LITTLE-KNOWN ASIAN BIRD

The Ceylon Bay Owl *Phodilus assimilis* in Sri Lanka

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Introduction

The Ceylon Bay Owl *Phodilus assimilis*, recently split along with the Western Ghats race *ripleyi* from Oriental Bay Owl *P. badius* (Rasmussen & Anderton 2005), is one of the rarest birds in Sri Lanka (Henry 1998). At the beginning of this century there had been only 12 records of the species in the island and this was the only bird there whose vocalisations were entirely unknown. Its remarkable song was discovered in 2001 (Warakagoda & Gunawardena 2001). Audio recordings have provided a strong basis to recognise the subcontinental populations of this owl as a separate species, and may even lead to a further "split" of the two taxa endemic to Sri Lanka and south India, respectively.

Prior to the present century only the barest facts were known of the ecology and biology of this owl: it is strictly nocturnal, a forest dweller, it nests in tree-holes, the eggs number 3–4, and the breeding period includes November (Henry 1998). Thus there was great interest among Sri Lankan ornithologists to know the vocalisation of this enigmatic creature, as a key means of learning more about it. Attempts in the 1970s to discover the voice from two captive birds failed (Liyanage 1972, de Zylva 1984), and lack of knowledge of its vocalisations remained the major obstacle to detecting its occurrence. The song was first noted by DW and Kithsiri Gunawardena on a night expedition to study the new Serendib Scops Owl *Otus thilohoffmanni*. DW's recording and publication of it led to a marked increase in the detection and knowledge of the Bay Owl in Sri Lanka, in the years since (Sirivardana 2003, Warakagoda 2005, Seneviratne 2006).

Since DW and KG's discovery there have been records of seven more birds in the wild, including

Plate 1. Ceylon Bay Owl *Phodilus assimilis*, roosting bird approaching the nest hole after dusk. Near Sinharaja Reserve, Sri Lanka, January 2007.

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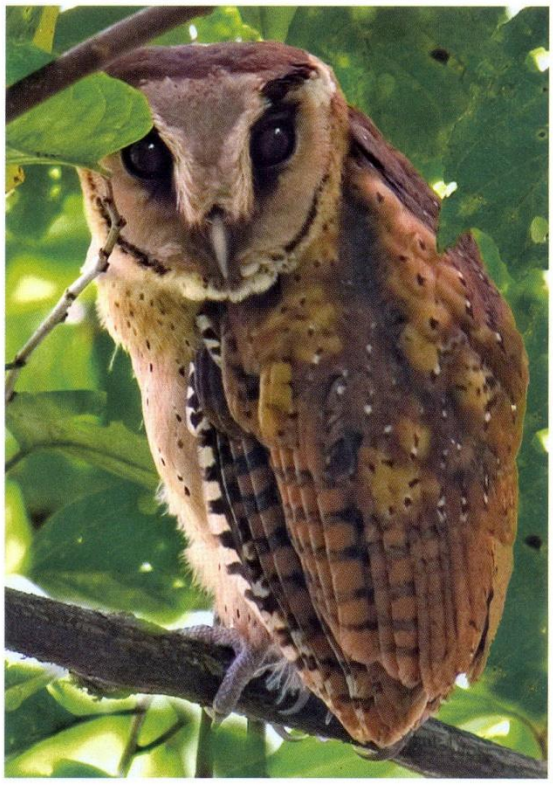
Plate 2. Ceylon Bay Owl *Phodilus assimilis*, in relaxed pose at day roost. Near Sinharaja Reserve, Sri Lanka, January 2007.



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two pairs. The existence of a further four individuals has been learnt, from unprompted descriptions of both the song and the bird by people living near forests. They reported hearing it in the last and first few months of the year, which conforms with our assumption of its breeding periods and indeed with our discovery of a pair at their nest in January 2007, which enabled continuous, although limited, observation of the bird for the first time (Hettige 2007a).

Vocalisation and distribution

The song of the Bay Owl in Sri Lanka can be described as a gliding whistle, *whew-eee-yo*, with the middle syllable much higher in pitch than the other two, and the whole phrase usually repeated three to four times, before a long pause. Haunting and musical, it was likened by a villager to the chant of a farmer herding his cattle home. A sonagram of it is shown in Figure 1. The song of the species in southern India, at present considered a subspecies of the Ceylon Bay Owl, has not been audio-recorded yet. No other vocalisation type is known to date except the contact call described below.

Our new data confirm that the Ceylon Bay Owl occurs sparsely in good forests in the wet and intermediate climatic zones of Sri Lanka. The most significant new distributional fact is that it occurs in the highest hills. Previously the upper elevational limit for the island was 1,200 m but in January 2007 this rose to 2,200 m with a record at Horton Plains National Park (confirmed by a photograph by Rohan Gunasekara). This is higher than anywhere recorded in southern India.

Figure 1. Song of the Ceylon Bay Owl *Phodilus assimilis*, recorded at Kanneliya Forest Reserve in September 2001 by Deepal Warakagoda.

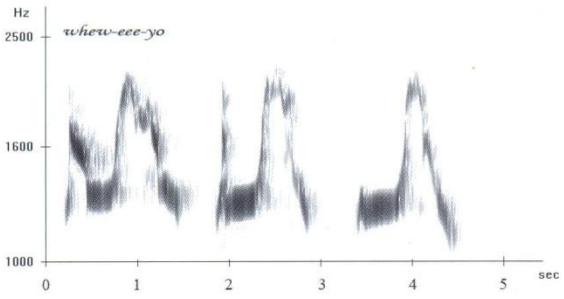

Plate 3. Ceylon Bay Owl *Phodilus assimilis.* Snipe-flies near eyes of roosting bird. Near Sinharaja Reserve, Sri Lanka, January 2007.

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Behaviour and ecology

While roosting this owl, like all others, adopts a camouflage pose in "alert mode" when a threat is detected in the vicinity, tightening the body feathers so as to change from a rather plump to a slender shape which disguises it as a broken branch or stump. Its very short "pseudo-eartufts" are erected and facial disk is vertically elongated, by compressing the edges of the sides of the disk inwards, and broadening the long V-shape extending down the middle of the disk from the forehead, causing the top of the edges of the disk to stand out on either side. König *et al.* (1999) imply that the "alert" mode is the usual posture, stating that the face is "not heart-shaped" but "vertically elongated", but our experience in the field and photographs of earlier records show the disk is nearly heart-shaped in the relaxed mode.

Plate 4. Ceylon Bay Owl *Phodilus assimilis,* at day roost near nest hole. Near Sinharaja Reserve, Sri Lanka, January 2007.

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Plate 5. Ceylon Bay Owl *Phodilus assimilis,* at day roost near nest hole. Near Sinharaja Reserve, Sri Lanka, January 2007.

Plate 6. Ceylon Bay Owl *Phodilus assimilis,* nest site in dead Fishtail Palm *Caryota urens.* Near Sinharaja Reserve, Sri Lanka, January 2007.

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This owl is now known to inhabit only dense forest with rich undergrowth, apparently preferring the vicinity of streams. At night it perches comfortably on vertical stems of small trees in the forest, and rather low (Warakagoda & Gunawardena 2001, Sirivardana 2003), in the same manner as in the Oriental Bay Owl. However, in the daytime it roosts on a rather horizontal branch (Hettige 2007b; see Plate 5). The literature on records outside Sri Lanka, including for Oriental Bay Owl, states that *Phodilus* roosts in tree-holes, but our observations suggest that Ceylon Bay Owl, at least, roosts in the open while nesting. A bird which roosted outside the nest-hole in the daytime continually adjusted its position to face away from the sun. It did this by rotating its body a little from time to time, repositioning the feet accordingly, eventually turning almost through a semicircle. Day-roosting Ceylon Bay Owls tolerate human presence at much closer range than most strigid species in Sri Lanka, mirroring reports from southern India and for the Oriental Bay Owl.

Viewing the day-roosting birds through optics, we noted that often a transparent or whitish liquid was present at the surface of the cornea of the eyes. Probing this liquid at most times were snipe-flies of one or more species of the genus *Chrysopilus* (family Rhagionidae) (see Plates 3 & 5). From time to time the bird covered its closed eyelids by moving over them a tuft of feathers adjacent to each eye from out- to inward. When the tuft was moved back outward the insects settled on this rather than remaining nearer the secretion. A similar phenomenon, not observed before in other owls in Sri Lanka, was subsequently recorded in the Serendib Scops Owl. Less frequently, a few mosquitoes were observed on the eyelids.

Four regurgitated pellets were collected at this site and analysed by UH. Each contained only bones and fur of small rodents, averaging 10 cm in length (without tail). An experienced zoologist who examined these was unable to identify anything to species level. None of the pellets contained skulls; some had broken parts of skull bones, and one had an intact lower jaw; all the other bones that were found were intact. This suggests that the Bay Owl first crushes the head of its rodent prey and then swallows the victim whole, as has been observed in the larger owls of Sri Lanka.

Nesting

Based on records of singing and nesting, we believe that there are two breeding periods of the Ceylon Bay Owl in Sri Lanka, one from October to February and the other around mid-year, including July.

A nest was discovered in January 2007 in rainforest just outside the Sinharaja Reserve adjacent

to a jeep track (Hettige 2007a), following the observation of an adult on several consecutive days at daytime roosts in the vicinity. Observations at night revealed the existence of a nest-hole in a dead Fishtail Palm *Caryota urens*. It was right at the broken top of the palm, about 10 m high, and formed by the break as a vertical hollow.

Initially one bird, presumably the male, roosted alone outside during the daytime, about 5 m away from the tree with the nest, and on relatively open perches about 1.5–5 m above ground. It continually turned away from the sun as described, but when danger approached it turned to face the sun and peered intently at the intruder. UH saw this happen when a Common Coucal *Centropus sinensis*, a Common Myna *Acridotheres tristis* and a monitor lizard *Varanus bengalensis* came near.

Soon after nightfall the roosting owl approached the nest, moving from branch to branch of adjacent trees. It uttered a rather soft, short, squeaky note while doing this, and its incubating mate answered in the same manner. Just as it reached the nest-hole its mate is presumed to have swiftly emerged and flown away, but it was too dark to see this. The approaching bird then entered the nest-hole.

On the days this was observed at this site it was the same bird of the pair which roosted outside in the daytime from morning (the members of the pair differed somewhat from each other, mainly in the density and distribution of dark spots on the underparts and the pattern on the forehead, but this may have been individual rather than sexual variation). The pattern of activity changed about 18 days after this dusk nest changeover was first observed. Now both adults roosted outside continually, suggesting that the young had hatched and grown to a certain size. The pair roosted at distances varying from about 2–30 m apart from each other.

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