 { Entire under parts, white . . . . . *Cuncuma leucogaster* (adult), p. 41  
Under parts, white with a broken  
brown chest band . . . . . *Pandion haliaetus* subspp., p. 15  
Abdomen, white; breast, grey . . . . . 30
- 30 { Tail uniformly brown . . . . . *Ichthyophaga nana nana* (adult),  
p. 17  
Base of tail white or mottled . . . . . *Ichthyophaga ichthyætus ichthyætus*  
(adult), p. 16

- |    |   |  |   |
|----|---|--|---|
| 31 | { | Larger: wing over 17 in. . . . .                         | 32  |
|    |   | Smaller: wing under 17 in. . . . .                       | 33  |
|    | { | Hind claw rounded beneath . . . . .                      | <i>Ichthyophaga ichthyætus ichthyætus</i><br>(young), p. 16 |
| 32 |   | Hind claw flattened and grooved<br>beneath . . . . .     | <i>Cuncuma leucogaster</i> (young), p. 41                   |
|    | { | Under parts, creamy or buffy white . . . . .             | <i>Ichthyophaga nana nana</i> (young),<br>p. 17             |
| 33 |   | Under parts, rich brown, streaked<br>with buff . . . . . | <i>Haliastur indus intermedius</i><br>(young), p. 41        |

## KEY TO THE FAMILIES OF ACCIPITRIFORMES

- |   |   |   |                           |
|---|---|---|---------------------------|
| 1 | { | Top of the head naked, or with short<br>downy feathers (carrion eaters) . . . . .     | <i>Ægyptidæ</i> , p. 11   |
|   |   | Top of the head normally feathered. . . . .   | 2                         |
| 2 | { | Soles of feet very prickly; outer toe<br>reversible . . . . .                         | <i>Pandionidæ</i> , p. 15 |
|   |   | Soles of feet without strongly marked<br>spicules; outer toe not reversible . . . . . | <i>Falconidæ</i> , p. 19  |

## Family ÆGYPTIDÆ

## Vultures

Vol. I., p. 60.

THE vultures differ from the other birds of prey in that the crown is never covered with normal feathers but always naked or covered with short down. They are large, heavy birds of repulsive appearance and habits, and with such long wings that when heavily gorged with carrion they find it difficult to rise from the ground. On the wing they are much more attractive birds, for the flight is very powerful.

The food consists of dead animals and decaying animal matter, and large flocks of the birds will assemble at a carcass, which is found by sight and not by smell as was formerly supposed. The watching, soaring birds high in the air nearest to the feast communicate the news, through their movements, to those further afield.

Vultures are found in the warmer parts of Europe, Africa and Asia. A group of birds in the New World (*Cathartidiformes*) are also known as vultures, and include the well-known condor and turkey-buzzards, but although New and Old World vultures are much alike superficially the former have so many anatomical peculiarities that they are now regarded as a separate order, distinct from and of equal rank to the whole of the remaining birds of prey (*Accipitriformes*).

Three, or possibly four, species are found in the Malay Peninsula, but none now seems to find its way south of about the latitude of Taiping, in Perak. Formerly vultures were supposed to occur throughout the Peninsula, but it is many years since one was seen in Singapore.

## KEY TO THE MALAYAN VULTURES

- |   |  |  |
|---|--|--|
|   | Small. Bill very slender; nostril horizontal and elongated. Plumage mostly white in adults | } <i>Neophron percnopterus ginginianus</i> , p. 14 |
| 1 | Large. Bill stouter; nostril upright and oval. Plumage brown or black in adults . . . . .  |  |
|   | Plumage mostly black; no white throat ruff; bare skin on head and legs, red . . . . .      | 2  |
| 2 | Plumage brown, rump white; a white throat ruff; bare skin on head, not red . . . . .       | <i>Torgos calvus</i> , p. 13                       |
|   | Tail feathers, 14. Under parts paler, cream-colour to buff . . . . .                       | 3  |
| 3 | Tail feathers, 12. Under parts darker, brown to nearly black . . . . .                     | <i>Gyps indicus nudiceps</i> , p. 12               |
|   |  | <i>Pseudogyps bengalensis</i> , p. 13              |

*Gyps indicus nudiceps*

## The Long-billed Vulture

*Gyps indicus nudiceps* Stuart Baker, *Bull. Brit. Orn. Club*, xlvii., 1927, p. 151: new name for *G. tenuirostris* Hume (Nepal); Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 17; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 13.

*Gyps indicus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 10 (part); Oates, in Hume's *Nests and Eggs Ind. Birds*, iii., 1890, p. 202; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 226 (part).

*Gyps tenuirostris*, Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 323.

*Gyps indicus tenuirostris*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 105.

**Malay Names.**—Reng, ěreng, ĥering.

**Description.**—*Adult.*—The head and neck bare except for a few small, scattered white down feathers. Lower back, rump and upper tail coverts, white. Wing and tail quills, blackish brown; remaining upper parts, brown, the edges of the feathers slightly paler. Neck-ruff, white; crop-patch, dull brown. Under parts, creamy white, whitish tawny or pale buffy brown, the feathers on the sides of the breast edged with pale brown.

*Immature.*—The head and neck more plentifully clothed with down. The rump, etc., mainly brown, not white. Entire under parts faintly streaked with brown.

**Soft Parts.**—Iris, very dark brown; bill, blackish, centre of culmen, dull yellowish horn; skin of head, dark brownish slate, neck, blackish; legs and claws, black (described from a Bangkok male: *after Williamson*).

**Dimensions.**—"Length, 38 in.; tail, 10.5 in.; wing, 24 in.; tarsus, 4.5 in.; bill from gape, 3 in. The female is of about the same size" (*Oates*).

**Range in the Malay Peninsula.**—A specimen in the Selangor Museum was killed near Taiping, Perak, about 1893. Blyth recorded the present species as the only vulture he had seen from the Malay Peninsula.

**Extralimital Range.**—Northern India and the Lower Himalayas to Assam and Burma. Less common in Siam and French Indo-China than *Pseudogyps bengalensis*, the white-backed vulture. Replaced in most of India by the typical form, *Gyps i. indicus*.

**Nidification.**—Not known to breed in the Malay Peninsula. In other parts of its range it lays a single white egg, which is either immaculate or marked with reddish brown. The large nest of sticks is placed in a tree and the nests are grouped in colonies. The eggs measure about 3.3 by 2.6 in. According to Mr Stuart Baker the bird haunts villages and breeds on the trees round about them.

**Habits.**—Beyond the bare records given above no information is available concerning the status of this bird in the Malay Peninsula, and our ignorance concerning its habits is complete. It may be expected to be found associating with other species of vultures which are common in the north of the Peninsula, being found as far south as Perak on the western and Kelantan on the eastern side.

### *Pseudogyps bengalensis*

#### The Brown White-backed Vulture

Vol. I., p. 62.

Adults have the head and neck naked and from grey-brown to dull greenish yellow in colour, the neck with a ruff of short white down. The back, wings and tail are brown; the lower back, flanks and thighs, white; a patch on the chest, black with white tufts; the under parts, dark brown with thin white streaks. In young birds the head and neck are covered with whitish down, and they are paler and less decisively coloured than adults. The under parts are mid-brown with broad white streaks and the rump is brown, not white. Total length, about 33 in.; wing, about 23 in.

Common in the north of the Peninsula and more abundant than the king vulture, with which it associates, but does not dispute pride of place. The present southern limits appear to be Kelantan and North Perak, but formerly the bird was known to occur at Malacca. There is no Malayan record of the nest.

### *Torgos calvus*

#### The Black or King Vulture

Vol. I., p. 60.

Adults of both sexes have the head and neck naked and red in colour. On each side of the neck there is a large fleshy lappet and there is a bare red patch on each thigh. The plumage is mainly black, with a dark brown patch

edged with **downy white** on the chest, and the flanks and upper parts of the thighs **are also downy white**. Legs, red.

**In young birds** the head and neck are covered with white down, the **general plumage** is brown, not black, and the feathers of the under parts have **whitish edges**. Total length, about 30 in.; wing, about 24 in.

**This vulture** is found only in the north of the Peninsula and there is no **record of its breeding** in Malaya. Taiping in Perak marks its approximate **southern boundary**. It is common in Patani, especially during cattle plague. **It has the usual loathsome carrion- and garbage-feeding habits** of its family.

*Neophron percnopterus ginginianus*

**The Egyptian or White Vulture** (*Eastern Race*)

*Vultur ginginianus* Latham, *Ind. Orn.*, i., 1790, p. 7 (Coromandel).

*Neophron ginginianus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 18; Oates, in *Hume's Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 213; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 326; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 231.

*Neophron percnopterus ginginianus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 23; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 19.

**Malay Name.**—Unrecorded.

**Description.**—*Adult.*—A large white bird with black quills and naked, yellow head. Young birds, brown.

“Plumage almost throughout white; winglet and primaries black, the latter grey outside, brown inside towards the base; secondaries whity brown or grey on the outer web outside, blackish brown elsewhere; tertiaries pale brown throughout. A brownish or greyish tinge on the scapulars and wing coverts, and sometimes elsewhere, is a sign of immaturity. The neck hackles are often stained rusty.”

*Immature.*—“Young birds are at first blackish brown, the scattered down on the head and throat black, then pale tips appear on some of the neck hackles and breast feathers and on the smaller wing coverts, giving a speckled appearance; the back, breast and greater wing coverts are mottled with whitish blotches. The change to the adult plumage is gradual.”

**Soft Parts.**—“Bill in adults horny yellow; cere and sides of head and throat yellow; irides dark brown; legs dirty yellow; claws pale horny. In young birds the bill is dark; naked parts of head and throat grey; legs and feet cinereous.”

**Dimensions.**—“Length, about 24 in.; tail, 9.5 in.; wing, 18.25 in.; tarsus, 3.1 in.; mid-toe without claw, 2.5 in.; bill from gape to tip, 2.4 in.” (*Blanford*).

**Range in the Malay Peninsula.**—No specimen of this vulture seems ever to have been obtained within our limits and the species is included in this volume purely on the strength of Robinson's note published in 1910: “According to Dr Abbott, a large white vulture is common in Trang and



Penang. I have never seen it in the latter locality." Later, Robinson included the name in a list of "Species undoubtedly occurring in the Malay Peninsula but not represented by local specimens in the Federated Malay States Museums" (*Journ. Fed. Mal. States Mus.*, vi., 1915, p. 67).

**Extralimital Range.**—This form replaces the western (typical) race of the Egyptian vulture, from which it differs only in smaller size and yellow, not dusky, bill. It meets the typical race in North-West India and occurs in the lower Himalayas, and the Indian Peninsula as far east as Bengal. An accidental visitor to Ceylon. It is not recorded from Tenasserim, Siam or French Indo-China and its occurrence in the north of the Malay Peninsula is therefore surprising.

**Nidification.**—Mr Stuart Baker records that in India this vulture breeds from January to May, but principally in March and April. The nest is said to be placed on cliffs, buildings or trees. The eggs are usually two in number, white, handsomely marked, perhaps washed with brownish red, and about 2.6 by 1.98 in. in size (*Blanford*).

**Habits.**—According to Blanford this vulture, in India, haunts towns and villages, living largely on human excrement, although it will also eat carrion. Nothing whatever is known of it in the Malay Peninsula beyond the bare visual records quoted above and I regret that I cannot add anything to the local history of the species, which I have looked for many times, without success, in Penang.

### Family PANDIONIDÆ

#### Ospreys and Fishing Eagles

MOST ornithologists restrict this family to the osprey only, but a minority of authors, including Robinson in our first volume, also include the two species of fishing eagle of the genus *Ichthyophaga*.<sup>1</sup> The family forms, in some ways, a link between the diurnal birds of prey and the owls, the osprey differing from the former and resembling the latter in that the outer toe is reversible. In the fishing eagles the outer toe is only partly reversible. In this family the soles of the feet are covered with spicules, which assist the birds to hold the fish on which they prey. All the Malayan forms are mentioned below.

#### *Pandion haliaetus haliaetus*

##### The Osprey

Vol. I., p. 63.

Head, white, striped with brown on the crown; upper parts, dark brown; under parts, white, streaked and washed with brown on the breast; tail, brown, irregularly barred with darker brown and the feathers barred with white on their inner webs. Total length, about 21 in.; wing, about 19 in.

The osprey is found in small numbers along the coasts of the Peninsula.

<sup>1</sup> This is the same as *Polioaetus* used by Robinson in the text of Vol. I., p. 63.

It has **not yet been found** breeding locally and is, at least largely, a migrant with us. **The rather** smaller, whiter headed Australian form (*P. h. cristatus*) also **occurs as a migrant**. The habit of the bird is to drop suddenly, with a **large splash, on fishes** near the surface of the water.

*Ichthyophaga ichthyætus ichthyætus*

**The Larger Fishing Eagle**

*Falco Ichthyætus* Horsfield, *Trans. Linn. Soc.*, xiii., 1821, p. 136 (Java).

*Polioaëtus ichthyaëtus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 452; Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 167; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 317; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 370; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 100.

*Ichthyophaga ichthyaëtus ichthyaëtus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 114; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 82.

**Malay Names.**—Hëlang, lang (any hawk or eagle).<sup>1</sup>

**Description.**—Sexes alike. A large brownish grey species with the abdomen and the tail, at the base, white.

Head and throat, grey, slightly darker on the crown, merging into greyish brown on neck, breast, flanks, axillaries and upper abdomen, and sharply defined against the white of the remaining under parts. Remainder of upper parts, earthy brown, darker than the breast, and becoming black on the quills. Tail, white with a broad, terminal black band. Wing lining, entirely dark.

*Sub-adult* birds are mottled with brown on the inner webs of the quills (best seen on the under side of the wing) and tail.

*Immature.*—The upper parts rather paler brown, the feathers with buff fringes and the rump faintly barred with buff. Quills, mottled and indistinctly barred on the inner webs. Tail, heavily mottled with brown. Under wing coverts, mixed with white. Dark under parts, pale brown, indistinctly streaked with white. Grey of head much less pure than in adults.

**Soft Parts.**—Iris, yellow; bill and cere, plumbeous or horn-coloured, grey at the base and darker on the culmen. Feet, yellowish or greyish white. Claws, black. Authors have recorded the iris of young birds as brown, and Legge, writing of the Ceylon race, states that the yellow iris is sometimes tinged with reddish and mottled with brown.

**Dimensions.**—*Male*: total length, about 27 in.; wing, about 18 in.; tail, 10 in.; culmen from cere, 1.5 in.; tarsus, 3.4 in. *Females* run larger.

<sup>1</sup> Accipitrine birds of all kinds are known to Malays as *lang*, or *hëlang*, and sometimes the generic term is amplified, as in *lang merah* (red hawk) for the brahmīny kite, or *lang tikus* for the black-winged kite. *Sewah* is another generic term for hawk-like birds, but my correspondents, Messrs A. W. Hamilton and A. T. Edgar, agree that it is used, properly, for the smaller, swifter species only. In the north of the Peninsula, in Kedah, Penang and Perak, the name seems fairly well known, but in my experience it is rarely used in the south of the Peninsula, although I have heard *lang sewah* and *burong sewah* applied to the sparrow hawk in Johore and Singapore. According to Mr A. W. Hamilton *sewah tikus* (rat-hawk) and *sewah burong* (bird-hawk) are terms used in the north of the Peninsula.

Two Malayan females have wings measuring 18.5 in., but one bird marked as a male by the collector is also very large: the wing measures 18.75 in., but perhaps the specimen is wrongly sexed.

**Range in the Malay Peninsula.**—The whole length of the Peninsula from north to south. The west-coast islands of Junk Zeylon, Langkawi and Penang; the east-coast island of Pennan. No formal record from the Tioman group or Singapore, but the bird occurs on the Dutch island of Batam, within sight of Singapore.

**Extralimital Range.**—The greater part of India east to Assam and Burma. Not rare in Tenasserim, common in Siam but less so in French Indo-China. All Malaysia and east to the Philippines and Celebes. A smaller race inhabits Ceylon.

**Nidification.**—Although this eagle will, no doubt, be found breeding in the Peninsula, there is as yet no record of a Malayan nest. In Assam and Burma, according to Mr Stuart Baker, it places its nest of branches, which it occupies year after year, on a tree on a river-bank. The two to four white eggs are usually heavily stained. The average size is given as 2.7 by 2.05 in.

**Habits.**—This eagle is common in the northern parts of the Peninsula, especially along the north-eastern coast, being found on the sea-coasts, particularly in the vicinity of high forest, and in the ricefields, but it is somewhat less common farther south where there is less open rice-country. It is also found commonly on the lower reaches of the big rivers, but in more inland districts it is replaced by the very similar but smaller species, *Ichthyophaga nana*. According to our experience the food consists chiefly of fish snatched from the water, but reptiles, birds, small mammals and carrion are also reported as forming part of the diet. It can be seen sitting in a tree over water more often than on the wing. We have never seen it in heavy jungle. Robinson records it as very abundant on the seaward face of Tanjong Patani, together with the white-bellied sea-eagle and the brahmyn kite. In some non-Malayan parts of its range this eagle seems to prefer forests to the sea-coasts.

### *Ichthyophaga nana nana*

#### The Smaller Fishing Eagle

*Ichthyaëtus nanus* Blyth, *Journ. Asiat. Soc. Bengal*, xi., 1842, p. 202 (Singapore Island).

*Polioaëtus humilis*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 454; Blanford, *Cat. Birds, Brit. Mus.*, iii., 1895, p. 371 (part).

*Polioaëtus humilis humilis*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 100.

*Ichthyophaga humilis humilis*, Stuart Baker, *Faun. Brit. Ind., Birds*, v., 1928, p. 116.

*Ichthyophaga nanus nanus*, Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 84.

**Malay Names.**—Hëlang, lang (any hawk or eagle).

**Description.**—Sexes alike and very like the preceding bird, but the tail not white at the base. Size much smaller.

**Adult.**—Head, neck all round, breast, upper abdomen, flanks, axillaries and wing lining, ashy grey, purest on the head and neck, washed with brown on the breast and under the wings and sharply defined against the white of the lower abdomen, thighs and under tail coverts. Mantle, scapulars, wing coverts, rump and upper tail coverts, brown, the feathers of the mantle, lesser wing coverts, back and upper tail coverts with indistinct grey edges, broadest on the mantle. Inner secondaries, brown; remainder of quills, brownish black, the outer primaries faintly mottled with whitish at the base of the inner webs. Tail quills, brown, darkest at the tip and mottled with white at the base of the inner webs of all feathers except the centre pair.

**Immature.**—Forehead, a broad superciliary stripe and under parts, creamy white, the breast and upper abdomen with faint, broad, pale brownish streaks, heaviest on the sides of the body. Crown, nape and sides of neck, brown, the feathers with conspicuous creamy white tips. Upper parts, brown, the wing coverts and scapulars with narrow creamy fringes. Secondaries, brown, whitish on the inner webs with indistinct dark bars. Primaries, almost black, the inner webs largely white, mottled with brown. Wing lining, mostly creamy white. Tail, brown, tipped with white, the feathers with broad, ill-defined darker bars, the last of which is broadened into a subterminal band; inner webs of all feathers except the centre pair, largely white.

**Soft Parts.**—Iris, pale yellow; eyelids and cere, slaty blue; bill, slaty blue, the upper mandible darker; feet like the bill but paler; nails, black. *Immature*: iris, pale brown; bill, black; feet, dull white.

**Dimensions.**—Total length, about 20 in.; tail, 7·5 to 8 in.; wing, 14 to 15 in.; culmen from cere, 1 to 1·25 in.; bill from gape, 1·6 in.; tarsus, 3 in. *Females* may be expected to run slightly larger: we have no specimens of this sex.

**Range in the Malay Peninsula.**—The whole length of the Peninsula but not on the islands. There is no satisfactory recent record for Singapore.

**Extralimital Range.**—The small race to which Malayan specimens belong extends to Tenasserim, Sumatra, Borneo and Celebes, but the species is not found in Java. A larger race is found in Upper Burma, along the Lower Himalayas and the adjacent low country to Kashmir. Birds from Tonkin have also been referred to this large race.

**Nidification.**—There is no Malayan record of the nidification, but the bird almost certainly breeds in the Peninsula. From Tenasserim the nest is recorded as built high in large trees in forest on the banks of small streams.

**Habits.**—Unlike the larger *Ichthyophaga ichthyætus* this is a bird of the inland waterways and forests. In the Peninsula it is not found in open country or on the sea-coasts. Robinson and Kloss have recorded that “on some rivers, notably the higher reaches of the Tembeling and its tributary the Tahan, in Pahang, almost every reach is inhabited by a pair of these birds, which lumber along in front of the canoe as the traveller advances up-stream.”

## Family FALCONIDÆ

## Eagles and Hawks

THIS family includes all the remaining birds of prey found in the Malay Peninsula and is sufficiently characterized on p. 7.

*Circus æruginosus æruginosus*

## The Marsh-Harrier

*Falco æruginosus* Linn., *Sys. Nat.*, 10th ed., 1758, p. 91 (Sweden).

*Circus æruginosus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 69; Blandford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 387; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 239.

*Circus æruginosus æruginosus*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 102; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 134.

**Malay Name.**—Hélang puteh kěpala (*Winstedt*: needs confirmation).

**Description.**—A large, brown, slender-winged, long-tailed hawk with chestnut under parts and grey wings. Female, brown, with the head conspicuously yellowish buff.

*Adult male.*—Head, neck and breast, buff (more creamy on the crown and hind neck, more rufescent on the throat and breast) heavily streaked with brown; the ear coverts may be nearly uniform brown. Remainder of under parts, chestnut, darkest on the under tail coverts, perhaps with indistinct blackish streaks, especially on the abdomen. Mantle, back, rump and scapulars, dark brown, often with narrow rufous fringes. Upper tail coverts, pale grey mixed with rufous. Tail, silvery grey above, duller whitish grey beneath. Winglet, primary and greater coverts except the innermost, inner primaries and secondaries except the innermost, which are brown, ashy grey. Outer primaries, black, buffy white at the base on the inner web. Edge of wing, buff, streaked with blackish, other wing coverts like the back. Under wing coverts and axillaries, pinkish buff, the latter often with dark shaft stripes.

*Adult female.*—Quite different. General plumage dark brown, rather richer, more chocolate on the under parts. Chin and throat, buff. Crown and nape, buff with thin blackish streaks, but almost uniformly buffy white in worn plumage. A large, but variable, patch of buff streaked with brown on the chest. A similar patch on the inner wing coverts on the edge of the wing. Mantle and sometimes the other parts with rufous-buff margins.

*Immature.*—Dark brown. Very like the adult female but even more uniformly coloured. Buff on the head more restricted, sometimes forming only a well-defined cap, at other times restricted to a patch on the nape. In a rare phase the plumage is entirely dark brown.

**Soft Parts.**—*Male*: iris, lemon; bill, slate, cere and base, yellowish green; feet, pale yellow. *Female*: iris, yellow; bill, black, cere and base, greenish slate; feet, dirty yellowish (*Robinson and Kloss*).

**Dimensions.**—*Male*: total length, 20 in.; tail, 9.5 in.; wing, 15.25 to 16 in.; tarsus, 3.3 in.; bill from gape, 1.5 in.; culmen (end of cere to tip, straight), 0.9 in. *Females* run slightly larger. One from Pulau Langkawi, Straits of Malacca, has a wing of 17 in. Wing of an immature female, 15.8 in.

**Range in the Malay Peninsula.**—From the northern limit at the Pakchan estuary south to Malacca (*Davison*). Langkawi Island; Junk Zeylon; Jelebu, Negri Sembilan. As in the case of the other species of harriers occurring in Malaya there is no formal record from the east coast, although they almost certainly occur there, where the country is open and suited to their habits.

**Extralimital Range.**—Breeds in Europe and West Asia eastwards to the Yenesei. Migrates south to Africa, India, Ceylon, Burma, Siam and Sumatra. It is common in Tenasserim and at least the western half of Siam, but Messrs Delacour and Jabouille do not admit it to the French Indo-China list, referring all previous records to the closely allied *Circus spilonotus*. Japan. It has also been recorded on a number of occasions from the Philippines, but most of the far-eastern records are based on young birds which need critical re-examination.

**Nidification.**—Does not breed in Malaya. "In its northern breeding-grounds the Marsh-Harrier nests about April, building in reed beds or rank marsh vegetation. The nest is a large heap of dead reeds and sedges, with the hollow lined with finer marsh grasses. The eggs number from four to six, and they are broad regular ovals, bluish white in colour without markings. They measure about 1.95 by 1.5 in." (*Whistler*).

**Habits.**—The marsh-harrier is a regular winter visitor to the Malay Peninsula, occurring in fair numbers from November to March. It is the commonest local representative of the genus, but is never very numerous in the south. It is recorded as common, in February, on the ricefields bordering the upper reaches of the Pakchan estuary in Peninsular Siam. In season, it is not uncommon on marshy ground near Kuala Lumpur in Selangor, where Mr E. Seimund has secured a small series when snipe-shooting, together with smaller numbers of the eastern marsh-harrier (*Circus spilonotus*) and the pied harrier (*C. melanoleucos*).

Like other harriers this is a bird of open country, especially in the vicinity of swampy ground or open water, although it also visits hill-sides and other dry places. It usually flies fairly low, quartering the ground in a systematic manner, flapping and sailing and occasionally resting on a stump, post or the ground. The food consists chiefly of frogs, small mammals, reptiles, fish and large insects, but it is well known to carry off birds wounded by sportsmen and also to rob nests of eggs or young.

### *Circus spilonotus spilonotus*

#### The Eastern Marsh-Harrier

*Circus spilonotus* Kaup, *Isis*, 1847, p. 953 (East Siberia); Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 58; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 388; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 236; Robinson

and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 102; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 135.

**Malay Name.**—Unrecorded specifically: hēlang, lang (any hawk or eagle).

**Description.**—The male is a gaily coloured large hawk with much white on the under parts. Female, as in the preceding species.

**Adult male.**—Above blackish brown, the feathers of the head and neck with broad white or rufous edges. Back feathers and wing coverts with irregular grey or rufescent white spots and patches; the smaller coverts along the forearm white, sometimes with dark shaft stripes; primary coverts and outer surface of secondaries, grey, terminal portion of primaries, blackish, bases of all quills, white; upper tail coverts, white, with grey or brown bars; tail, grey above, whitish below, unbarred; lower parts, white with blackish shaft stripes, broad on the throat and upper breast, narrow or wanting on the abdomen (*after Blanford*).

**Note.**—In the above plumage the adult male of *C. spilonotus* is very like the adult female of the next species to be described, the pied harrier (*C. melanoleucos*), but it can be distinguished by its larger bill (see the *key* on page 9).

**Adult female and immature.**—Very like the corresponding stages in *Circus aeruginosus*, but the tail usually broadly barred, not uniformly brown. If the tail is without bars, *C. spilonotus* can be identified by the fact that the inner webs of the primaries, at the base, are boldly patterned on a white ground, whereas they are almost uniform or merely paler and finely mottled in *aeruginosus*. Head usually more boldly streaked than in *aeruginosus*. Some females, perhaps very old birds, are like the male in plumage.

**Soft Parts.**—Iris, brown or yellow; bill, blackish, paler (grey or yellowish) at the base, cere, yellow; feet, yellow, claws, black.

**Dimensions.**—*Male*: total length, 19 to 20 in.; tail, 8.75 to 9 in.; wing, 14.5 to 15.3 in.; tarsus, 3.5 to 3.8 in.; culmen (end of cere to tip, straight), 0.85 in. *Females* run slightly larger. Total length, 21 in.; wing, up to 16.4 in. (specimens from Borneo).

**Range in the Malay Peninsula.**—Known only by a few specimens obtained near Kuala Lumpur in Selangor.

**Extralimital Range.**—Breeds from Turkestan across Asia to Transbaikalia, replacing *Circus aeruginosus*, of which some authors consider it a subspecies, in the eastern parts of its range. Moves south in winter to Burma, Siam, French Indo-China (very common), Japan, the Philippines and Borneo.

**Nidification.**—Very similar to the marsh-harrier (*Circus aeruginosus*) described above. Does not breed in Malaya.

**Habits.**—A winter visitor to the Peninsula but in smaller numbers than the marsh-harrier (*Circus aeruginosus*). The few specimens we have examined are dated from February to 30th March. Its habits in its winter quarters seem essentially similar to those of the marsh-harrier. A specimen shot by Mr E. Banks in Sarawak contained the remains of a rat and a water-rail (*Hypotaenidia striata*).

*Circus melanoleucus***The Pied Harrier**

*Falco melanoleucus* Pennant, *Ind. Zool.*, 1769, p. 12, pl. 2 (Ceylon).

*Circus melanoleucus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 61; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 385; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 237; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam.*, v., 1922, p. 102; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 133; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 96.

**Malay Name.**—Unrecorded specifically: hělang, lang (any hawk or eagle).

**Description.**—A large and boldly piebald hawk.

*Adult male.*—Head, neck all round, breast, mantle, back, outer short scapulars and outer six primaries, glossy black. Remaining under parts, including under wing coverts and axillaries, white, sharply defined against the black breast. Rump, white sullied with grey. Upper tail coverts, grey with broad white edges. Tail, silvery grey. Lesser wing coverts, white with the grey bases showing through. A broad band of black across the wing is composed mainly of the greater coverts and inner secondaries, but it reaches the angle of the wing. Other coverts and quills, silvery grey. A few whitish fringes to the feathers on the nape.

*Adult female.*—Quite different. Mantle, back, scapulars and inner secondaries, brown; upper tail coverts, white; tail, pale grey, the tail with five, visible, blackish bars, the bars much narrower than the interspaces. Head, neck and wing coverts along the edge of the wing, creamy buff tinged with rufous and streaked with dark brown; median coverts, brown tipped with buff; remainder of closed wing, pale grey, banded with black, the outer primaries black at the tips; wing quills, whitish on the inner webs at the base. Under parts, white, heavily streaked with brown on the breast and less heavily elsewhere.

Some authors aver that the female is sometimes found in the plumage of the male.

*Immature.*—"Young birds are more uniformly brown above than the adult female, and have no grey on the wings or tail, which are brown with darker bands; the ruff is ill-marked at the sides, but there is a large white brown-streaked nuchal patch and another patch of buff-edged brown feathers on the throat; the lower parts generally are rufous brown, faintly streaked darker" (Blanford).

**Soft Parts.**—*Male*: iris and feet, chrome; bill, black; cere, greenish yellow. *Female*: iris, lemon; bill, slate; cere and base, yellowish green; feet, pale yellow.

**Dimensions.**—Total length, 17.5 in.; tail, 8.5 in.; wing, 13.75 in.; tarsus, 2.75 in.; bill from gape, 1.1 in. *Females* are slightly larger: total length, 18.25 in.; wing, 14.4 in.

**Range in the Malay Peninsula.**—The west coast from Peninsular Siam to Johore.

**Extralimital Range.**—Breeds in South-Eastern Siberia, Mongolia and



**North China**, moving south for the winter to India (east and north) and **Tenasserim** ("sparingly distributed"). Common in Siam and French Indo-China, the Philippines and Borneo.

**Nidification.**—Does not breed in the Malay Peninsula. The nest is placed on the ground, as in the other species of harrier. The eggs are bluish white, sometimes sparsely marked with brown. They measure about 1.7 by 1.4 in.

**Habits.**—A winter visitor. Common in the Siamese part of the Peninsula, much less numerous in the south and very rare in the extreme south. According to Mr E. Seimund it is not uncommon in the winter months on marshy ground near Kuala Lumpur, but it is very shy and hard to approach. Specimens have been obtained in January and March. The habits seem to be much like those of other harriers. In different parts of its range the chief food has been variously described as frogs or large grasshoppers.

*Note.*—Montagu's harrier (*Circus pygargus*) has been included in the list of Malayan birds apparently on the strength of a description given by Kelham of a male shot, but not preserved, by him in Johore, but we regard the record as too uncertain for more than bare mention in this volume. This species can be distinguished from the other harriers occurring in the Peninsula by the fact that only the second, third and fourth primaries are notched on the outer web, whereas in the others the fifth feather is also notched. The plumage of the adult male is largely bluish grey.

### *Accipiter trivirgatus indicus*

#### The Crested Goshawk

*Astur indicus* Hodgson (or Pearson), *Bengal Sporting Magazine*, vii., 1836, p. 177 (India).

*Astur trivirgatus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 105 (pt.); Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 119; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 243.

*Lophospizias trivirgatus*, Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 401 (pt.).

*Lophospizias trivirgatus rufitinctus*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 103.

*Astur trivirgatus rufitinctus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 155.

*Astur trivirgatus indicus*, Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 109.

**Malay Names.**—Hélang rajawali (a sparrow hawk); lang, hělang (a hawk).

**Description.**—A tuft of lengthened feathers about one and a half inches long on the nape. Adults are grey-brown above, darkest on the head; tail boldly barred; breast streaked; abdomen barred. Sides of breast, pinkish brown.

*Adult male.*—Top of head and crest, blackish grey, the feathers white at the base. Sides of head, paler grey. Throat, white with a median black

streak, and **separated** from the grey cheeks by a thin blackish malar stripe. Sides of **breast, rust-colour**; remainder of under parts, white, heavily streaked with **blackish** on the fore neck, even more heavily with dusky rust on the **breast, heavily** barred with brown on the abdomen and flanks and more **narrowly, but** regularly, barred with brownish black on the thighs. Under **tail coverts**, white with a trace of a few thin dusky bars near the vent. Upper **parts, very** dark brown with a grey bloom on the mantle, becoming blackish on the lesser wing coverts, and passing into grey on the marginal coverts near the edge of the wing. Edge of wing, white. Wing quills, brown with **darker** broad bands, more conspicuous on the inner webs; the inner webs **white** at the base. Longest upper tail coverts, broadly tipped with white. All tail quills, except the centre pair, narrowly white at the base of the inner web; otherwise brownish grey with a narrow whitish tip and three or four (visible) broad, dark brown bands, the dark bands rather broader than the paler interspaces. Lining of wing and axillaries, white, heavily spotted on the coverts and barred on the quills and axillaries with blackish brown.

*Adult female*.—Very like the male, but the top and sides of the head much darker, blackish rather than grey. Upper parts, slightly paler brown.

*Immature*.—Also crested but plumage quite different. Crown, nape and crest, rufous-buff, heavily spotted with black, the white bases of the feathers often showing through. Remainder of upper parts, dark brown, the feathers with narrow buff fringes. Wing and tail quills banded, but the dark bands usually narrower than in the adult. Under parts, white with a black, median throat stripe and heavily spotted, marked with large brown spots, the spots often surrounded by a rufous-buff suffusion. Thighs, barred. Cheeks, whitish, or washed with brown, and with darker shaft stripes.

An older bird is in an intermediate stage. The plumage is largely that of the immature bird, but the *barred* feathers of the adult plumage are beginning to appear on the abdomen and others with spots of bright rust-colour on the sides of the breast.

**Soft Parts**.—*Adult*: iris, orange; bill, slate, culmen, black, cere and gape, greenish yellow; feet, pale yellow (*Robinson and Kloss*). *Immature*: iris, yellow; upper mandible, black; lower mandible, bluish slate; feet, pale yellow.

**Dimensions**.—*Male*: total length, 15 in.; wing, 8.25 in.; tail, 6.5 in.; culmen from cere, 0.7 in.; bill from gape, 1.1 in.; tarsus, 2.4 in. *Female* larger: wing, 9 in.; tail, 6.8 in. The above measurements are those of a pair from the Malay States, but some birds from Peninsular Siam are slightly larger, the wing of a male measuring 8.9 in. and that of a female, 9.6 in. Birds occurring in the Malay Peninsula are, in fact, intermediate between the brighter and smaller typical *trivirgatus* of Sumatra and the duller, larger, northern form, *indicus*.

**Range in the Malay Peninsula**.—From Peninsular Siam south to Mt Ophir, Malacca territory. Not recorded from any of the islands.

**Extralimital Range**.—From Formosa and Hainan through Yunnan and Assam to Northern India. Also in Tenasserim, French Indo-China and Siam. In South India and Ceylon it is replaced by a smaller race which is said to

be inseparable from the typical form occurring in Sumatra, Borneo and Java. The species also occurs in the Philippines.

**Nidification.**—The species breeds in Selangor, where, in forest, on 14th January, Mr G. C. Madoc found two eggs in a nest which he describes as a great mass of small dead twigs placed sixty-five feet up in the umbrella top of an almost leafless tree. The eggs are white, and regular ovals in shape, and, according to Mr Madoc, they measure 1.93 by 1.47 in. and 1.92 by 1.46 in.

**Habits.**—This is not a common bird in the Malay Peninsula, but it seems to be more numerous in the north than in the south. It is resident and has not been taken in the mountains or at the lighthouses. South of Siamese territory it is known to us only from a few specimens secured in the lowlands of Perak and Selangor and a bird collected by Wallace at Mt Ophir, on the boundary of Malacca and Johore. In North Siam, Count Gyldenstolpe records it as avoiding evergreen jungles and the lower valleys with their dense vegetation, and frequenting the deciduous forests and thin-tree jungle. In most parts of its range it is recorded as a forest bird feeding on reptiles, and birds even as large as a pheasant.

### *Accipiter badius bifasciatus*

#### The Burmese Shikra

*Astur bifasciatus* Peale, *U.S. Expl. Exp.*, 1848, p. 70 (Singapore).

*Astur poliopsis*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 110; Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 121; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 244.

*Astur badius* (part), Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 398.

*Astur badius poliopsis*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 103; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 151; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 106.

**Malay Names.**—Hělang rajawali (a sparrow hawk); lang, hělang (a hawk).

**Description.**—Upper parts, grey; under parts, closely barred pinkish rufous and white. Young birds are brown above and white, spotted with brown, below.

**Adult.**—Upper parts and cheeks, pale bluish grey, paler on the cheeks and head, darker on the lesser wing coverts. Primaries, darker grey, slightly blackened. Inner webs of all quills partly white, or pinkish cream, with broad, dusky bars. In fresh plumage, the secondaries narrowly, almost imperceptibly, fringed with white. Tail, very narrowly white-tipped, the centre feathers slightly darkened subterminally; other tail feathers with blackish bands on the inner webs, scarcely perceptible on the outermost feather; all except the outermost feather with a broad subterminal black band. Lores, an ill-defined superciliary stripe and throat, whitish, the throat perhaps freckled or faintly barred with grey and with or without a pale grey median streak. Remainder of lower parts and axillaries, white, heavily and regularly barred on the breast, upper abdomen, flanks, and sometimes the upper part of the thighs, with pale pinkish rufous (vinous), the coloured

bands broader than the white interspaces. Wing lining, white tinged with cream, the bars of the quills showing through.

**Note.**—The above description is taken from a male in what appears to be the perfect plumage of the adult. Many other males and all the females differ in that they have the inner web of the outermost tail feather strongly barred with black and also show remains of barring on even the centre pair of tail feathers. It is fashionable to regard such birds as younger individuals, but it may be that only a minority of males ever attain the perfect-expression point of the plumage. I regard the latter view as more probable. In some adults there is a faint rufous tinge on the nape.

**Juvenile.**—Quite different. Upper parts, dark brown, the feathers edged with rufous. Tail, grey with broad black bands. Under parts, white tinged with creamy buff and with large brown spots, darker and longer on the breast, redder and more rounded on the abdomen.

**Immature.**—Very similar to the juvenile, but upper parts paler brown with the rufous fringes narrower and paler. The median throat stripe conspicuous.

In a later stage the upper parts are pale ashy brown; under parts, white, heavily streaked on the breast with dark brown, and suffused and irregularly barred with rufous on the remaining under parts. All the above descriptions were drawn up from Siamese birds.

**Soft Parts.**—*Male*: iris, crimson, or crimson with a narrow outer ring of yellow; upper mandible, blackish, base at the sides grey; lower mandible, grey, tip blackish; cere, olive-yellow; feet, yellow. *Female*: iris, yellow (Annam specimens, *Kloss*). *Immature*: iris and feet, lemon-yellow; bill, brown, bluish at base.

**Dimensions.**—*Male*: total length, 12.2 in.; tail, 5.3 to 6 in.; wing, 7.6 to 8 in.; culmen from cere, 0.6 in.; bill from gape, 0.85 in.; tarsus, 2 in. *Female* larger: total length, 14 in.; tail, 6.8 in.; wing, 8.5 to 8.7 in.; culmen from cere, 0.7 in.; bill from gape, 1 in.; tarsus, 2.2 in.

**Range in the Malay Peninsula.**—Peninsular Siam including Junk Zeylon and the neighbouring island of Panjang. Perak; the Sembilan Islands off the mouth of the Perak river. Malacca territory (*Davison*); Singapore Island.

**Extralimital Range.**—The shikra is a widely spread hawk, with races in Africa, India and Ceylon (the typical race). We regard the present subspecies as ranging from Assam to Kwangsi, Hainan and Formosa in the east; and through Burma proper, Tenasserim, Siam and French Indo-China to Sumatra in the south.

**Nidification.**—There is no record from our area. Oates mentions a nest found in Tenasserim in April. It was made of sticks and placed in the branches of a large tree. The three eggs were pale bluish white, the shell fine and with little gloss. The eggs measured about 1.6 by 1.25 in.

**Habits.**—The shikra is common in the Siamese part of the Peninsula, where it is an open-country bird and possibly resident, but it becomes rare farther south, and in the southernmost parts of its range seems to be only a migrant. The only examples we have seen from the Malay States are a female

from a small island in the Straits of Malacca, off the Perak coast (December), and a male collected by Mr A. T. Edgar at Sitiawan, Lower Perak.

The Singapore record is based on a mounted specimen in the Raffles Museum labelled "Dec. 1891." We feel rather doubtful about the accuracy of the label although a reliable record for Sumatra indicates that the species is likely to occur in Singapore.

Although it is not found in thick forest, Davison thought that the favourite haunts were clearings studded over with dead trees and stumps; also the well-wooded banks of rivers and creeks. The food consists of insects and reptiles. Insects are caught on the wing and the flight is usually short. A sharp note is uttered when the bird is perched.

*Accipiter gularis gularis*

**The Japanese Sparrow Hawk**

Vol. I., p. 71.

In the adult male the whole of the upper parts are dark grey, the tail with four broad darker bars. The throat is white and the remainder of the under parts very pale buffy pink, usually, but not always, with some obsolete whitish bars. The depth of colour on the under parts is very variable and ranges from almost pure white to deep pinkish cinnamon.

Females are rather different and have the top of the head dark grey and the remainder of the upper parts dark grey-brown, with the tail barred as in the male. The under parts are whitish with a mesial stripe on the throat and elsewhere broadly barred with bright brown. Young birds (both sexes) have the upper parts dark brown, the feathers with pale buff edges, the tail boldly barred with black, and the under parts white, heavily streaked on the breast with pale brown and with large spots of the same colour elsewhere.

The total length of males is about 11 in.; wing, about 6.5 in. Females are larger: wing up to 7.8 in.

The breeding-grounds of this hawk are in Japan, China, etc., and the birds move south in autumn, during which season birds of passage are common on the small islands in the Straits of Malacca. In the late winter months the species is distributed fairly well over the lowlands of the whole Peninsula in all types of country, but is commonest on the coasts. The food consists mainly of small birds.

There is a resident form of this species in the mountains of the Peninsula but little is known about it, and properly authenticated eggs have not yet been obtained. It differs from the migratory *gularis* in its very richly coloured under parts.

*Accipiter soloënsis*

**The Chinese Goshawk**

*Falco Soloënsis* Horsfield, *Trans. Linn. Soc.*, xiii., 1821, p. 137 (Java).

*Astur soloënsis*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 114; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 400; Oates, *Cat. Birds' Eggs, Brit.*

*Mus.*, ii., 1902, p. 245; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 104; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 153.

**Malay Names.**—Hēlang rajawali (a sparrow hawk); lang, hēlang (a hawk).

**Description.**—In all plumages very like the preceding species but much **smaller** and the cere distinctly yellow, even in dried skins. Adults with the **upper parts** darker and the under parts unbarred.

**Adult male.**—Upper parts, grey, almost blackish grey on the wings **and becoming** black on the primaries. Wing quills, white at the base of the **inner web**. All tail feathers except centre pair whitish along edge of **inner web** and all except the centre and, in some cases, the outermost pairs barred **with** black on the inner web. Lores whitish. Cheeks and sides of neck, **paler** grey than the upper parts. Throat, white with a few narrow black shaft stripes, and perhaps finely freckled with grey. Breast, flanks and upper abdomen, deep vinous. Lower abdomen, thighs and under tail coverts, white; lower flanks and thighs, minutely freckled with grey. Wing lining and axillaries, white, perhaps tinged with cream.

**Adult female.**—Like the male but the grey parts darker, almost blue-black, and the vinous under parts deeper in colour, almost brick-red. This is according to a specimen in the Raffles Museum collection. Some authors do not admit a sexual difference in plumage.

**Immature.**—Quite different. Top of head, sooty brown, almost black. Upper parts, dark brown, the feathers with narrow rufous fringes. Wing quills, blackish, on the inner web largely white and with dark bars, obsolete on the outer primaries. Tail, greyish brown with broad black bars on all feathers except the centre pair. An indistinct superciliary stripe, whitish freckled with rufous. Cheeks, dark grey. Under parts, white, throat streaked with blackish in the centre line and at the sides. Breast and upper abdomen heavily marked with elongate rich brown spots which tend to coalesce on the sides of the breast and become fewer, smaller and rounder on the lower abdomen. Thighs indistinctly barred with pale rufous. A few irregular black spots on the under tail and under wing coverts. Axillaries with narrow dusky bars.

**Note.**—Most birds we have seen from Malaysia are in plumage intermediate between that of the immature and adult states described above. In some moulting birds scattered new grey feathers of the adult plumage are conspicuous on the upper parts among the older brown feathers of the immature plumage. In these birds the breast is already vinous but the abdomen retains the large spots characteristic of the young bird. Others seem to have newly acquired the adult plumage: they differ from more aged birds in the under parts, which are indistinctly barred with white, and in the inner wing quills, which retain some black bars on their inner webs.

**Soft Parts.**—Iris, yellow; cere, yellow to orange-red; bill, horny blue, blackish at the tip, yellow on the edges; feet, yellow. According to published records the colour of the iris is variable even in adult birds of the same sex. In males it is recorded as brown, yellow or red.

**Dimensions.**—Total length, 11.5 in.; tail, 5 in.; wing, 7.25 to 7.9 in.; culmen from cere, 0.5 in.; bill from gape, 0.8 in.; tarsus, 1.6 to 1.7 in. There seems to be very little difference in size between the sexes. Perhaps females run a trifle larger than males. La Touche recorded one with a wing-length of about 8.25 in.

**Range in the Malay Peninsula.**—On the mainland from Kuala Lumpur south to Singapore, but the range is no doubt more extensive than the few available specimens indicate. The following islands in the Straits of Malacca: Terutau, Langkawi, Rumbia and Jarak.

**Extralimital Range.**—Breeds in North China and Korea. Moves south to the Nicobars and South Tenasserim. Occurs in Siam and French Indo-China, but, apparently, not commonly. Recorded from all the large land-masses in Malaysia; also the Philippines, Celebes, the Lesser Sunda Islands and the Moluccas east to Waigiu.

**Nidification.**—Does not breed in the Malay Peninsula. In China the rough nest of sticks is said to be placed on a tree but the bird is also said to make use of old magpies' nests. Eggs in the British Museum ascribed by Oates to this species are described by him as of a regular oval form, without gloss, and in colour creamy white, sparingly speckled with chocolate-brown. They measure about 1.5 by 1.1 in.

**Habits.**—Not a common bird in the Malay Peninsula and apparently only a migrant, the few specimens we have seen being dated from October to December. It occurs in small numbers with other migratory species on the small islands in the Straits of Malacca during the "autumn" influx and is then also found, sparingly, in the lowlands of the Peninsula, but has not yet been obtained in the mountains. Davison collected it at Klang in Selangor and in Malacca territory. Mr E. Seimund has obtained one or two near Kuala Lumpur, and we have seen several shot on Singapore Island. We know little of its local habits. In other parts of its range it is variously described as a forest or open-country bird, and the food is usually recorded as large insects, reptiles, frogs and small birds.

### *Buteo burmanicus burmanicus*

#### The Desert-Buzzard

*Buteo burmanicus* Hume, *Stray Feathers*, iii., 1875, p. 30 (Burma); Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 143.

*Buteo plumipes*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 180; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 256.

*Buteo desertorum* (pt.), Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 393.

**Malay Names.**—Lang, hēlang (any hawk or eagle).

**Description.**—*Adult.*—A large brownish hawk with the front of the upper part of the tarsus feathered. So variable in the details of plumage that the description of any one specimen can convey only a general idea of the species.

*Adult*.—**General** colour above, dark brown, darkest on the forehead and mantle, and an indication of darkening on the nape; slightly greyish on the lower back and rump; the feathers all with more or less dark shaft stripes and edged with rufous, or buff, the crown especially rufous in tone. Sometimes the white bases of the nape feathers show through and help to produce a variegated effect as do white bars, perhaps tinged with rufous, on the normally hidden parts of the scapulars and wing coverts. Tail quills, rufous, brightest on the inner webs and mottled with darker brown; a narrow white tip and a broad, ill-defined subterminal band. About four narrow, indistinct brownish bars on the terminal half of the tail and faint indications of other bars on some of the feathers. Wing quills, blackish brown, the outer webs of the primaries washed with grey. Inner webs of all quills at the base, white, changing to rufous on the secondaries and with a few narrow bars of brown, most distinct on the secondaries, obsolete on the primaries. A dark brown moustachial patch. Throat, buffy white with narrow, darker shaft stripes. Under tail coverts, whitish with a few black spots. Thighs, brown with faint rufous bars. Remaining under parts, rufous brown with narrow dark shaft stripes but the feathers so broadly edged, indented, or irregularly barred with whitish buff that a very variegated appearance is produced. The general effect in the specimen now described is of whitish-buff under parts, streaked and spotted with brown and with two broad brownish zones crossing the breast and abdomen. Under wing coverts, mixed blackish brown, buff and rufous. Axillaries, whitish with a rufous pattern. (*Male*, Selangor).

*Dark phase*: described by Mr Stuart Baker as "dark purple or chocolate-brown throughout; the head often with a little rufous edging to the feathers; ear coverts, rufous; lores and sides of forehead, white; the tail-feathers are faintly barred and the quills are faintly barred and marked with white as in the normal specimens." I have not seen this phase in Malaya.

*Immature*.—A male from Perak is probably young. In it the head, neck, under parts and wing lining are creamy white, the head and neck broadly striped with brown, the under parts and wing lining with large heart-shaped rufous brown spots. Remaining plumage much as in the adult described above, but the inner webs of the lateral tail feathers largely white.

**Soft Parts**.—"Iris dull yellowish mingled with brown, or light hazel; cere varying from greenish yellow to yellow; gape yellow; bill blackish; legs and feet citron-yellow; claws, black" (*Legge*).

**Dimensions**.—Total length, about 19 in.; tail, 7.75 to 8.25 in.; wing, 14.1 to 14.75 in.; culmen from cere, 0.85 in.; bill from gape, 1.5 in.; tarsus, 2.8 in. *Females* run larger: wing, 16.5 in.

**Range in the Malay Peninsula**.—Near Taiping, Perak; Kuala Lumpur.

**Extralimital Range**.—The breeding-grounds extend from Turkestan and Tibet across Asia to Japan. Moves south in winter to Ceylon, Burma, including the south of Tenasserim, French Indo-China and the Malay Peninsula. No record for Siam.

**Nidification**.—Does not breed in the Malay Peninsula.



**Habits.**—A female of this buzzard was shot at Kuala Lumpur, Selangor, 27th October 1906, and a male in the same place in 1911. Two other specimens, one adult and one immature, were taken many years ago near Taiping, Perak. The local status of the species therefore seems to be that of a very rare winter migrant. We know nothing of the habits and therefore quote from La Touche, who writes of this buzzard in China, "frequents open country, both wild and cultivated, and in winter may be commonly seen on a tree bordering a ploughed or fallow field lying in wait for its prey. The Foochow wild fowlers call it the Hen-hawk, but whether it attacks domestic fowl is very doubtful, its natural food being rodents and suchlike small prey. It may be seen also circling high overhead, especially when migrating, the dark patch on the under-wing being very conspicuous; and during migration time it is a beautiful sight to see these fine birds sailing over in wide circles, the very wide-spread rounded tail and the wing-patch making them easily recognizable."

*Hieraaëtus pennatus pennatus*

**The Booted Eagle**

*Falco pennatus* Gmelin, *Syst. Nat.*, i., pt. 1, 1788, p. 272 (Spain).

*Nisaetus pennatus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 253; Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 144.

*Hieraëtus pennatus*, Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 344; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 79; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 56.

*Eutolmaëtus pennatus*, Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 271.

**Malay Names.**—Lang, hëlang (any hawk or eagle).

**Description.**—A small brown eagle with paler head and neck. Under parts streaked. Plumage variable.

**Adult.**—"Forehead and lores whitish; a narrow black superciliary streak; head and neck above and on sides fawn-colour or tawny, feathers with black shaft stripes that are broader on the nape and broader still on the crown; cheeks and ear coverts darker; upper parts brown; upper back, larger scapulars, and rump dark umber-brown; tertiaries, smaller scapulars, and wing coverts brown, with broad whity-brown edges and darker shafts; larger coverts darker but pale-edged; quills blackish, secondaries with pale ends; upper tail coverts fawn or rufous brown; tail feathers greyish brown above, greyish white beneath, with traces of dark bars, the last one much broader, and pale tips; lower parts, including wing lining, buffy white, with black longitudinal streaks often fringed with ferruginous, these are thickly marked on the chin, more thinly on the throat and breast, generally disappearing on the abdomen, and replaced by faint rufous bars on the thigh coverts and vent in very old birds; a few black spots beneath the wings.

"Some birds are dark brown throughout, and although these may be

young in general, the dark plumage appears in some cases to be retained for a long time, as individuals certainly breed in it.

"*Young birds* usually have the head and neck rufous brown or dull rufous, sometimes dark brown; the upper plumage brown as in adults, but with dark shaft stripes; tail coverts whitish; lower parts either dark brown or pale rufous with blackish streaks, except on the lower abdomen: tail greyish brown above, paler below, more or less distinctly banded and pale-tipped" (*Blanford*).

**Soft Parts.**—"Iris, brown; bill, bluish grey or pale blue with black tip; cere and gape, yellow; legs, dull yellow" (*Stuart Baker*).

**Dimensions.**—*Male*: total length, 19 in.; tail, 8.5 in.; wing, 15 in.; tarsus, 2.4 in.; bill from gape, 1.4 in. *Female*: total length, 21.5 in.; tail, 9 in.; wing, 15.75 in. (*after Blanford*).

**Range in Malay Peninsula.**—Kuala Lumpur and Singapore.

**Extralimital Range.**—Breeds in Europe and eastwards across Asia to Transbaikalia; also in India and North Africa. In winter it moves south, chiefly, it would seem, to India and North-East Africa. Known from Burma, including Tenasserim, but not, apparently, from Siam or French Indo-China. Birds from the extreme east of the breeding range have recently been separated as another subspecies on account of slightly larger size.

**Nidification.**—No record from the Peninsula. Although chiefly a winter visitor to India there are records of this small eagle nesting in that country. The large nest of sticks is placed in a tall tree. The eggs, which are usually two in number, are described by Oates as "generally plain white or pale greenish white; a few, however, are sparingly marked with rufous or pale yellow. Specimens measure from 2 to 2.3 in. in length and 1.56 to 1.86 in. in breadth."

**Habits.**—A very rare winter visitor to the Malay Peninsula. It is known to us only by a male taken at Kuala Lumpur in March 1900 and two old mounted specimens in the Raffles Museum, both obtained in Singapore, one in January 1889 and the other without precise data. This latter specimen is, no doubt, the bird from Singapore mentioned by Hume in *Stray Feathers*, viii., 1879, p. 44. I have no personal knowledge of the habits of this species. Referring to the bird in India Mr Stuart Baker writes, "It is a bold powerful bird for its size, preying on all kinds of small mammals and birds, and often attacking and carrying off domestic chickens and ducks. It prefers open well-wooded country, but is sometimes seen in forest and round about villages and cultivation."

### *Hieraaëtus kienerii formosus*

#### The Rufous-bellied Hawk-Eagle

*Hieraaëtus kieneri formosus* Stresemann, *Orn. Monatsber.*, xxxii., 1924, p. 108 (Celebes).

*Lophotriorchis kieneri*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 255; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 345; Robinson and Kloss,

*Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 96; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 80.

*Lophotriorchis kieneri kieneri*, Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 57.

**Malay Names.**—Lang, hëlang (any hawk or eagle).

**Description.**—A nuchal crest formed by a tuft of lengthened feathers; feet feathered to the base of the toes. Upper parts, black; breast, white; remainder of under parts, chestnut streaked with black. Young birds are brown above and white below.

**Adult.**—Sexes alike. Entire upper parts and sides of head, glossy black with greenish reflections, less glossy and more brownish on wing and tail quills, a few streaks of chestnut on the cheeks. Inner webs of wing quills, smoky at the base, becoming white on the outer primaries, mottled with brownish and with faint indications of dusky bars. Tail feathers, indistinctly barred with black, most obviously on the inner webs, which are smoky on the edges. Chin, throat and upper breast, white, sometimes faintly washed with chestnut and with a few broad black streaks on the sides of the neck and on the breast. Remaining under parts including axillaries and under wing coverts, except distal series which are black and white, bright chestnut, broadly streaked with black except on feet and under tail coverts, the streaks coalescing into an ill-defined patch on the sides of the flanks. Under side of wing and tail quills, whitish, conspicuously barred with black, except the outer tail feathers; tail, with a broad dark terminal band.

**Immature.**—Colour quite different. Upper parts, pale brown becoming blackish brown on the quills, the edges of the feathers paler, the centres rather darker, especially on the head, nape and mantle. Lores and a streak behind the eye, blackish; sides of the head, mixed with rufous. Under parts, including axillaries and under wing coverts, white, the breast with or without a few dark-centred chestnut streaks; under tail coverts and tarsus, mixed with a little chestnut. A dark brown patch on the sides of the abdomen. Tail, dark brown barred with black.

**Soft Parts.**—Iris, brown; bill, black, bluish slate at base; cere and feet, yellow. *Immature*: iris, brown; lids, greyish green; bill, dark slate, lighter at base; feet, pale yellow.

**Dimensions.**—Total length, 19 in.; tail, 7 to 7.25 in.; wing, 12.75 to 14 in.; culmen from cere, 0.9 in.; bill from gape, 1.4 to 1.5 in.; tarsus, 2.6 in. *Females* average larger than males: wing, 12.5 to 15 in.

**Range in the Malay Peninsula.**—Selangor, Malacca and Singapore.

**Extralimital Range.**—From Sumbawa in the Lesser Sunda Islands, Celebes and the Philippines, throughout Malaysia to French Indo-China, Siam, Manipur, Assam and west to Nepal. Also in South-West India and Ceylon. Not yet recorded from Burma. Malaysian birds are smaller than those occurring in the Himalayas, and two subspecies are therefore recognized. The species is so rare in collections that the exact boundaries of these races cannot yet be established with any degree of certainty, but *formosus* based on a bird from Celebes seems to extend north to Cachar.

**Nidification.**—No record from the Malay Peninsula. According to authors, in South India the large nest of sticks is placed in a tall tree in forest. The single egg measures about 2.4 by 1.9 in. and is white with small pale or reddish-brown markings, and sometimes with secondary markings of grey.

**Habits.**—A rare bird in most parts of its range and especially so in the Malay Peninsula where it is known to us only by Davison's old record from Malacca territory; three specimens in the Selangor Museum obtained near Kuala Lumpur between 1895 and February 1936; and two specimens in the Raffles Museum shot in Singapore on 4th August 1891 and 4th May 1925. Judging from the dates and localities of the few local specimens it seems to be a resident but wandering species, and birds breeding, or bred, in the countries immediately north of the Malay Peninsula no doubt move south in the autumn. We know little of its habits in the Malay Peninsula. One of the Kuala Lumpur specimens was killed while attacking domestic fowls. One of the Singapore birds had boldly entered a chicken-house and another was captured when in pursuit of tame pigeons. According to Blanford it is a bold courageous bird, with a flight and mode of attack somewhat resembling a falcon's. The food is recorded as small mammals and birds.<sup>1</sup>

*Ictinaëtus malayensis*

**The Black Eagle**

Vol. II., p. 29.

A large, long-tailed eagle, almost black in fresh plumage, with striking yellow feet. The claws are very long, less curved than in other Malayan birds of prey, and the outer toe is remarkably small. The tail is narrowly and irregularly barred with grey-brown on the upper surface and more conspicuously with whitish on the under surface. Young birds have the upper parts dark brown and the under parts tawny-buff streaked and finely mottled with blackish.

Total length, about 28 in.; wing, about 22 in.

Although common in the mountains of the interior, where it may be often seen at the various hill stations soaring over the forest, this fine eagle is much rarer in the lowlands where the few specimens that have been obtained have all been taken in or near old forest. There is no local record of the nest.

*Aquila clanga*

**The Greater Spotted Eagle**

Adults are dark brown. Younger birds have the feathers of the upper parts, including the tail quills, with broad whitish, or whitish-brown, ends; upper tail coverts, white; under parts, dark brown streaked with blackish. Legs feathered to the toes. Wing, 19 to 22 in.

An immature example of this eagle was shot in Singapore during the

<sup>1</sup> Since the above was written, Mr A. T. Edgar has sent a specimen from Perak to the Raffles Museum. Mr Edgar mentions that the bird had attacked golden plover and a large kingfisher (*Halcyon pileata*).

autumn of 1936. It is the first recorded example of the species from Malaysia. Hitherto the southern limit of the known range was Koh Lak in South-West Siam. The species has a wide range from Europe to Amurland, and in winter it is found in North Africa, India and South China.

*Spizaëtus cirrhatus limnaetus*

**The Changeable Hawk-Eagle**

Vol. I., p. 69.

The plumage of this large eagle is very variable and there are two distinct colour phases which are in no way to be correlated with sex, age, season or locality. Both phases may be represented in one nest of young. The sexes are alike. In the dark phase the whole of the visible plumage is dark blackish brown with some paler greyish mottling on the base of the tail beneath. In the pale phase young birds have the entire under parts pure white and the upper parts much variegated brown with tail regularly barred with darker brown. Adults have the under parts heavily streaked with blackish brown and the upper parts darker brown.

Total length, about 26 in.; wing, 14·5 to 17·5 in.

Common and widely distributed throughout the Peninsula in both forest and open country. It feeds on small mammals and birds and is a well-known poultry thief. Mr A. T. Edgar has found the nest in tall trees in Lower Perak and records an egg in January and a juvenile in April. He describes the egg as follows: "A broad oval, bluntly pointed at the smaller end, it measured 2·6 by 2·08 in. The surface is chalky, the colour dirty white, with a few indistinct blurred marks of dull reddish brown. The inside of the shell has a strong sea-green tint when looked at through the blow-hole." Eggs in January and February (*Ryves and Madoc*).

*Spizaëtus nipalensis fokiensis*

**The Chinese Hawk-Eagle**

*Spizaëtus nipalensis fokiensis* Swann (ex MS., W. L. Sclater), *Syn. List. Acc.*, 1919, p. 72; Fohkian, South China.

*Spizaëtus nipalensis* Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 267 (pt.); Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 352 (pt.); Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 96.

**Malay Name.**—Unrecorded.

**Description.**—A medium-size eagle, general colour brown, conspicuously barred with white on the under parts. Feet feathered to the base of the toes; a long crest up to 4 inches long, composed of a few lengthened feathers on the nape.

**Adult.**—Top of head and nape, blackish brown, the feathers broadly brownish buff at the base and fringed with the same colour, the general effect therefore variegated. Crest feathers, black, tipped with buff. Mantle, back, scapulars and smaller wing coverts, dark brown with copper reflections,

the feathers darker subterminally, paler at the edges : long scapulars narrowly tipped whitish and with hidden, indistinct, broad darker bars and white mottling on the inner web. Remaining wing coverts and inner secondaries rather paler brown with whitish-buff tips, the hidden parts indistinctly and broadly barred with dark brown and with broken white bars or mottling, especially on the inner webs. Remaining wing quills, blackish brown, partly white on the inner webs at the base and with broad blackish bars which are most noticeable on the under surface. Upper tail coverts, barred pale brown and white, the white bars narrower. Tail quills, barred blackish brown and greyish brown, the paler bars narrower and slightly mottled with darker brown, and on the lateral feathers tending to white on the inner webs. Sides of head streaked brownish buff and blackish. Throat and breast, whitish, sparingly streaked in the centre line of the throat and on the fore neck and upper breast with black-brown. Lower breast feathers patterned with pale chocolate-brown. Remaining under parts and axillaries, pale chocolate-brown, darkest on thighs and palest on tarsi, barred with white, broadest on the abdomen, narrowest on the thighs. Under wing coverts the same except a proximal series barred black and white (*Female*, Peninsular Siam).

*Immature*.—"Young birds have the head and neck above and at the sides buff or whitish, with larger or smaller brown centres to the feathers, white tips on the mantle and quills ; tail with six or seven dark bars ; lower parts white or rufous-buff, sometimes with a few blackish-brown spots, chiefly on the breast. The crest is often small or wanting. In a further stage the buff and whitish edges to the upper plumage diminish, and there are large black-brown drops on the lower parts ; the thigh coverts and vent sometimes pale rufous, sometimes brown, and more or less barred with white. Occasionally the tail is without bars. There is a gradual passage to the adult plumage" (*Blanford*).

**Soft Parts**.—Iris, orange ; bill, black, base, grey ; feet, pale yellow (*Robinson and Kloss*).

**Dimensions**.—*Female* : total length, 28 in. ; tail, 11 in. ; wing, 17.25 in. ; culmen from cere, 1.4 in. ; bill from gape, 1.95 in. ; tarsus, 4.1 in. The wings of females of this race are said to run up to 18.6 in. *Males* are smaller : wings, 16.5 to 17.1 in.

**Range in the Malay Peninsula**.—Peninsular Siam, including Terutau Island.

**Extralimital Range**.—The present race is found in South-East China (records from Kwangtung, Fohkien, Chekiang and Anhwei and probably resident in all these places) and Hainan. There seems to be no record from French Indo-China and very few from Siam. Mr Stuart Baker includes Tenasserim in the range. To the west the larger, typical race occurs in Yunnan, Assam and along the Himalayas to Kashmir, drifting on to the plains of India in winter. There are other resident representatives of the species in Japan ; South India and Ceylon ; Java ; the Philippines ; Celebes ; and in our opinion even *Spizaetus alboniger*, resident in the Malay Peninsula, is only a subspecies of *S. nipalensis*.

**Nidification.**—Does not breed in the Malay Peninsula.

**Habits.**—The local status appears to be that of a very rare or accidental winter visitor to the northern part of the Peninsula. The only locally obtained specimens with which we are acquainted are an immature male obtained by a Dyak collector in the hills of Pulau Terutau, in the northern part of the Malacca Strait, in March 1909, and an adult female collected by Messrs Robinson and Kloss, in heavy forest at Tapli, Pakchan, Peninsular Siam, on 3rd March 1919. A bird collected by Count Gyldenstolpe in Siam was attacking a large wood-duck (*Asarcornis scutulata*) when shot. In China it is said to be found only in the forests of the hills. In India the typical race is recorded as feeding on large birds, hares and other small mammals.

*Spizaëtus alboniger*

**Blyth's Hawk-Eagle**

Vol. II., p. 30.

The adults of both sexes are alike, but young birds are very different. In adults the upper parts, including a long crest on the nape, are deep black. The throat and breast are white heavily streaked with black. The remaining under parts are clearly and boldly banded black and white. Tail with a broad grey cross-band. Young birds are very different in appearance. They have the head, neck and under parts pale pinkish buff turning to almost tawny on the crown; the upper parts brown and the tail with about four dark bands. In a later stage the upper parts are much darker brown, the throat and breast pale tawny-buff streaked with dark brown, and the remaining under parts closely and regularly banded white and dark brown.

Total length, about 21 in.; wing, 11.8 to 13 in.

Adults of this hawk-eagle are not uncommon in the mountain forests of the Malay States, but they are rarely, if ever, seen in open country in the lowlands. Young birds are likely to turn up almost anywhere in the autumn, and I have seen one or two caught in Singapore. The species is by no means common, and the nest and eggs have not been described.

*Circaëtus ferox ferox*<sup>1</sup>

**The Short-toed Eagle**

*Accipiter ferox* S. G. Gmelin, *Nov. Comm. Acad. Petrop.*, xv., 1771, p. 442, pl. x. (Astrakhan, South Russia).

*Circaetus gallicus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 280; Oates, in Hume's *Nests and Eggs Ind. Birds*, iii., 1890, p. 150; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 355; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 275; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 98; Stuart Baker, *Faun. Brit. Ind., Birds*, v., 1928, p. 93; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 69.

**Malay Names.**—Lang, hëlang (any hawk or eagle).

<sup>1</sup> Better known as *C. gallicus* (Gmel.).

**Description.**—Tarsus bare and reticulated. Toes short. Upper parts brown, head paler. Tail banded. Breast mixed brown and white; abdomen barred white and brown.

**Adult.**—"Forehead, lores, cheeks and chin whitish, with black bristles; eyelids covered with white down; ear coverts brown with fine black lines; upper parts generally brown; shafts on head, back and wing coverts blackish; longer scapulars, primary and some secondary quills blackish brown outside, the quills white inside except at the tip and the primaries for some distance up each border; all quills except first primaries with dark cross-bands; tail brown above, white-tipped, whitish below, with dark cross-bands, generally 4 in number, the first concealed by the coverts; the inner webs of all rectrices except the middle pair partly white; chin, throat and upper breast brown like the back, with dark shafts, some white at the base of the feathers generally showing; lower breast, abdomen and lower tail coverts white, with a few brown subdistant spots or bars; lower wing coverts and axillaries barred brown and white" (*Blanford*).

**Immature.**—"In young birds the upper parts are paler; the head whitish with dark shafts, and the white bases of the feathers conspicuous; lower parts white, with brown shaft streaks on chin, throat and upper breast, and a few scattered spots of light brown or rufous on the lower breast and abdomen. Birds of the second year have the upper parts like adults, broad brown stripes on the throat and breast, and more numerous brown spots than the nestlings on the abdomen" (*Blanford*).

**Soft Parts.**—Iris, yellow; bill, bluish black; feet, whitish grey (a female from Siam: *Gyldenstolpe*).

**Dimensions.**—*Male*: total length, 26 in.; tail, 11.5 in.; wing, 21 in. *Female*: total length, 28 in.; tail, 13 in.; wing, 22 in.; tarsus, 3.75 in.; bill from gape, 2.3 in. (*Blanford*).

**Range in the Malay Peninsula.**—Kuala Lumpur.

**Extralimital Range.**—From Southern Europe across Asia to Mongolia and south to North Africa and India ("as far east as Lower Bengal": *Stuart Baker*). There is no reliable record from French Indo-China, but Count *Gyldenstolpe* obtained it in Siam. Recorded several times from the Lesser Sunda Islands. Some authorities regard birds from the eastern part of the range as subspecifically distinct under the name of *C. f. hypoleucus* Pall.

**Nidification.**—There is no record from the Malay Peninsula. In India, according to Mr *Stuart Baker*, the rough, untidy nest of sticks is placed in a tree, usually in open country. The single egg is white and measures about 2.9 by 2.3 in.

**Habits.**—This species was recorded by A. L. Butler from Ampang, near Kuala Lumpur, Selangor, many years ago, but the specimen is no longer in existence and we cannot trace any other local record. We have never met with the bird in life and therefore quote from Mr *Stuart Baker*, "This eagle is a bird of open country, both of dry plains and of wetter cultivated country. It spends much time circling round high up in the air, often in pairs, and during the breeding season indulges in wonderful evolutions. At other times



it sits on the branches of a tree or on some post and thence swoops on its prey, which consists largely of snakes, lizards and frogs. It also eats small mammals and birds, and will carry off ducks and small game when wounded. Its cry is described as a plaintive scream."

*Spilornis cheela bassus*

**The Malay Serpent-Eagle**

Vol. I., p. 65, pl. 2.

A large brown hawk with the under parts paler and more rufous than the upper parts; the abdomen plentifully spotted with large white spots; a broad white band across the middle of the tail, and the scapulars and wing coverts narrowly tipped with whitish. A long, broad black and white crest covers the nape. Total length, about 21 in.; wing, about 13.5 to 15.5 in.

A common resident bird in the Malay Peninsula although there is as yet no local record of the nesting. It is found alike in open country and forests. The food consists of small reptiles, frogs, birds, crabs, etc.

*Butastur indicus*

**The Grey-faced Buzzard-Eagle**

*Falco indicus* Gmelin, *Syst. Nat.*, i., pt. i., 1788, p. 264 (Java).

*Butastur indicus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 297; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 365; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 278; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 98; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 107.

**Malay Names.**—Lang, hēlang rintek (*Winstedt*: needs confirmation); lang sikap (Dindings).

**Description.**—A large hawk with short toes and the tarsus naked for the greater part of its length. Adults with the upper parts and breast brown; abdomen broadly barred. Young birds are streaked on the under parts.

**Adult male.**—Lores and forehead, narrowly, white; upper part of head, cheeks, sides of neck, and nape, ashy, greyest on the crown and on the sides of the cheeks, which are almost pure grey, and washed with brown on the neck. Mantle and scapulars, ashy brown with thin black shaft stripes. Lower back and rump, dark rufous brown; upper tail coverts, slightly darker, the lateral feathers white with broad brown bars. Wing coverts, brown mottled with bright rufous and with thin black shaft stripes. Primary coverts and primaries, outer webs and tips blackish brown, inner webs largely rufous, with narrow dark bars, and whitish along the edge at the base. Secondaries similar, but outer webs and tips dark brownish ashy. Tail quills, ashy with three visible, broad black bands, the outer feathers mottled with white on the inner webs. Throat, white with a broad dark central streak and bordered by indistinct moustachial streaks. Breast, ashy brown

tinged with rufous and with a few obsolete whitish spots which may disappear with age. Under tail coverts, white; remaining under parts including axillaries, white with broad rufous-brown bars, narrowest and palest on the thighs. Wing lining, white with a few irregular reddish-brown bars.

*Adult female*.—Very similar but differing in detail. General tone of plumage darker; rufous tinge entirely absent on breast, and on upper parts only noticeable on the outer upper wing coverts. A white patch above and behind the eye. Feathers of breast with whitish edges. Dark bands on tail narrower. Nape freckled with whitish buff.

*Immature*.—Forehead and a broad superciliary stripe, white. Crown and nape, mixed rufous and blackish brown. Upper parts, dark brown, darkest on the mantle; wing coverts, tipped with whitish and freckled with rufous on the edges. Wing quills less rufous than in the adult. Under parts, creamy white, heavily streaked on the breast with dark brown, the markings becoming shorter and paler on the abdomen, and round and pale rufous on the thighs.

**Soft Parts**.—Iris, chrome; bill, anterior half black, basal half pale yellow; feet, pale yellow. *Immature*: iris, brown; bill, black; legs, yellow (*Robinson and Kloss*).

**Dimensions**.—Total length, 16 to 17 in.; tail, 7 in.; wing, 12 to 13 in.; bill from cere, 0.75 in.; bill from gape, 1.3 in.; tarsus, 2.1 in. There is very little difference in size between the sexes but females run a trifle larger. Wing up to about 13.5 in.

**Range in the Malay Peninsula**.—Peninsular Siam including Junk Zeylon; Perlis; the Langkawi Islands; the lowlands of Perak including the Dindings. Singapore Island.

**Extralimital Range**.—Breeds in Japan and South-East Siberia, in the eastern part of its range moving south to the Philippines, Celebes, Moluccas and New Guinea in winter. On the western side it visits Burma, including Tenasserim, Siam from north to south, and French Indo-China. Borneo and Java, but no record from Sumatra.

**Nidification**.—Not known to breed in the Peninsula. In Japan it is reported as choosing solitary trees in cultivated fields as nesting sites and also tall trees in forest. The two to four eggs are described as white with a faint tinge of blue. Size about 2 by 1.6 in.

**Habits**.—Not a common bird in the Malay Peninsula and as yet only known from a few localities in the lowlands of the west coast and from Singapore Island, although, no doubt, it occurs on the eastern side of the Peninsula as well. The local specimens have been obtained from October to February, and it is therefore, almost certainly, only a winter visitor. We have never seen this species in the field. Davison, who met with it in Tenasserim, writes: "It seems to be of a confiding and somewhat indolent disposition, preferring to seat itself on some dry tree or other point of vantage, from whence it keeps a look-out for lizards, locusts, etc., of which its food seems principally to consist, as I found from an examination of the stomachs of those I killed."

*Cuncuma leucogaster***The White-bellied Sea-Eagle**

Vol. I., p. 75.

In adults of both sexes the head, neck and under parts are white, and the remaining upper parts pure grey. The tail is sharply divided in colour, the basal two-thirds black, the terminal third white.

Young birds are quite different. They are brown with the feathers of the upper parts edged with buff; the head almost buff; the tail mottled white and brown and the under parts much variegated, irregularly, with darker and paler brown.

Total length, about 28 in.; wing, about 21.5 in.

This large eagle with a wedge-shaped tail (centre feathers longest) is common along the coasts and on the small coastal islands of the Peninsula, but it is not often seen far from the sea. The food consists largely of fish and sea-snakes, which are snatched from the surface of the water. In Singapore it is very common and one or two can usually be seen patrolling the harbour, sitting on the fishing stakes, or slowly flapping their way over the town in the early evening on the way to well-known roosting-places at the tops of clumps of tall trees left standing, usually on high ground, in various parts of the island, often within the limits of the city. Some of these roosting-places have been used for many years. The nests, which are used year after year, are not always in the mangrove belt, but are just as often placed at the tops of tall trees anywhere near the coast. Nests with young have been noted in December (*Robinson*), February and March (*Edgar*); eggs in December and January (*Madoc* and *Ryves*).

*Haliastur indus intermedius***The Brahminy Kite**

Vol. I., p. 73.

The sexes are alike, but young birds and adults differ considerably in appearance. In the adult the head, neck and breast are white with very thin black shaft stripes. The primaries are black and the remainder of the plumage bright rufous-chestnut. Young birds are quite different. They are brown, palest, almost buffy, on the head, darkest on the upper parts and more richly coloured on the under parts. The feathers of the upper parts are tipped with buff and the under parts are streaked with the same colour. Thighs with thin black shaft stripes.

Total length, about 19.5 in.

This scavenging hawk is a familiar sight along the coasts of the Peninsula, especially in the harbours, but it is also found along the lower reaches of the larger rivers and inland on the ricefields where it feeds mainly on frogs and crustacea.

According to Mr A. T. Edgar the breeding season in Lower Perak is in the first three months of the year. The pile of sticks forming the nest is

generally not less than forty or fifty feet from the ground in a tree in the mangroves. The eggs are laid on a pad of dried clay. Mr Edgar describes the two eggs as: "They are round ovals, compressed at one end, measuring 2.09 by 1.62 and 2.05 by 1.6 in. The shell is tough, the surface chalky and dirty white in ground-colour, one egg very sparsely marked with small red-brown specks and scriggles, the other with quite a number of fine dots and lines, mostly congregated at the smaller end." The egg-shell shows green through the blow-hole. Season: eggs from December to March; young from April to May (*Madoc* and *Ryves*).

*Milvus migrans govinda*

**The Kite or Pariah Kite**

General plumage, brown, lighter on the crown and nape, which are streaked with black; wing coverts and scapulars edged with buff; under parts, richer brown streaked with pale buff and with blackish shaft stripes. Tail indistinctly barred; wing quills, whitish at the base of the inner webs; feet, yellow in adults.

Tail forked. Wing, roughly 18 in.

The pariah kite is an uncommon bird in the Malay Peninsula and very few specimens have been recorded. These are all from the western side of the Peninsula, from localities on or not far from the coast, and we regard the species as a rare winter visitor.

*Elanus caeruleus vociferus*

**The Black-winged Kite**

*Falco vociferus* Lath., *Index Orn.*, i., 1790, p. 46 (Coromandel Coast).

*Elanus caeruleus*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 336; Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 177; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 379; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 290.

*Elanus caeruleus caeruleus*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 97; Herbert, *Journ. Siam Soc., Nat. Hist. Suppl.*, vi., 1926, p. 332 (*Nidification*).

*Elanus caeruleus vociferus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 125; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 93.

**Malay Names.**—Lang (hělang) sewah; lang tikus.

**Description.**—Unmistakable in appearance. A medium-size hawk, pale grey above, white below. A large black patch on the wing.

**Adult.**—Sexes alike. Forehead, superciliary stripe, sides of head, entire under parts and axillaries, white. Under wing coverts, white except for a trace of black on the greater coverts. Eyebrow, black, expanded to a large spot in front of the eye. Lesser and median upper wing coverts and a small patch on the edge of the wing, black. Remaining upper parts, pale grey, palest on head and neck. Centre pair of tail feathers, grey; next pair grey

on the outer web: remainder of tail, white. Sometimes there is a faint grey wash on the under parts.

**Immature.**—Very similar to the adult but differing in detail. Grey upper parts tinged with brown and many of the feathers with whitish edges. Top of head heavily streaked with brown. Breast with a few thin dark streaks and washed with brownish on the sides.

**Soft Parts.**—Irides, red; bill, black; cere, gape and feet, yellow. In young birds the irides are yellow.

**Dimensions.**—The sexes seem to be alike in size. Total length, about 13 in.; tail, 5 to 5.5 in.; wing, 10.5 to 11.2 in.; bill from culmen, 0.7 in.; bill from gape, 1.1 in.; tarsus, 1.4 in.

**Range in the Malay Peninsula.**—Perak; Selangor; Singapore Island. Recorded from Penang, but the record is based on a bird collected by Cantor and the exact locality is therefore a little doubtful.

**Extralimital Range.**—India (from the base of the Himalayas) and Ceylon to Yunnan, Chekiang and Peking (once). Tenasserim, Siam and French Indo-China (common in the south, rare in the north). The typical race is African. The closely allied *E. c. hypoleucus* is found in the Greater and Lesser Sunda Islands, Philippines, Celebes and Sula Islands.

**Nidification.**—In Siam the bird breeds near Bangkok and the following details are from Mr E. G. Herbert's account of the breeding habits in that country. The nest is usually situated near a village, and is built in a rather small tree at about twenty-five feet from the ground. It is made of sticks, loosely put together, with little or no lining. The bird appears to breed twice in the year, as clutches of eggs have been taken in January, February, July and August. The eggs are very constant in size and shape. They are moderately broad ovals, slightly pointed at one end, smooth, and without gloss. The clutch in Siam is three or four. The ground-colour is usually yellowish white, but sometimes it is white. There is much variation in the markings. Some eggs are handsomely marked with bright reddish-brown clouded spots, mostly clustered at the large end; others are smudged and smeared all over with brown. Others again have a few small spots at the large end, on a pure white ground. Size about 1.6 by 1.2 in. In Lower Perak Mr A. T. Edgar has found the nest (eggs in December and February, young in June) at the top of a tall solitary tree on the edge of the ricefields and in the leafy top of a rubber-tree. He describes the nest as "an untidy pile of sticks and twigs, twelve inches across by eight inches in total depth, the egg-chamber being merely a depression, six inches in diameter by four inches in depth, and lined with smaller twigs."

**Habits.**—The black-winged kite is known to us personally only by a few specimens obtained and observed in open country in the lowlands of Perak and Selangor, and on Singapore Island, between August and November, and it is possible that most of the birds occurring in the Malay Peninsula are winter visitors only. Mr A. T. Edgar, however, has found the species breeding in Perak. It may be seen perched on isolated trees bordering the ricefields, or hovering and gliding, often very high, in the air. The food consists largely

of rats, lizards, frogs and large grasshoppers. In the ricefields it probably eats crabs and, on occasion, small birds. There is no definite record from Peninsular Siam or from the eastern side of the Peninsula, but in both these areas the bird is almost certain to occur.

*Machæramphus alcinus alcinus*

**The Slender-billed Pern**

*Machæramphus alcinus* Westerman, *Bijd. tot de Dierk*, i., 1848 (1851), p. 29, pl. 12 (Malacca); Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 342; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 408; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 94; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 169.

**Malay Names.**—Lang (hělang) malam; lang jambul (*Winstedt*).

**Description.**—A large black hawk with a conspicuous white chest and a long black nuchal crest. Toes very uneven in length. Although the bill is curiously small, with the upper mandible sharply keeled, the gape is wide. Obviously a very specialized form.

**Adult.**—Sexes alike. Throat and centre of breast, white, the black chin prolonged as a broad irregular streak down the centre of the throat. A few large black spots on the breast, usually at the sides. A patch above and below the eye, white. Remainder of plumage, black, glossy on the exposed portion, duller and brownish on the concealed parts. Under side of wing and tail quill shafts, whitish. Most specimens show faint bars formed by greyish mottling on the inner webs of the tail feathers. These may be signs of immaturity.

**Soft Parts.**—Irides, bright yellow; bill and claws, black; legs and feet, pale plumbeous (*Davison*).

**Dimensions.**—Total length, about 18.5 in.; tail, 6.5 to 6.75 in.; wing, 14.25 to 14.6 in.; culmen from cere, 0.8 in.; bill from gape, 1.8 in.; tarsus, 2.6 in.

**Range in the Malay Peninsula.**—The whole length of the Peninsula from Bandon in Peninsular Siam to Johore. There is no definite record from any of the islands, but the late H. C. Robinson told me in conversation, when he was staying in Singapore in January 1927, that he had seen a specimen of this hawk on the previous day in the Singapore Botanic Gardens. I have a manuscript note in my diary to the effect that Mr C. Boden Kloss confirmed this record at the time.

**Extralimital Range.**—South Tenasserim, Sumatra and Borneo. Not known from French Indo-China or Siam proper. New Guinea. There is a closely allied form in Africa.

**Nidification.**—In April 1913, in Bandon, Peninsular Siam, Messrs H. C. Robinson and E. Seimund met with two pairs of this bird nesting high in two solitary, lofty oil-trees from which the natives extract resin (*Dipterocarpus crinitus*), but the party was coming down-stream and did not stop to secure

the eggs. Mr Seimund tells me that the trees were standing on the bank of the river on open ground, but close to forest and limestone cliffs. The trees were close together with the upper branches interlocked. The nests were about twice the size of a rook's nest and one in each tree. Two birds were sitting near each nest and Robinson records that when disturbed they seemed half dazed by the light and flew comparatively slowly. At one time there was a nest of this species at the Batu Caves, near Kuala Lumpur in Selangor, but it was regarded as inaccessible. No other details concerning the nidification of this bird are available and the eggs have never been described.

**Habits.**—This hawk of striking appearance is widely spread and not rare in the Malay Peninsula, especially in wooded country in the vicinity of limestone hills, but owing to its crepuscular habits it is rarely observed, and its exceedingly swift and powerful flight makes it difficult to obtain. We have seen specimens from Bandon, Perak, Selangor and Johore. According to Robinson it was once not uncommon near Kuala Lumpur. The main item of food is bats. Mr E. Seimund tells me that he has watched this hawk feeding at dusk in Selangor and that it is his belief that the bats are swallowed whole when the bird is on the wing.

*Pernis apivorus ptilorhynchus*

**The Crested Malaysian Honey-Buzzard**

Vol. II., p. 25.

A long crest on the nape. Upper parts, brownish black becoming browner on the rump and tail, the latter banded with black and grey. Throat, whitish, outlined with black; under parts, brown, the breast streaked with black; remaining under parts, barred with white. A dark variety also occurs.

In very young birds there is little or no trace of the cross-barring on the abdomen and the under parts are whitish. Upper parts paler than in adults.

Total length, about 25 in.; wing, 16.5 in.

In addition to the resident form described above (although "resident" the nest and eggs have not been described) two other forms of the honey-buzzard visit the Peninsula in winter, when they are common and widely spread over the lowlands.

These migratory forms either have short crests or are quite crestless. They are *P. a. orientalis* from its breeding-grounds in Eastern Asia, and a smaller bird, which for the present can be regarded as *P. a. ruficollis*, from the north-west.

The habits of resident and migratory birds are difficult to isolate. The migrants are likely to turn up almost anywhere in the lowlands. They can be seen in ricefields, in the Botanic Gardens in Singapore, along the rivers, and especially in small patches of forest left standing in cleared areas and secondary jungle. It would seem that the resident birds are rather more conservative in their choice of country, preferring the old forest

of tall trees, especially on the hills. Nevertheless, such birds are found elsewhere.

The food consists largely of bees, their grubs and combs.

The migratory forms will be discussed in detail in the next volume.

*Aviceda leuphotes*

**The Black-crested Baza**

*Falco leuphotes* Dumont, *Dict. Sci. Nat.*, xvi., 1820, p. 217 (Pondicherry).

*Baza loophotes*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 352; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 409.

*Baza loophotes burmana*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 91; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 173 (see also *A. l. leuphotes*, p. 171); Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 121.

**Malay Names.**—Lang, hëlang (any hawk or eagle).

**Description.**—A gaily coloured hawk about the size of a pigeon. Upper parts, glossy black; under parts, boldly patterned black, white and chestnut. A long nuchal crest formed by a few greatly lengthened feathers. Edge of the upper mandible with two projecting "teeth."

**Adult.**—Head and neck all round, upper parts, wings, tail, under wing coverts, axillaries, thighs and under tail coverts, glossy black with greenish or bluish reflections in certain lights, the scapulars with white bases showing through as patches, and the inner primaries and secondaries rufous-maroon on the outer webs except at the tips, and in the case of the inner secondaries the rufous terminating in a subterminal patch of white. Inner, greater upper wing coverts, broadly banded with white, the outermost few feathers chestnut basally and subterminally on the outer web. Breast, white succeeded by a broad black band; upper abdomen and flanks, buffy white with broad rufous bars. Lower abdomen and vent, black. Under side of all quills, grey, the primaries dusky at the tips and the tail feathers with dark terminal or subterminal patches.

**Note.**—The above description is drawn up from a female and is typical of the majority of Malayan birds, but there is much variation in the details of the plumage which we do not understand. Many birds have the scapulars mixed with chestnut, far more chestnut in the wings than is indicated above, and the dark band bordering the white breast more chestnut than black. These birds are probably in an immature plumage. Some birds have no white on the secondaries and in others the outer webs are largely white. Our series is not large enough to show whether the last-mentioned condition is indicative of a sub-adult phase, the male, or individual variation. We are not yet satisfied that any of the variation is basically geographical.

**Soft Parts.**—Iris, dark brown; bill and cere, pale slate, darker on the edges and culmen; feet, dirty slate or greenish slate (*Robinson and Kloss*).

**Dimensions.**—Total length, 12.4 to 12.6 in.; tail, 5.5 in.; wing, 9.2 to 9.5 in.; bill from cere, 0.7 in.; bill from gape, 1 in.; tarsus, 1.1 to 1.2 in. The sexes are alike in size.



**Range in the Malay Peninsula.**—Peninsular Siam, including the Junk Zeylon group of islands; Selangor; Singapore and the neighbouring islet of Pulau Ubin; Malacca.

**Extralimital Range.**—From Nepal to Eastern Bengal, Travancore and Ceylon (migrant). Eastwards to Kwangtung and Kwangsi (breeds). Occurs in Tenasserim, Siam and French Indo-China.

**Nidification.**—There is no local record. In India the nest, which is placed in a tree in forest, is described by Mr Stuart Baker as "well and compactly made of small twigs lined with grass or fibre, with an over-layer of green leaves." The same author describes a nest taken in Assam as being in dense forest near ricefields. The eggs in this nest were probably abnormal as they had some fine markings of red-brown and one, in addition, a few round lavender spots at the larger end. The two or three eggs are usually greyish white and measure about 1.5 by 1.25 in.

**Habits.**—The black-crested baza is a rare bird in the south of the Malay Peninsula, but it is much commoner in Peninsular Siam. All the specimens examined by us have been collected from November to March and it therefore seems that the local status is that of a winter migrant, although as it has never been taken at the lighthouses and is unrecorded from Sumatra it would seem that it dislikes crossing even narrow strips of water. From time to time small flocks appear in Singapore, the species showing a gregarious habit not common in hawks. The following observations are from Davison's account of the species in Tenasserim:

" . . . some three days' sail south of Mergui. Here the forest consisted for the most part of immense wood-oil trees, the mass of them unbranched for the first eighty or one hundred feet, and with very little undergrowth. High up amongst these trees there were a score or more of these kites singly, in pairs, or in small parties; they kept to the topmost branches, fully fifty or sixty yards from the ground, whence they made short sailing flights after insects, perching immediately after they had seized their prey. At times they would cling head downwards for a few seconds to some of the smaller branches; they had a sharp kite-like squeal, to which they occasionally, but not often, gave utterance.

" This is, I should say, eminently a forest bird; on only one occasion have I seen it in the open, and then there were three birds together flying at a good height; but they were making straight for a bit of forest about a quarter of a mile distant; they flew rather swiftly and with continued flappings of their wings. I found only the remains of insects, chiefly coleoptera, in the stomachs of those I examined. This bird, when fresh, has a most peculiar and disagreeable odour; what might be termed a regular frog-like or bug-like smell; nor does this wear off till the skin has been exposed to the air for some considerable time."

Several observers have noted the fact that when perched the bird erects its crest vertically. Mr Stuart Baker adds bats, mice, shrews, lizards, tree-frogs and caterpillars to the more usual insect diet.

*Aviceda jerdoni jerdoni***Jerdon's Baza**

*Pernis Jerdoni* Blyth, *Journ. Asiat. Soc. Bengal*, xi., 1842, p. 464 (Malacca).

*Baza sumatrensis*, Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 357.

*Baza jerdoni*, Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 411; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 92.

*Baza jerdoni jerdoni*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 174; Stuart Baker, *Nid. Birds Ind. Emp.*, iv., 1935, p. 123.

**Malay Names.**—Hělang, lang (any hawk or eagle).

**Description.**—A large hawk with a long, black nuchal crest; upper mandible with two projecting "teeth." Upper parts brown; lower parts whitish with broad rufous bars.

*Adult male.*—Top of head and crest, black, the latter with narrow white tips; sides of head, grey streaked with rufous. Sides of neck and a nuchal collar, rufous-buff, the nape with broad black streaks. Upper parts, dark purplish brown, median and greater wing coverts paler. Wing quills, brown, regularly and broadly barred with blackish. Tail quills, grey-brown with narrow white tips and four broad blackish brown bars. Throat, white with a broad black median stripe. Breast, rufous brown, the feathers with darker centres. Remainder of under parts, including under wing coverts and axillaries, regularly banded with white and pale rufous brown, the dark bands becoming dusky on the flanks.

*Adult female.*—Not unlike the male but the sides and top of the head and the nape, rich buff streaked with blackish, the sides of the head very narrowly. Crest as in the male. Under parts whitish with pale rusty markings, streaked on the breast, but barred elsewhere.

*Immature male.*—"The upper surface is much paler, especially the shoulders, the feathers of which have pale margins, the throat and chest are heavily streaked longitudinally with black, and the cross-barring has a very irregular appearance, large guttate spots being present in the centre of the abdomen; sides of the head heavily streaked with black" (*Robinson and Kloss*).

**Soft Parts.**—Irides, yellow; bill and cere, blackish, base of lower mandible paler; feet, white tinged with blue (*after Davison*).

**Dimensions.**—Total length, about 18 in.; tail, 8.6 to 9.6 in.; wing, 12.3 to 13.4 in.; bill from cere, 1 in.; bill from gape, 1.3 in.; tarsus, 1.6 to 1.7 in. There seems little difference in size between the sexes.

**Range in the Malay Peninsula.**—Peninsular Siam; the Langkawi Islands; Perak. Blyth recorded the species from "Malacca."

**Extralimital Range.**—From Sikkim to Assam; Burma, Siam and Sumatra. Other races occur in South India and Ceylon; Borneo; the Philippines and Celebes.

**Nidification.**—No record from the Malay Peninsula. According to Mr Stuart Baker, two nests found in the Darjeeling district were in tall forest

trees on the edge of tea cultivation. The chalky white eggs measured about 1.78 by 1.46 in. and in each case the clutch was two.

**Habits.**—We have nothing whatever to record of this very rare bird except the bare mention of the specimens obtained. Robinson and Kloss collected four at Chong in the interior of Trang, Siamese Malaya, in December 1909, and their collectors brought back two from the Langkawi Islands in March of the same year. In the Selangor Museum there is an old mounted specimen which is recorded as having been obtained near Taiping in Perak many years ago.

*Microhierax fringillarius*

**The Malay Black-legged Falconet**

Vol. I., p. 67, pl. 3.

This tiny hawk has the upper parts, a patch on the sides of the head, the sides of the body, and the outer sides of the thighs, black, the wing and tail quills spotted with white on the inner webs. Forehead, a streak behind the eye, chin and throat, white; remainder of under surface, rufous.

Total length, 5.7 to 6.7 in.; wing, about 3.85 in.

Common in the Peninsula in both open and forested country. Newly cleared forest in which tall trees have been left standing is a favourite location. This little hawk is fearless and will attack birds larger than itself, but grasshoppers form the larger part of its food. The eggs have been found in holes in trees and under the eaves of buildings.

*Falco peregrinus calidus*

**The Eastern Peregrine Falcon**

*Falco calidus* Latham, *Ind. Orn.*, i., 1790, p. 41 (India).

*Falco communis* (pt.), Sharpe, *Cat. Birds, Brit. Mus.*, i., 1874, p. 376.

*Falco peregrinus* (pt.), Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 413; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 296.

*Falco peregrinus calidus*, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1922, p. 93; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), v., 1928, p. 32.

**Malay Names.**—Hélang, lang (any hawk or eagle).

**Description.**—A large falcon, dark steel-grey above and whitish spotted with black below. A conspicuous black moustachial patch.

**Adult.**—Upper parts, blue-grey, darkening to almost black on the head and nape and paling to light grey on the rump and upper tail coverts, all the feathers with narrow black shaft stripes and, including the tail, broadly banded with blackish. Tail, narrowly tipped with white. Primaries, blackish grey, banded on the inner webs, except at the tip, with white washed with rufous. Secondaries, paler grey than the primaries, narrowly edged with white, less decisively barred with white on the inner webs especially on the inner feathers, and with the outer webs with dark bands. Under parts,

white, very faintly flushed with pinkish buff and sometimes with a grey shade. A broad moustachial stripe and a large patch under the eye, black. Breast, narrowly streaked with blackish brown; the streaks change to large spots on the upper abdomen and to bars elsewhere, including the axillaries and under wing coverts, the bars broadest on the flanks and narrowest on the under tail coverts and thighs. As the bird ages the markings on the under parts become fewer and smaller.

*Immature*.—Differs from the adult in that the upper parts are dark brown, the feathers with rufous or buff edges, broadest on the upper tail coverts. Nape, patched with buff. Tail, banded with narrow broken rufous-buff bars. Under parts, whitish buff with broad blackish-brown streaks, which become large heart-shaped spots on the flanks and under tail coverts.

**Soft Parts**.—Irides, brown; bill, bluish slate, dusky at the tip and perhaps yellowish at base of lower mandible; cere, yellow; feet, yellow.

**Dimensions**.—*Female*: total length, about 19 to 20 in.; tail, 6.6 to 6.9 in.; wing, 13.9 to 14.5 in.; bill from cere, 0.95 in.; bill from gape, 1.3 in.; tarsus, 2.2 in. *Males* are rather smaller: total length, about 16 to 17 in.; tail, 5.8 in.; wing, 12.6 in. These measurements are taken from a few Malayan specimens.

**Range in the Malay Peninsula**.—Pulau Jarak, the Sembilan Islands and the Aroa Islands, in the Straits of Malacca. Selangor and Malacca. Singapore Island.

**Extralimital Range**.—The well-known peregrine falcon is of almost world-wide distribution and has been divided into numerous geographical races or subspecies of varying degrees of distinctness. There is much difference of opinion concerning the status and geographical ranges of the Asiatic forms and no general agreement has yet been reached. We are not in a position to hold any personal views on this matter and therefore adopt a conservative course, and consider that *F. p. calidus*, differing from the typical race of Europe, in having a narrower black moustache, more extensively white cheeks, and often in being paler above and less heavily marked below, breeds from Western Siberia to Kamchatka and migrates south in winter, reaching North Africa, Ceylon, Malaysia and New Guinea. It is found in Tenasserim, Siam and French Indo-China. There is no formal record from Peninsular Siam but the species is certain to occur there. *F. p. ernesti* Sharpe is a dark, resident form inhabiting the Sunda Islands, the Philippines, New Guinea, etc.

**Nidification**.—No record from the Malay Peninsula. In other parts of its range this falcon lays its three or four eggs in a nest of sticks which is usually placed on a cliff face. The eggs are very variable in colour, ranging from cream to brownish red in ground-colour and marked, usually heavily, with a darker and richer colour. The eggs measure about 2 by 1.6 in.

**Habits**.—A winter visitor. During the autumnal influx the peregrine often occurs, with other migratory species, on the small islands of the Straits of Malacca. A male and female from Pulau Jarak, collected at the end of April, were apparently taken on the return northern journey. During the winter months it is not rare in Singapore, and on several occasions we have

seen birds passing over the city. The habits have often been described. A bold, fierce hunter, the peregrine swoops on its prey with great speed. It feeds mainly on birds up to the size of a wild duck, all but the largest being carried off in the air.

*Falco tinnunculus* subspp.

**The Kestrel**

Small hawks with the upper parts brick-red and the lower parts fawn-colour. Top of the head, rump and tail, blue-grey in adult males, the tail with a broad subterminal black band. In males both upper and lower parts are spotted with blackish. Females are heavily streaked on the head and under parts, and broadly barred on the upper parts with blackish brown. Feet, yellow. Wing, about 10 in.

Kestrels are far from common in the Malay Peninsula and the local status is that of a winter visitor only. The few specimens we have seen are from Peninsular Siam, the Langkawi Islands and Singapore. Two races seem represented, a paler form which we now refer to the typical race, *F. t. tinnunculus* Linn., and a darker bird which is apparently *F. t. interstinctus* McClell., described from Assam (synonym, *F. t. japonensis*). The species will be considered in greater detail in our next volume.