

CHAPTER FIVE

Fishing Owls, Eagle Owls and the Snowy Owl

Ketupa, Scotopelia, Bubo, Nyctea

The little known fish owls in the genus *Ketupa* are a group of four large, powerful species that between them range over much of Asia. Together with the three African fishing owls in the genus *Scotopelia*, they can be regarded as the nocturnal counterparts of the Osprey and fish eagles.

In the past, the Asian fish owls were sometimes included together with eagle owls in the genus *Bubo*, but nowadays they are usually regarded as warranting separate status, mainly because they have specializations for feeding on fish. Nevertheless, they strongly resemble eagle owls in appearance, having similar prominent ear tufts, colouring, size and heavy build. In fact, they are often mistaken for eagle owls, although they differ in three main respects. Firstly, their feet are devoid of feathers and adapted for gripping slippery fish; secondly, they have even less prominent facial discs, presumably because their sense of hearing is a relatively unimportant aid in locating fish; thirdly, they lack soft plumage and silent flight, no doubt because their prey, being under water, is unable to hear them no matter how much noise they make in their approach.

ASIAN FISH OWLS

The four Asian fish owls live in a wide range of environments, from hot, humid, equatorial forests to cold, boreal forests close to the Arctic Circle, but nevertheless they have similar basic ecological requirements. All four species live by lakes, rivers and streams with well-wooded banks, and feed mainly on relatively large fish and other aquatic animals. They would almost certainly compete if

they lived together in the same area, but this is largely avoided by there being little overlap in their distribution.

The range of Blakiston's Fish Owl (*K. blakistoni*) is completely exclusive, for it is separated by about 800 km from the nearest definitely known population of another *Ketupa* species. It lives in wooded river valleys and, despite the fact that its range is so far to the north, it is apparently resident throughout the year. This species is rare everywhere, perhaps because it is dependent on streams and rivers which are sufficiently fast-flowing to remain partially unfrozen throughout the winter. According to the ICBP, Blakiston's Fish Owl is considered threatened in the USSR, with a total population estimated at 300—400. In Japan around 50 were located in 1984 while in China there was no recent data.

The ranges of the Brown Fish Owl (*K. zeylonensis*), Malaysian Fish Owl (*K. ketupa*) and Tawny Fish Owl (*K. flavipes*) are also largely exclusive. The Brown Fish Owl has a tropical distribution, and is replaced by the Malaysian Fish Owl in the high rainfall, equatorial region of southern Indo-China and Malaysia. Both species are common throughout most of their range, although the Brown Fish Owl is rare in the arid areas to the west of India. Both species are most numerous along sluggish streams and rivers meandering through forest or woodland, but occupy a wide range of other waterside habitats, including mangrove swamps, beach forests by the seashore, and even clumps of large trees by flooded rice-fields, fish-ponds and reservoirs. The Tawny Fish Owl has a mainly montane

distribution in the Himalayas and the mountains of southern China and Indo-China. Much less catholic in its choice of habitats than the other species, it is more or less confined to precipitous mountain streams flowing through dense forest. It appears to be rather rare throughout its range, or at any rate it has rarely been recorded.

The ranges of the Brown, Malaysian and Tawny Fish Owls overlap to some extent in parts of Indo-China. There is little information about their ecology in this region, but what there is suggests that they segregate into different habitats. In Burma, for example, the Malaysian

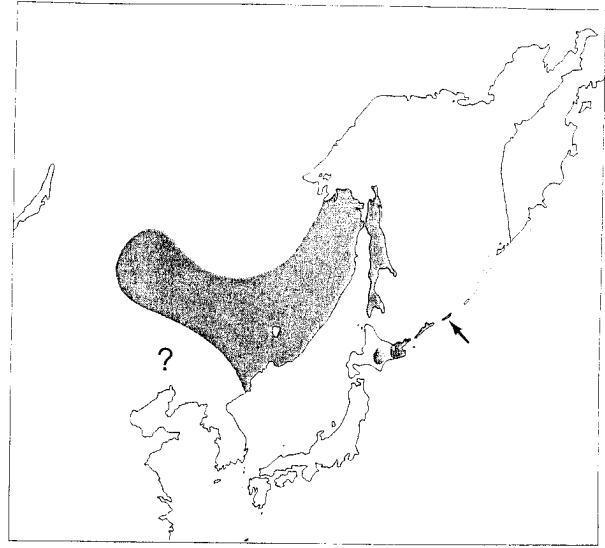
Fish Owl is more or less confined to coastal regions and the courses of the larger rivers, particularly the Irrawaddy delta, while the Brown Fish Owl occurs mainly along the wooded rivers and streams of the interior. It is also notable that both species are absent from mountain streams in Indo-China, where their place is taken by the Tawny Fish Owl, though both occur at higher altitudes elsewhere in their range. The Malaysian Fish Owl, for example, occurs to at least 1300 m in Borneo, and the Brown Fish Owl to 2000 m in Ceylon. Much more ecological information is needed, but it appears probable that the different



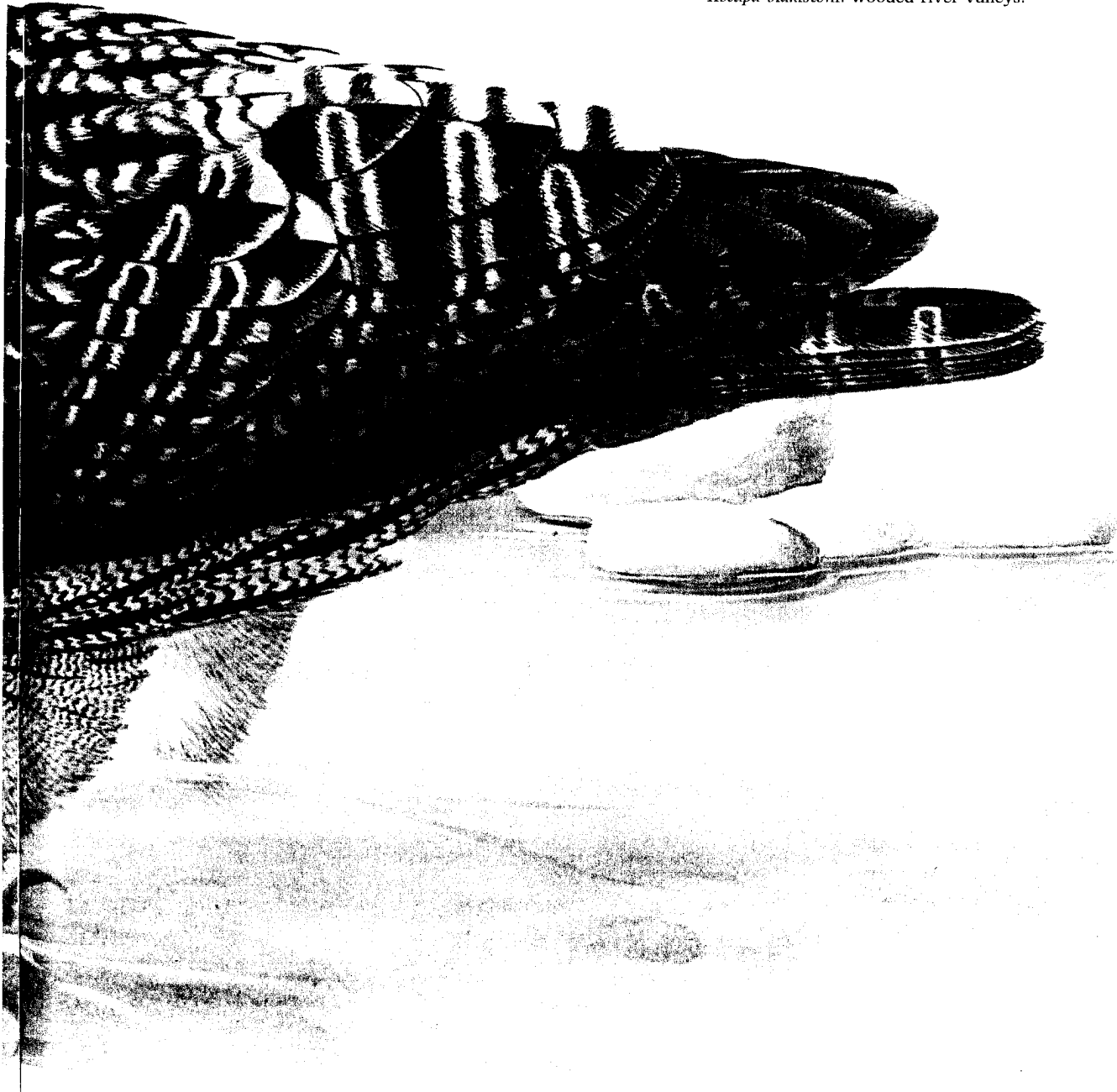
fish owls seldom come into contact with each other, even when the edges of their ranges overlap. Here, the evidence suggests that the different species share out the available habitats, or occur at different altitudes, each being more restricted in areas where it overlaps with other species than in areas that it occupies exclusively.

Like most owls, the fish owls are strongly territorial and tend to be evenly spaced in suitable habitats. Travelling along small rivers in the

Blakiston's Fish Owl *Ketupa blakistoni* (510 to 610 mm) is an inhabitant of eastern Siberia and north-eastern China and the only fish owl to have fully feathered legs. Apparently it has the habit of wading in shallow water hunting for crayfish.



Ketupa blakistoni: wooded river valleys.



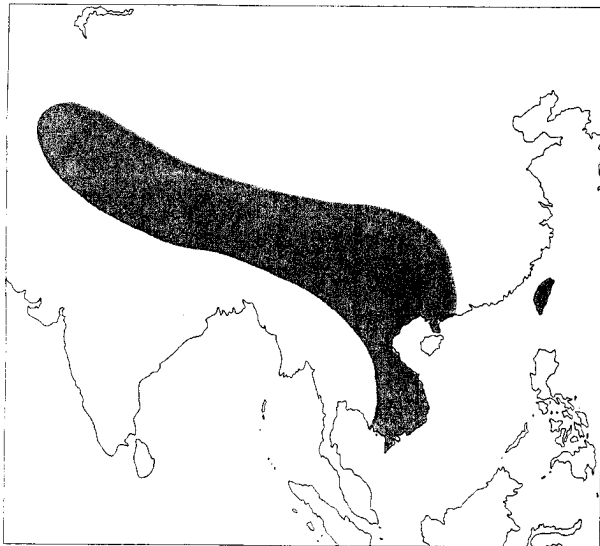
interior of Borneo, for example, it is normal to see or disturb a pair of Malaysian Fish Owls at regular intervals of 1 to 2 km. In one especially favoured area I saw nine pairs in less than 7 km of river. Fish owls usually roost in waterside trees with dense foliage, mangoes being particularly popular in tropical areas. Sometimes a pair roost together, but more often they roost in separate trees a short distance apart. They occasionally emerge from their roosts in the late afternoon, and this has earned them the reputation of being semi-diurnal. In fact, they rarely hunt before dusk, and are hardly more diurnal than eagle owls or other species that are generally regarded as thoroughly nocturnal. I have watched Malaysian and Brown Fish Owls hunting on numerous occasions, but only once before dusk, and then on a dark stormy evening.

Fish owls usually hunt from a tree-stump, dead branch or some other vantage point overlooking the water's edge. They usually catch their prey in the same way as a fish eagle, by swooping at it, and snatching it from the surface of the water with their talons. However, Blakiston's Fish Owl often simply drops from a perch onto its prey and has also sometimes been known to plunge into the water like an Osprey. The feet of fish owls are beautifully adapted to grip a wriggling, slippery, loose-scaled fish. They are devoid of feathers and covered below by numerous sharp-edged, spiky scales, while their claws are long and curved with a sharp, lower cutting edge. In fact, they are very like the feet of fish eagles and the Osprey.



The Tawny Fish Owl *Ketupa flavipes* (480 to 510 mm) has unfeathered feet covered in spiny scales, and sharp claws, superbly adapted for gripping fish. Although fish forms the main part of their diet, Tawny Fish Owls also take other prey. Crabs, crayfish and frogs can be caught in the shallows but mammals, birds, snakes and insects have also been recorded.

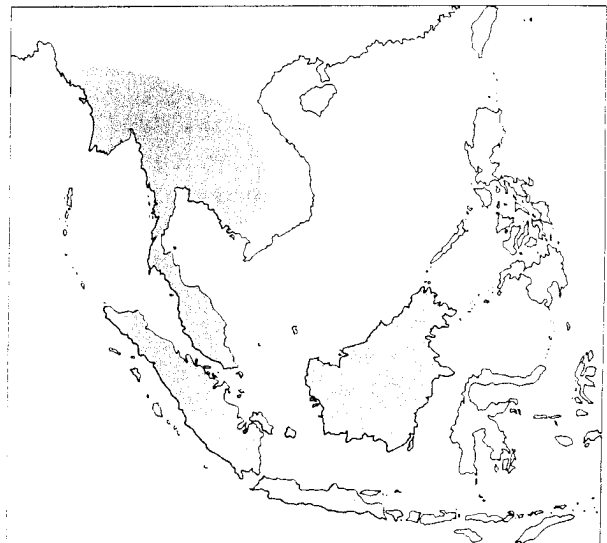
Ketupa flavipes: mountain streams in dense forest.





The Malaysian Fish Owl *Ketupa ketupa* (380 to 430 mm) is a common species over most of its range. Like other fish-eating owls, it watches for its prey from a perch at the water's edge, then swoops to snatch it from the surface of the water, in much the same way as a fish eagle. This individual was photographed in Sumatra.

Map: *Ketupa ketupa*: streams and rivers through forest and woodland; also mangrove and beach forests, clumps of trees near rice-fields, fish ponds or reservoirs.

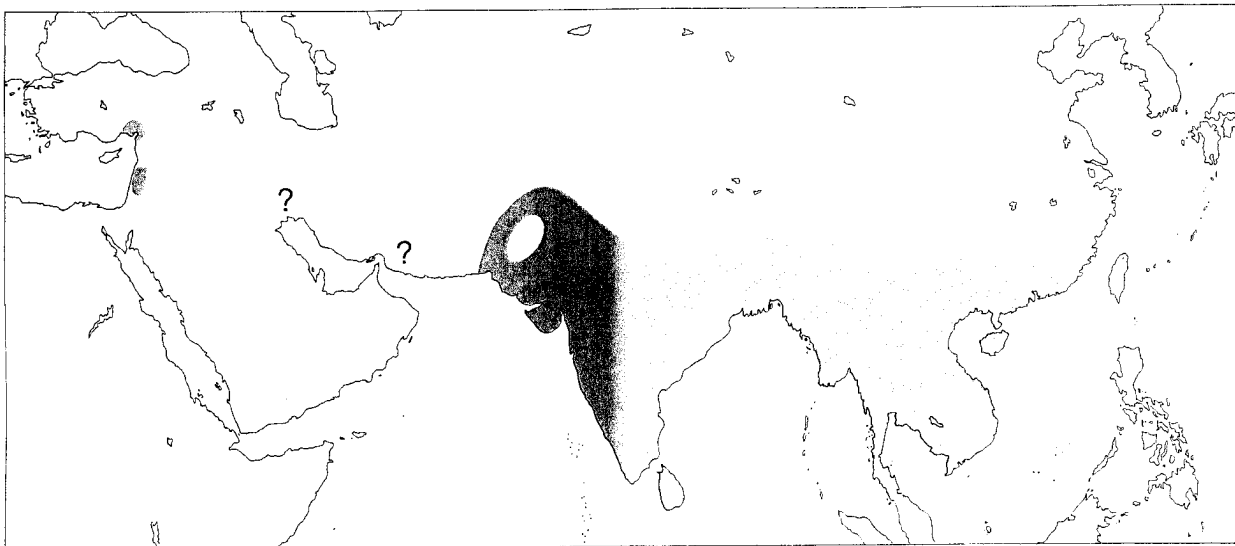


However, although fish owls have a diet that consists primarily of fish, they will take almost any other prey that comes their way, including small mammals, birds, snakes, frogs, crayfish, crabs and sometimes insects. The mammals recorded in their diet include a small porcupine, and birds include species up to the size of junglefowl and pheasants. They also scavenge to some extent; the Brown Fish Owl, for example, has been recorded feeding on the carcass of a crocodile. Fish owls are sometimes seen wading in shallow water. Often they are merely bathing, but not infrequently they are hunting for crayfish, crabs and other easily caught aquatic animals. Blakiston's Fish Owl is said to hunt regularly in this manner, and the Malaysian Fish Owl certainly does so occasionally, but such behaviour may be mainly incidental to bathing.

Blakiston's Fish Owls commence breeding as early as February, often while there is still snow on the ground. They nest in holes in large dead trees but have recently taken to breeding in nest-boxes in parts of Japan where few natural suitable nest-sites remain. The clutch is usually of 1 to 2 eggs, all the incubation being done by the female, and taking 35 to 37 days. The young leave the



Ketupa zeylonensis:
streams and rivers through forest and woodland.





The Brown Fish Owl *Ketupa zeylonensis* (480 to 510 mm) is the most widely distributed of the four species of Asian fish owls which replace each other over a large part of the continent. Pairs call noisily to each other in the breeding season, which falls between November and May, the dry season in much of their range.

nest up to 50 days later, but are often fed by the parents for a further year. The other three species use a variety of nest-sites, including holes in trees and river-banks, ledges in cliffs and ruins, hollows in the forks of trees, and the old nests of crows and eagles. Clutch-sizes of from 1 to 3 eggs have been recorded for the Brown Fish Owl, of 1 egg for the Malaysian Fish Owl and of 1 to 2 eggs for the Tawny Fish Owl. The Brown Fish Owl appears to breed between November and May throughout its range. In India and northern Indo-China this is the dry season, which suggests that the breeding season might be timed to coincide with the period when river levels are low, the water clear, and fish therefore easy to catch. Unfortunately, the same period is wet in the Middle East and a more satisfactory explanation obviously needs to be found. There are breeding records for the Tawny Fish Owl from the Himalayas in the dry season, but they are too few to be very significant. The Malaysian Fish Owl breeds between December and May in Malaya and Borneo. It is the wettest time of the year in this region, but other times are only less wet, not dry. Obviously, much more information will have to be accumulated before the breeding seasonality of fish owls can be properly explained.

Like most owls, the fish owls are particularly noisy before breeding, and pairs sometimes indulge in bouts of duetting which continue for many minutes. They have a great variety of hooting and mewing calls which are probably distinctive, though descriptions in the literature are confusingly similar. The voice of the small Malaysian Fish Owl is perhaps the most easily recognized, for it is higher-pitched and more musical than the voices of the larger species.

Identification of the Asian fish owls is likely to be a problem only in the parts of Indo-China where the ranges of Brown, Malaysian and Tawny Fish Owls overlap. These three species are, in fact, fairly easily distinguished. The Brown Fish Owl is large, about 480 to 510 mm long, and has fine, wavy, horizontal barring on its underparts; the Tawny Fish Owl is also large, but lacks horizontal barring on its underparts and is a very rich rufous colour; while the Malaysian Fish Owl has neither horizontal barring nor rich rufous colouring, and is relatively small, about 380 to 430 mm long.

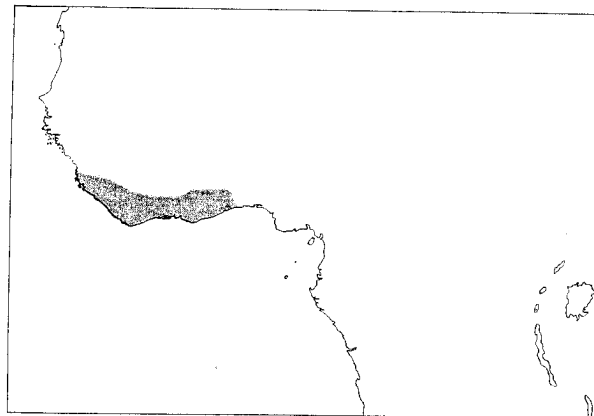
It remains to consider the relationship between the Brown Fish Owl and Blakiston's Fish Owl, for some authorities prefer to regard them as a single

species. The two resemble each other, and differ from the Tawny and Malaysian Fish Owls, in having fine, wavy, horizontal barring on their underparts. However, both species are very variable, and it is difficult to point to any differences that strongly suggest that they are really distinct. It is true that Blakiston's Fish Owl is generally pale in colour, and slightly larger than the Brown Fish Owl, but these are differences that might be expected in view of its northerly distribution and, in any case, they are no greater than the differences between widespread populations of the Brown Fish Owl. Examples of the latter are very pale and buff in the arid areas of Palestine, but a richer yellow brown in the humid forested areas of India and Indo-China. It is also true that Blakiston's Fish Owl differs from the Brown Fish Owl, as well as from the other two species, in having completely feathered tarsi, but again this difference could well be correlated with its northerly distribution. To support this idea there is the fact that the Brown and Malaysian Fish Owls, which have tropical and equatorial distributions, resemble each other in having completely naked tarsi, while the Tawny Fish Owl, which lives further to the north and at higher altitudes than the two latter species, is intermediate and has tarsi that are feathered to about half way down.

This dispute can be resolved only when more is known about the status of fish owls in eastern China. The Brown Fish Owl is known to occur in Kwangsi and Kwangtung Provinces in the south, and Blakiston's Fish Owl in Hopei Province in the north, but it is not known for certain whether fish owls occur at all in the intervening area. If they do not, then it is entirely a matter of taste whether Blakiston's Fish Owl is regarded as a separate species or not. On the other hand, if there are intervening populations that intergrade with the Brown Fish Owl in the south, and Blakiston's Fish Owl in the north, then all the populations must be regarded as a single species.

AFRICAN FISHING OWLS

The three African fishing owls in the genus *Scotopelia* resemble their Asian counterparts in being large and powerful, and in having similar specializations for feeding on fish; otherwise they are quite different in general appearance. They lack ear tufts, and have loose feathering on their heads which gives them a characteristic shaggy,



Scotopelia ussheri: rainforest.

maned look. However, in spite of their superficial dissimilarity, it is thought that the two groups have evolved from the same parent stock, and not independently on the two continents. Obviously, they must have been isolated from each other for a long time to be so different in appearance.

Even less is known about African fishing owls than about Asian species. The least poorly known is Pel's Fishing Owl (*S. peli*), which is sparsely distributed throughout most of Africa south of the Sahara. It is a huge, magnificent species, a rich orange-rufous in colour, and one of the most spectacular of all the owls. It lives by rivers, lakes and marshes with forested banks, but is just as at home in riverine forest strips in desert regions as it is by rivers flowing through the great forests of Zaire. Along the Levubu River in the Kruger National Park of South Africa it reaches densities of up to one pair per 2 or 3 km of river, and may be equally common in many parts of Africa. The other two species are more rare and much less widely distributed. The Vermiculated Fishing Owl (*S. bouvieri*) is found mainly in riverine forest strips adjacent to the great block of continuous Zaire forest, but occurs neither within the continuous forest area, nor far away from the forest edge. The Rufous Fishing Owl (*S. ussheri*) is known only from a handful of records from the