

OWLS

Order STRIGIFORMES

OWLS, of course, are recognizable at sight and no very elaborate diagnosis need be given here. The bill is short, very strongly hooked and compressed laterally, the base with a cere in which the nostrils are pierced. Forehead usually with well-developed bristly feathers.

Head large, as are the eyes, which are always directed forwards and in many genera surrounded by bristly feathers (known as the facial disc), which in turn are bordered by a circlet of small stiff feathers—not bristly, generally recurved—the ruff. Above and behind the eye there are often greatly lengthened feathers known as horns, aigrettes or ear-tufts, though they have nothing to do with the ear coverts.

The wing has eleven primaries but its shape may vary much ; the tail is usually somewhat short and square, sometimes slightly rounded, never forked.

The legs are variable in length, sometimes scaled, often covered with feathers on to the toes or with bristles. The toes are always strong, four in number, with powerful and sharp claws, the outer toe reversible.

The plumage is always soft and voluminous, usually brown, rufous or grey ; in northern species often white. Many species are mottled or vermiculated, like the nightjars. The sexes rarely differ, except in size, females being usually larger, but the juvenile plumages are often distinct. Many species are dimorphic, having distinct grey and rufous, or brown phases.

Most owls nest in holes in trees, usually laying on the bare wood, but a few make simple nests of sticks and some occupy burrows. The eggs are white, very round, often with a somewhat lustrous shell. The young are hatched helpless, covered with down, usually white.

Food is exclusively animal, mammals, birds, reptiles and fish, but some species capture beetles, moths and dragon-flies. None are carrion feeders.

The habits are in the main nocturnal, but there is great variation in this respect, and some species can see excellently in full daylight. The range is cosmopolitan and there is almost no land surface except the circumpolar regions where owls are not found. The number of species is very large but the owls are probably somewhat less numerous than the diurnal birds of prey. They are, on the whole, rather more sedentary than the Accipitrine birds, but there are, nevertheless, many which perform regular migrations. About twenty forms

are found in Malaya, but the majority are very rarely met with or inhabit the densest of jungles. I have selected the four commonest species for description in this volume.

KEY TO THE SPECIES OF OWLS HERE DESCRIBED

1	{	Tarsi not feathered	2
		Tarsi feathered	3
2	{	Large birds, wing over 11 in., with long aigrettes	<i>Ketupa ketupu</i> , p. 81
		Moderate-sized birds, wing less than 10 in.; with no aigrettes	<i>Ninox scutulata</i> , subspp. p. 83
3	{	Feathering of legs extending to base of toes or beyond; more blotched above; larger; wing more rounded	<i>Otus bakkamæna</i> , subspp., p. 78
		Feathering of legs not extending to base of toes; more uniform above; smaller; wing more pointed	<i>Otus scops malayanus</i> , p. 80

*Otus bakkamæna lempiji***The Malayan Scops Owl**

PLATE 4

Scops lempiji, Horsf., *Trans. Linn. Soc.*, xiii., 1821, p. 140 (Java); Sharpe, *Cat. Birds, Brit. Mus.*, ii., 1875, p. 91; id. *Ibis*, 1889, p. 79; Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 107; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 327.

Malay Name.—Burong hantu.

Description.—An owl with large ear-tufts, facial ruff not highly developed and not specially hairy; toes unfeathered to the base; wing about 6 in.

Adult.—Sexes similar.—Above sandy brown, mottled with black and buff, and blotched with black spots; scapulars, pale golden buff on the outer web, tipped with black; inner webs with black and sandy vermiculated barrings. A somewhat ill-defined collar on the hind neck, sandy buff, the feathers tipped with black and with traces of cross bars. Forehead and a stripe above the eye, pinkish buff, more variegated, with black posteriorly; crown, blackish; ear-tufts, buffy, broadly edged with black on the outer webs, almost uniform on the inner ones. Facial ruff and ear coverts, sandy, tinged with rufous and broadly margined with black behind, forming a stripe. Under surface, rich rufous buff, with spots of black, not extending across the feathers, generally double, and connected by a narrow dark shaft stripe, these spots most in evidence on the centre of the abdomen. Primaries blackish on the inner webs, notched with yellowish white towards the base of the inner ones, the outer webs with buffy bars and dark interspaces, vermiculated with buff and black, the pale bars lighter and more conspicuous on the outer primaries; under

wing coverts and axillaries, yellowish buff. Tail feathers, blackish brown, mottled with sandy and with blackish cross bars, more distinct and broader on the outer feathers. Under tail coverts, pale buffy brown, thighs, pale buff; tarsal feathers, whitish.

Immature.—Markings generally irregular and indistinct on a brownish buff ground-colour, with a strong tendency to cross-barring, especially on the head. Newly hatched fledgelings are clad in pure white down.

Soft Parts.—Iris, dark wood-brown; edge of eyelids, pale pinky brown; toes, claws and bill, horny white; cere, yellowish horny, tinged with greenish (Davison.)

There is much variation in the colour of the iris. In one Sumatran bird and in several Malayan ones it is recorded as bright yellow. The differences are possibly associated with sex.

Dimensions.—Total length, about 8·5 to 9 in.; wing, 5·9 to 6·4 in.; tail, 2·9 to 3·1 in.; tarsus, 1·05 to 1·10 in.; bill from gape, 0·85 to 0·95 in.

Range in the Malay Peninsula.—Throughout the whole length of the Peninsula. Common on Langkawi, Penang and Singapore Islands. Not recorded from Junk Zeylon and the Bandon Islands, where, however, it probably occurs. Absent from the Tioman group.

Extralimital Range.—Southern Tenasserim and occasionally farther north, Java and Sumatra. Local forms differing in size and colour occur in Borneo, Siam, Tenasserim and Burma, and in various districts in India proper.

Nidification.—This owl breeds in the Malay Peninsula from February onwards, nesting in holes in trees or in broken stumps some height above the ground. The eggs, usually three in number, are laid on the bare wood without any lining material. They are smooth, white, with hardly any gloss, and are very round. The average dimensions are about 1·25 by 1·1 in.

Habits.—Common throughout the Peninsula at low elevations in open country as well as in jungle, but not, I believe, at any elevation in the hills. Wherever found it is fairly common but is most strictly nocturnal in its habits, far more so than the little owl, the species of *Glaucidium*, or the hawk owls. There is much discrepancy in the description of its note, which many observers state to be monosyllabic. Personally I believe that the disyllabic hoot, the first note long and the second very short, repeated at very frequent intervals during moonlight nights, is uttered by this owl.

The food is moths, beetles and insects generally—these, according to Jacobson, are often sought for near the ground. Birds and small mammals seem to be taken only rarely.

Remarks.—Like all owls the plumage of this bird is very variable and difficult to describe. The chief variations are in the intensity and number of the clear black markings on the upper surface, which are almost obsolete in some birds and very pronounced in others. The black spots on the under surface are also inconstant, as well as the general ground-colour, which ranges from pale sandy buff to an almost orange tint.

During the winter months a larger paler bird, in which the wing may be nearly 7 in. and in which the feathering of the tarsus extends partially on to the toes, is found in the northern parts of the Peninsula, but has not been

found south of the Langkawi Islands. This is *Otus bakkamœna lettia* (Hodgs.), which ranges through Siam to Burma and the Himalayas and eastwards to Southern Cochin-China.

The male bird (lower figure) is from the Salwin district, Tenasserim, and the female from Singapore Island. Both were collected by Davison, and are in the Hume collection in the British Museum.

Otus scops malayanus

The Little Malay Scops Owl

Scops malayanus, Hay, *Madras Journ. Lit. Sci.*, xiii., pt. 2, 1845, p. 147 (Malacca); Sharpe, *Cat. Birds, Brit. Mus.*, ii., 1875, p. 58; Robinson and Kloss, *Journ. Fed. Malay States Mus.*, vi., 1916, p. 226 (Kedah Peak).

Otus scops malayana, Robinson, *Journ. Fed. Malay States Mus.*, vii., 1917, p. 145.

Otus sunia malayanus, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 438.

Malay Names.—Burong hantu; jampok.

Description.—A small species with a relatively long wing; lower plumage much mottled.

Adult.—*Rufous phase.*—Above, almost uniform chestnut-bay, with a few fine black shaft stripes which become more pronounced on the head; scapulars with the outer web pure white, edged with black; primary coverts with a broad white terminal spot. Edge of wing, white, the bastard primary blackish, barred with cinnamon and with large triangular white spots on the outer web. Primaries and secondaries dull brownish, with narrow chestnut bars on the outer webs, which, on the outer primaries, become large white spots; inner lining of wing oily brown, with indistinct whitish bars on the inner webs of the feathers, broader and paler on the innermost; axillaries whitish; under wing coverts, whitish, with black centres, those near the edge of the wing blackish, with rufous tips. Tail as the upper surface, but irregularly mottled and barred with black, the bars clearest on the outer feathers. Lores, whitish, the bristles blackish at the tips, except those in front of the eye, which are chestnut-bay; feathers over the eye, white, with dark tips; incomplete facial ruff, cinnamon, with the posterior part black; chin white. Beneath, chestnut-bay, the feathers of the breast with partially concealed white spots on both webs, near the tip, and black shaft stripes. Abdomen, whitish, with transverse vermiculations of dark brown and heavy blackish brown shaft stripes. Under tail coverts mainly white, with black bases and irregular markings of bay and black towards the tip; thighs, and tarsal feathering, which extends nearly to the toes, white, with regular narrow stripes of dark brown.

Note.—A bird from Penang, representing the extreme rufous phase, has been described above; others differ in being duller and browner and in having the vermiculated area of the under surface extending farther up the breast. Many birds are quite intermediate between the rufous and grey phases.

Adult.—*Grey phase.*—Upper surface with no chestnut-bay, the general colour being sandy grey, very finely vermiculated with black. Nape and hinder part of crown with concealed white spots. A sandy buff patch on the sides of the neck; under surface relatively as in the rufous phase, but with the black shaft stripes more pronounced. Thighs and tarsal feathering with a strong wash of buff.

Soft Parts.—Iris, bright yellow; bill, horny; gape, fleshy; cere, dusky dark green; feet, fleshy brownish yellow; claws, horny (Bingham), dirty-white, soles yellowish (Robinson).

Dimensions.—Total length, 7·7 to 8 in.; wing, 5·4 to 5·7 in.; tail, 2·3 to 2·6 in.; tarsus, 0·75 in.; bill from gape, 0·6 in.

Range in the Malay Peninsula.—Down the whole of the west coast of the Peninsula, the islands of Junk Zeylon, Langkawi, Penang and Singapore, and small islets in the Straits of Malacca. Not recorded from the east coast of the Peninsula, though there is no reason to suppose that the species does not occur there.

Extralimital Range.—Limits undefined; probably north to Assam, where it intergrades with *O. s. sunia* of the Himalayas, and east to Siam and Cambodia, there passing into the Chinese *O. s. stictonotus*. Common in Tenasserim from Amherst to the peninsular border; Sumatra, but not the other Indo-Malayan islands.

Nidification.—Not known from the Malay Peninsula; clutches of three and four eggs were taken by Bingham in the Thoungyeen valley, North Tenasserim, in March. The dimensions average 1·23 by 1·11 in.

Habits.—As with many tropical owls, there is little definite on record about this small *Scops*. In the Malay Peninsula it is more abundant in the north than in the south, though fairly well distributed over the whole western side. The species is certainly migratory and is not uncommon in the winter months on small islets and lighthouses in the Straits of Malacca. Practically all dated specimens have been obtained in the months from October to March, and it is therefore more than doubtful if it is a resident breeding bird in the Malay Peninsula. So far as our experience goes it is never found in heavy jungle, and but rarely on the mountains, or indeed at any great distance inland.

On the Langkawi Islands, where it is common, the persistent monosyllabic hoot of a small owl is very frequently heard, and must be ascribed to this bird. It is lower and quite different from that of the larger *Scops* owl, *S. b. lempiji*, which is often heard at the same time.

The food, so far as is known, is almost entirely insectivorous.

Ketupa ketupu

The Malay Fish Owl

Strix ketupu, Horsf., *Trans. Linn. Soc.*, xiii., 1821, p. 141 (Java).

Ketupa javanensis, Sharpe, *Cat. Birds, Brit. Mus.*, ii., 1875, p. 8; Oates,

in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., p. 98; Blanford, *Faun. Brit. Ind., Birds*, iii., 1895, p. 283.

Ketupa ketupu, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), iv., 1927, p. 410.

Malay Name.—Tumbok ketampi.

Description.—*Adult.*—Sexes similar. Very dark brown above, with broad tawny edges to the feathers, most of those of the back, mantle and upper tail coverts with interrupted bars of pale yellowish buff about the centre of the feathers; scapulars largely pale yellow buff on the outer webs; lesser wing coverts mainly blackish brown with tawny edges and bars, paler and more extensive on the greater series. Lores white, with rufescent tips to the feathers; face and chin, rufescent, without shaft stripes; ear-tufts very long, almost entirely black on their outer webs, broadly edged with tawny on their inner webs and at the base. Primaries, dark brown externally, with pale whitish buff bars on their outer webs and with darker greyish brown ones on the inner webs, these bars being much broader. Pale bars broader on the secondaries. On the inner aspect of the wing the pale bars are broader and more regular and only slightly lighter on the outer webs; base of the feathers, pale creamy buff. Outer lesser inner wing coverts tawny, with large black centres, inner ones more uniform; greater series mainly black, with pale bases; axillaries, uniform pale tawny. Tail, dark brown, with three narrow buffish bars and a broader tip; beneath, paler.

Under surface uniform orange-buff, deepest on the breast, with broad black shaft stripes, narrowing towards the tips of the feathers. These stripes are much sparser and finer on the flanks and are almost absent in the centre of the abdomen and the under tail coverts, whose general tint is lighter. On the throat a large rounded white patch, formed by the bases of the feathers. Thighs, uniform fawn, palest towards the tibio-tarsal joint; tarsal feathering whitish.

Immature.—The pale edgings to the feathers above much broader, so that the bird appears more striped. Wing coverts and secondaries, with the spots more yellowish buff. Black stripes below less defined.

Soft Parts.—Iris, lemon, chrome, or in some cases deep orange; bill, black or bluish horn; cere, greenish; feet, dirty yellowish brown, greyish brown or pale greyish green; claws, black.

Dimensions.—Total length, about 17.5 to 19 in.; wing, 13.5 to 15 in.; tail, 7.5 to 8 in.; tarsus, 2.8 to 3.1 in.; bill from gape, 1.7 to 2 in. Females are as a rule slightly the larger but the measurements of the sexes intergrade.

Range in the Malay Peninsula.—Throughout its length. Islands of Junk Zeylon and Penang, on both of which it is very common, rarer in Singapore. Not recorded from Langkawi and the islands of the Bandon Bight but almost certain to occur there.

Extralimital Range.—South Assam; down the coast of Burma, from Aracan to the Siamese border; the greater part of Southern Siam, east to Cochin-China, Sumatra, Borneo, Java and Bali.

Nidification.—Stuart Baker (*loc. cit.*) states that Mr Kellow found this owl

breeding in the "foot-hills behind Perak" [apparently Bukit Gantong.—H. C. R.]. "The eggs were laid either in caves on the cliffs or in hollows, where the first great boughs spring from the trunks of forest trees. In one instance three eggs were found, in the other, two. They were laid in January and February." Jacobson states that in West Sumatra it lays a single egg in the cup-like hollow formed by the fronds of the big arboreal bird's-nest fern, *Asplenium nidus*, no lining material whatever being used. The late Colonel Bingham found it breeding at the end of February on the Thoungyeen river, North Tenasserim. The nest was in a natural depression of a fig-tree and there was a lining of a few withered twigs and feathers. The single egg was white, without gloss, and in shape a very broad oval, measuring 2'20 by 1'85 in.

Habits.—Essentially a bird of the ricefields, this big owl is also found along jungle streams and on the coast, though probably only occasionally in the mangrove areas if these are far from ricefields. It is at times semi-diurnal in its habits and emerges in the late afternoon from trees at the edge of the jungle or on the borders of the fields, or even in orchards, where it lies up during the day. In the Patani States, where it is exceedingly common, Dr Annandale and myself found that it fed on frogs, fish and crustaceans and that the large water-bugs (*Belastoma* and *Nepa*) also entered into its diet. Jacobson states that in West Sumatra the food consists of small mammals and birds, as well as fish, and that it causes much loss to the owners of the ponds where these are reared. He gives its note as a "tuk-tuk-tuk-tuk-tuk," uttered in quick succession at night, while Blanford and others state that it has a low soft whistle. In captivity it is a low "mew," which, as has been elsewhere noted, is remarkably feeble for the size of the bird.

Ninox scutulata malaccensis

The Malay Hawk Owl

Athene malaccensis, Eyton, *Ann. and Mag. Nat. Hist.*, xvi., 1845, p. 228 (Malacca).

Ninox scutulata (part), Sharpe, *Cat. Birds, Brit. Mus.*, ii., 1875, p. 157; Kelham, *Ibis*, 1881, p. 371.

Ninox scutulata malaccensis, Robinson, *Journ. Fed. Malay States Mus.* vii., 1917, p. 144.

Malay Names.—Burong punggok; bêtĕmak.

Description.—A medium-sized owl, without facial disc or ruff; tarsi feathered nearly to the toes, which are covered sparsely with stiff bristly hairs.

Adult.—Sexes alike. Above, dark chocolate-brown, more greyish on the head and browner on the back and upper tail coverts; scapulars with large concealed white spots. Primaries, dark brown, the outer webs narrowly edged with pale reddish brown, the inner secondaries barred with white. Tail feathers ashy greyish brown, with three broad black bars and a subterminal one, the extreme tips white. Inner aspect of quills dark brown; under wing coverts dark chocolate, the inner ones edged with yellowish buff, the outer ones more

uniform ; edge of the wing white. Feathers of the forehead with white bases, the loreal bristles whitish, with strong black shaft stripes ; face and ear coverts, dark chocolate ; chin, fuscous, a dull white spot at the base of each mandible, rest of under surface, reddish chocolate-brown, streaked with buffy yellow on the throat ; lower breast, belly and flanks with large white spots on both webs of the feathers, producing a mottled effect ; under tail coverts, white, sparsely spotted with chocolate ; thighs and tarsal feathers greyish behind, chocolate-brown in front, with a few paler markings ; bristles on the toes, dirty-white.

Immature.—The juvenile plumages are not well known, but subadult birds have the wing coverts obscurely edged with rusty, and the white portions of the lower plumage somewhat sullied. The bars on the tail are also more numerous.

Soft Parts.—Iris, chrome-yellow or lemon ; bill, bluish horn ; cere, olive-green ; feet, pale chrome ; claws, greyish horn.

Dimensions.—Total length, about 11 in. ; wing, 7·5 to 7·9 in. ; tail, 4·7 to 5 in. ; tarsus, 1 to 1·1 in. ; bill from gape, 0·8 in.

Range in the Malay Peninsula.—The whole of the Malay Peninsula nearly up to the Burmese border ; Singapore and Penang Islands and the Langkawi group.

Extralimital Range.—It is probably this form that is resident in the Rhio Archipelago, south of Singapore, while that inhabiting the Lampongs in South-East Sumatra and the east coast of that island is practically identical. Closely allied, but different races, are found in Borneo, Ceylon, Peninsular India, Burma, Siam, Indo-China, China and Japan. *Two* of these, larger and paler birds, *N. scutulata burmanica* Hume, and *N. s. japonica* (Temm. and Schleg.), occur in Malaya as casual stragglers or on migration during the winter months.

Nidification.—Nothing definite is known about the breeding of the Malayan form. Other species of the genus lay rounded white eggs with very little gloss in holes in trees, without nesting material. The race described above breeds in Singapore. Nestlings have been obtained by Mr F. N. C. Chasen on 23rd April.

Habits.—A fairly common bird throughout the country and in all types of jungle, up to about 2000 ft. or possibly even higher. It is perhaps not so nocturnal in its habits as the *Scops* owl and is not unfrequently seen at dusk hawking for insects. Whitehead says that the Bornean race catches dragon-flies, and Kelsall says that the stomachs of birds he dissected at Kuala Kangsar contained water-beetles. The note, which is often heard at dusk, is a monosyllabic one, “*pāk*,” which is expressed in its Bornean name. The Malays say that it sits on an exposed branch uttering this note and making love to the moon.

Note.—The soles of most species of Oriental *Ninox* are furnished with sharp spicules, and it might be thought that these are designed to facilitate the capture of slippery prey, such as fishes, as is undoubtedly the case with the larger owls, such as *Ketupa*. Though *Ninox* is often seen hawking over water, I know of no case in which it has actually been proved to have been feeding on fish.