

Observations at a nest of Amazonian Pygmy Owl *Glaucidium hardyi* in French Guiana

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Knowledge of the breeding biology of most Neotropical *Glaucidium* species varies from 'unknown' to 'poorly known', which is not surprising given that most species are elusive, tiny owls that principally live in the forest canopy. Working with a camera high up in the nesting tree of a pair of Amazonian Pygmy Owls *Glaucidium hardyi* resulted in the series of photographs presented in this article, and new insights into the life history of a poorly known Neotropical bird.

Until the late 1980s, the Least Pygmy Owl *Glaucidium minutissimum* complex was generally treated as a polytypic species comprising eight subspecies. Then, in 1989, Amazonian Pygmy Owl *G. hardyi* was described as a distinct species, based on its different morphology and vocalisations⁸ (Fig. 1), and thereafter Robbins & Howell⁶ also named Subtropical Pygmy Owl *G. parkeri* from the eastern Andes of Ecuador and Peru. Simultaneously, Howell & Robbins³ split the remainder of the complex into four additional species, three of which occur in Middle America. Amazonian Pygmy Owl is a small *Glaucidium* (14–15 cm), with a short tail and long, round-tipped wings. Its crown and nape are notably greyer than the plain brown mantle and back, with a well-marked 'occipital face' suggesting false black eyes on the nape (Fig. 2). As befits its name, *G. hardyi* is distributed throughout much of Amazonia, south as far as northern Bolivia, north to south-east Venezuela and east to eastern Peru^{1,2,5,7}, where this owl inhabits the canopy of primary tropical forest. It is partially diurnal. König *et al.*⁵ mentioned that its breeding biology has not yet been studied, but they supposed that this facet of its behaviour would prove similar to that of other pygmy owls, which use abandoned woodpecker holes as nest sites, sometimes very high in trees.

In French Guiana, this pygmy owl is widespread throughout the forested interior and forested areas of the coastal region. The species is often heard, but is difficult to observe. Its small

size and fast flight render *G. hardyi* an elusive bird⁴.

On 24 September 2011, TD & Guillaume Longin discovered an active nest of Amazonian Pygmy Owl, 13 km from Maripasoula, in a dead tree beside the dirt road between Maripasoula and Papaïchton, both of which are on the Maroni River in western French Guiana (c.03°46'N 54°07'W). This c.25-km dirt road runs through primary lowland forest. However, on both sides there are many clearings, c.100–150 m wide, except the middle section furthest from Maripasoula and Papaïchton. These clearings are cultivated by the inhabitants of both villages, although parts have now been abandoned, some for more than ten years, permitting the regrowth of secondary forest, in places up to c.15 m tall and dominated by *Cecropia* trees. The nest tree was dead and c.35 m tall, much taller than the surrounding secondary vegetation, and situated between the road and an abandoned clearing. The nest was sited in an old woodpecker hole, c.25 m high on a vertical trunk and contained almost full-grown young (Fig. 3). The diameters of the branch and nest hole entrance were c.20 cm and c.7.5 cm, respectively (Fig. 4).

The nest and behaviour of the adults and young were observed and photographed by TD from within the nest tree on 25 September in the afternoon and on 26 September in the morning. The adults were not shy and occasionally perched less than 3 m from TD. During these periods, one adult stayed near the nest all the time, leaving the nest tree only to forage.



Figure 1. Amazonian Pygmy Owl *Glaucidium hardyi* alarmed by the photographer's presence, panting with partially opened bill (gular fluttering) to cool down in the hottest afternoon hours (Tanguy Deville)

Figure 2. Amazonian Pygmy Owl *Glaucidium hardyi* showing the false eyes of its 'occipital face' while preening its back (Tanguy Deville)

Figure 3. General view of the Amazonian Pygmy Owl *Glaucidium hardyi* nest tree; the nest hole is on the vertical trunk in the centre of the photograph (Tanguy Deville)

Figure 4. A nestling Amazonian Pygmy Owl *Glaucidium hardyi* at the entrance of the nest hole (Tanguy Deville)

Figure 5. Amazonian Pygmy Owl *Glaucidium hardyi* bringing a half-eaten bird to the nestlings (Tanguy Deville)

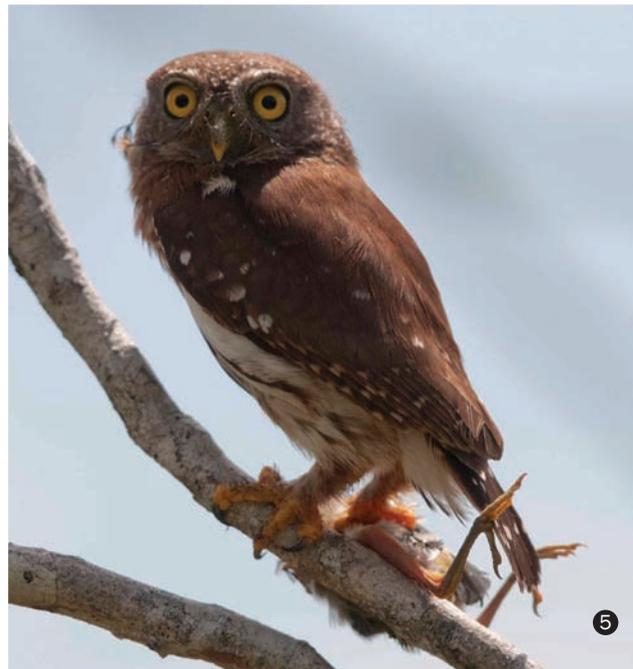




Figure 6. A *Cephalotes atratus* ant eating prey remains from the claws of Amazonian Pygmy Owl *Glaucidium hardyi* (Tanguy Deville)

Figure 7. Amazonian Pygmy Owl *Glaucidium hardyi* bringing a cicada to the nestlings (Tanguy Deville)

Figure 8. Amazonian Pygmy Owl *Glaucidium hardyi* mobbed by a female White-chinned Sapphire *Hylocharis cyanus* (Tanguy Deville)

Only one young was ever seen at the entrance of the nest hole (Fig. 3). The adults always entered the nest hole directly without pausing on the rim. Feeding of the young was observed twice. On 25 September at 14h03, an adult brought a small, half-eaten, unidentified bird to the nest (Fig. 5). On perching after leaving the nest hole, large black *Cephalotes atratus* ants, living high in the nest tree, came to eat prey remains from the adult's claws (Fig. 6). On 26 September at 08h51, an adult left the nest tree and returned, after an absence of just 12 minutes, carrying a cicada with its head missing (Fig. 7). Removal by the adults of prey remains, faecal sacs or pellets from the nest hole was not observed.

Once, an adult in the nest tree was mobbed by a female White-chinned Sapphire *Hylocharis cyanus* (Fig. 8). During the hottest afternoon hours, adults perching in the open in the nest tree tried to cool down by panting with half-open bill (gular fluttering) (Fig. 1). During the day, the adult in the nest tree regularly sang a soft, descending, rather high-pitched trill of notes as described in the literature, a very un-owl-like song². Once it sang from within the nest, with its head visible at the entrance. On 25 September at dawn one adult was perched near the nest while the other was singing in a tree c.50 m away.

Our observations further demonstrate that the Amazonian Pygmy Owl is quite active by day, especially when there are young in the nest.

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