

# Genus BUBO.

Head and disk much as in the last; bill slightly longer; nostrils more oval; ear-conch rather small. Wings moderately short; 4th and 5th quills subequal and longest, and falling short of the tail by more than the length of the middle toe. Tail moderate, even. Tarsus rather short, very stout, and feathered down to the foot. Feet very large; inner toe subequal with the middle one, the outer very short; inner claw very large and long.

## BUBO NIPALENSIS.

(THE FOREST EAGLE-OWL.)

*Bubo nipalensis*, Hodgs. As. Res. xix. p. 172; Sharpe, Cat. B. ii. p. 37 (1875).

*Huhua nipalensis*, Hodgs. J. A. S. B. vi. p. 362; Jerd. B. of Ind. i. p. 131; Blyth, Ibis, 1866, p. 254; Jerd. Ibis, 1871, p. 346; Blyth, Ibis, 1872, p. 89; Hume, Rough Notes, p. 378 (1873); id. Str. Feath. 1873, p. 431, and 1874, p. 468.

*Etoglaux nipalensis*, Hodgs. J. A. S. B. x. p. 28.

*Bubo orientalis*, Blyth, Cat. B. Mus. A. S. B. p. 34 (1849); Horsf. & Moore, Cat. B. Mus. E. I. Co. no. 80 (in part), p. 72 (1854).

*Ptiloskelos amhersti*, Tickell, J. A. S. B. xxviii. (1859) p. 448; id. MS. Ill. Ind. Orn. vol. ii.

*Huhua pectoralis*, Holdsw. P. Z. S. 1872, p. 416.

*Huhu*, *Huhu chil*, Nepalese (*apud* Hodgson).

*Loko Bakamūna*, Sinhalese; *Peria-anda*, Tamils in Ceylon.

*Adult female.* Length to front of cere 23·0 to 24·0 inches; culmen from cere 1·7 to 1·9; tail 8·3 to 9·5; tarsus 2·75; mid toe 2·0, claw (straight) 1·75; height of bill at cere 0·8. Expanse of one with a wing of 17·2, 56 inches.

*Male.* Wing 15·3 to 17·0 inches.

The following are individual measurements of a series of seven examples:—

	Wing. in.	Tail. in.	Tarsus. in.	Weight.	Museum or Collection.
♀. Kalebokka .....	18·0	8·3	2·75	....	T. Butler, Esq., Clapton.
♀. Haputale .....	17·2	9·5	2·75	3·75 lb.	Norwich.
♀?. Kandy district .....	17·2	9·2	2·50	....	Norwich.
Juv. ♂. Kandy district .....	17·0	8·5	2·50	....	Colombo.
♂. Maskeliya .....	16·0	7·4	2·50	....	R. Cobbold, Esq., Ardleigh.
♂?. Kandy district .....	16·2	8·1	2·50	....	British Museum.
♂. Kandy district .....	15·3	....	....	....	E. Holdsworth, Esq.

Iris "yellowish brown" (*Bligh*, in epist.); bill olivaceous brown; cere olive; feet brownish, claws dark brownish horn.

Forehead, crown, and all above glossy sepia-brown, barred on the head and hind neck with narrow cross rays of fulvescent white, and on the back, scapulars, and wing-coverts with broader bars of buffy, including a terminal band of the same, which, on the longer scapulars and greater wing-coverts, is mottled with brown; inner webs of ear-tufts (which vary from 2·5 to 3·0 inches in length) barred with buff-white; outer webs of the lateral scapulars buff, the inner barred with mottled bands of a paler hue; outer webs of the anterior wing-coverts conspicuously banded with buff; primary-coverts crossed with pale mottled bars, duskier on the inner webs; primaries and

secondaries banded with smoky grey across both webs, the inner paling to buff at the edges; tail deeply tipped and crossed with fine narrow mottled bars of dusky buff; these widen and are paler towards the base.

Lores and facial disk greyish; chin, throat, and under surface whitish, washed here and there on the breast with buff; chin and ruff-feathers barred narrowly with brown; fore neck and chest banded with regular bars of the same, the distance between which increases on the upper breast; on the breast, pectoral plumes, flanks, and under tail-coverts the bars increase in width, take a pointed or slightly spear-shaped form, and are very far apart, but are three in number, as on the chest; bars of the under tail-coverts paler and narrower than those of the breast; tarsi narrowly barred with brown; under wing-coverts buffy white, marked with bar-like spots and pointed bars of brown.

*Obs.* The above is a description of the largest and most mature bird\* I have met with. One, probably in the plumage of the second year, has the barrings of the upper surface more buff and generally broader, the markings of the head and hind neck, especially, showing a more yellow hue than in the old bird; the scapulars have more of the buff hue on the inner webs, the markings of the wing-coverts and barring of the tail show the same characteristic; the bands on the throat and round the edge of the disk are more coalescent, those on the chest closer together, and there is a more sudden increase in the width of the interspaces on the breast than in the above example; tarsi not so strongly barred.

*Young.* The nestling has the iris brown; bill fleshy white; feet dull yellowish, claws dusky.

Above and beneath white; the head and hind neck narrowly barred with brown; the back, scapulars, and wing-coverts openly banded with the same and tinged with rufescent buff, the edges of the bars whitish, contrasted with the buff ground-colour; quills dark brown, with handsomely mottled bars of smoky grey; tertials whitish, barred similarly to the scapulars; forehead and disk white; orbital fringe dark; tail smoky grey, banded with blackish brown; beneath, the under surface is tinged with greyish, and marked throughout with narrow, wavy, blackish-grey cross bars; legs white, unbarred.

*Bird of the year.* After putting off the nestling dress, the bill becomes more olivaceous; the upper surface is light glossy sepia-brown, with all the pale markings bolder and yellower than in the adult; the bars on the head, hind neck, shoulder of the wing, and least wing-coverts are greyish buff; on the scapulars and greater secondary wing-coverts they are rich buff, broad and mottled conspicuously with brown; primaries and secondaries tipped and barred with pale brownish, paling on the inner webs into brownish buff; basal portion of primaries buff; tail brown, tipped deeply and banded with four bars of buff, mottled with the ground-colour.

Lores, face, and ear-coverts greyish, the former with blackish shaft-lines, and the latter with indistinct cross lines of brown; fore neck and sides of throat whitish, changing on the breast and under surface into buffy white; ruff and neck as far as the centre of the chest barred with brown more closely than in the adult, on the breast the space between the bars increases gradually to the lower parts, and on the flanks and pectoral plumes the markings are pointed; legs barred narrowly with undefined marks of brownish; under wing-coverts buff, barred like the under surface.

*Obs.* The distinctive characteristic of the immature bird is the difference in width of the chest and breast interspaces, giving the appearance to a casual observer of a coalescence on the former region. Whether this character or not led to the distinctive name *pectoralis* of Jerdon for the South-Indian bird I am unable to say; it is common to nearly all Ceylonese young birds, the only exception to the rule that I know of being that of the young male(?) in the collection of Mr. Holdsworth. The ground-colour of the under surface in this is more fulvescent than in other birds which have come under my notice; the bars are not spear-shaped on the lower parts, and approach gradually from there up to the chest, where they are very close together. Mr. Hume observes ('Stray Feathers,' vol. i. p. 431) that the markings on the chest are variable in Himalayan birds also.

As regards the supposed distinctness of the Nepal form from the Ceylonese, after giving considerable time and attention to the subject, and examining the specimens of the former in the British and Norwich Museums, I must support Mr. Hume in considering them identical. Ceylonese birds are, doubtless, as a rule smaller than northern; and guided by this, together with the peculiar feature exhibited in the widely-separated pointed bars of the lower parts, I was disposed for some time to follow Mr. Holdsworth in diagnosing them as *H. pectoralis*; but the fact of the old birds, such as the fine example shot by Mr. Laurie, and two others which I have seen in Messrs. Whyte and Co.'s establishment, coinciding exactly with Himalayan examples, settles the matter, I think, beyond dispute. In such the character of the under-surface barring, the coloration of the scapulars, and even the diminishing of

\* In the possession of Mr. T. Butler, Knighton House, Clapton; shot by Mr. Forbes Laurie in Kalebokka.

the transverse markings of the head to marginal indentations are precisely similar to the like conditions in the Himalayan bird. Should further investigation, aided by the examination of a larger number of *fully* adult birds than I have been able to get together, lead to the discrimination of the insular race as altogether a smaller one than the North-Indian, I would propose the specific name of *blighi* for the former, as Mr. Bligh was, I believe, the first to procure, or, at any rate, to bring to the notice of ornithologists, the species in Ceylon. An inspection of Jerdon's figure of *H. pectoralis* in the 'Madras Journal,' 1839, vol. x., and a perusal of the description in the text of the lower plumage, does not strengthen the conviction of its identity with the Ceylon bird. The drawing shows a band across the chest, formed by a brownish ground-colour, and not by a coalescing of the bars, such as is never seen in the youngest of Ceylonese specimens. The description (p. 89) is in part as follows:—"Beneath white, feathers barred with brown, numerous on the throat, less so on the belly and vent, and the bars are larger and take an arrow-headed form; a narrow pectoral band of brown with a golden tinge, and edged buff as above." The latter characteristic is not represented in Ceylon specimens, and reads as if it had been an abnormal one in Jerdon's bird. With regard to the superior size of Himalayan *nipaleusis*, 3 adult examples in the British and Norwich Museums, irrespective of sex (which is not recorded on the labels), measure in the wing 17·5, 18·0, and 18·2 inches. In the Norwich example there is an extra bar on the feathers of the lower surface, which peculiarity likewise exists in Mr. Laurie's bird, described above.

*Distribution*.—This splendid Owl, the largest and most powerful of its tribe in Ceylon, is a pretty general inhabitant of the mountain-region of the island from about the level of the Dumbura valley to the upper ranges. I have never met with any examples of it from the southern coffee-districts, but have no doubt that it occurs there, and that it may have not unfrequently been killed on the estates in that part of the island. In the Kandyan Province it has been procured in the districts of Matale, Kalebokka, Dumbura, Pusselawa, Maskeliya, and Haputale. It is, however, a comparatively recent addition to the avifauna of Ceylon, having been added to the list of birds by Mr. Holdsworth in his catalogue dated 1872. The specimens brought under his notice were procured by Mr. S. Bligh in 1867 in the Kandyan district; and this gentleman has therefore the credit of discovering this fine addition to the Ceylon Strigidae. Among the several fine examples which have been procured since Mr. Bligh's first specimens are a female in magnificent plumage shot by Mr. Forbes Laurie in Kalebokka, an equally fine bird killed by Mr. C. Cobbold in Maskeliya, an adult female procured by Mr. Bligh at Lemastota, and a male killed by coolies on his estate at Catton, in addition to all which not a few specimens have found their way to the establishment of Messrs. Whyte and Co. in Kandy. An immature example from this source is now in the Colombo Museum, and another in the British Museum. I have no information of this species having ever been shot in the low country; but doubtless on more extended research it will be found tolerably low down in the Peak forests, and I should not be at all surprised to see it occur in the ranges just above Gillymally. Elsewhere the Eagle-Owl is found in the Himalayas and the Nilghiris (if Jerdon's *pectoralis* should prove not to be a good species). Eastward of India proper it ranges into Tenasserim.

*Habits*.—This fine bird, as its English name implies, is a denizen of woods and forests; in Ceylon, however, it is, on the whole, more partial to isolated patna-woods than to the gloomy interior of the large jungles, and is doubtless attracted thither by the abundance of bird-life in these cool and retired ravines. It is usually found roosting in shady trees in the most confined portions of patna-dells, down which sparkling streams tumble, shut in by steep wooded banks. Should its retreat, as is often the case, border a coffee-estate, the Eagle-Owl levies contributions on the pigeons and poultry of the neighbouring bungalow, and falls a victim to the gun of the *Doré*. In such manner one of the above-mentioned examples was killed from the roof of his house by Mr. Cobbold in Maskeliya, after it had, as I am informed, decreased the population of the adjoining dove-cot. It is said to feed principally on birds, and very likely also preys on the large squirrels (*Sciurus tennantii*) common in the hill-jungles, occasionally perhaps killing hares, which are plentiful on most of the patnas in the Central Province.

In the Himalayas Hodgson asserts that it kills pheasants, and sometimes fawns of the smaller species of deer. Its exceedingly powerful talons and massive legs would certainly enable it to capture as large animals as most Eagles. I believe it to be strictly nocturnal in its habits; and Doctor L. Holden, formerly of Deltota, who observed something of its habits, informed me that it was very shy, quickly taking flight in the day when

its haunts were invaded. The note of *H. pectoralis* is said by Jerdon to be a "low, deep, and far-sounding moaning hoot," and most probably resembles that of the present species. The vocal powers of the latter are, however, not restricted to a hoot; for Major Fitzgerald, R.A., in writing to Mr. Gurney in November last, and as quoted in 'The Ibis' (January 1878) by the latter gentleman, remarks of a caged bird that he had kept for years:—"In confinement the bird became quite tame, and would utter cries of pleasure at recognizing the hand that fed it. . . . . It was, I think, a female; and during the period which might probably be its nesting-season, was in the habit of uttering a peculiar and incessant cry."

Nothing is known of the nidification of this species. It probably builds a stick-nest in the hollow of some large trunk, or on a deep and capacious fork between two limbs overshadowed by thick foliage, or perhaps it may deposit its two eggs in holes in large trees, merely on the rotten wood generally found at the bottom of the cavity. I commend the subject to my ornithological friends in Maskeliya, Haputale, and other likely districts in the Ceylon hills. A knowledge of this bird's breeding-habits would be a grand acquisition to the ornithology of the island.