

NEW RECORD OF NESTING SITE OF TROPICAL SCREECH OWL (*MEGASCOPS CHOLIBA*) FROM BRAZIL

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Novo registro de sítio de nidificação da corujinha-do-mato (*Megascops choliba*) no Brasil.

Key words: Tropical Screech Owl, *Megascops choliba*, Strigiformes, nest site, reproduction, Atlantic forest.

INTRODUCTION

The nesting site selection is critical for many species because it can affect the individual reproductive success and species population size (White *et al.* 2006, Schill & Yahner 2009). The utilization of tree trunk cavities as nesting sites (Belthoff & Ritchinson 1990) is usual in many bird species. However, a part of these species, including all owl species, are not able to build these cavities (Severinghaus 2007), hence, their reproduction is limited by the presence and availability of these cavities (Miller 2010).

Owls of the genus *Megascops* (Strigidae), recently separated from *Otus* on the basis of molecular characteristics and bioacoustics, are represented by 27 species distributed exclusively in the Neotropics (König *et al.* 1999).

The genus members are small to medium-sized and exhibit short ears and a cryptic plumage (del Hoyo *et al.* 1999, König *et al.* 1999). In Brazil, there are six species of *Megascops* (CBRO 2011), with the Tropical Screech Owl (*M. choliba*) being one of the most common representatives (Sick 1997). This species occurs from Costa Rica to north Argentina and throughout Brazil and usually inhabits forest edges, savannas and urban areas (Sick 1997).

Few studies have been published about the nesting habits of the Tropical Screech Owl and other tropical Strigidae (Scott & David 1989, König *et al.* 1999). Here, we report a new nesting site for the Tropical Screech Owl, contributing to the knowledge of the reproductive biology of this species.

METHODS

The record was made in the rural zone of Capão Bonito (23°54'33"S, 48°12'10"W) in São Paulo, southeastern Brazil. The area belongs to the Atlantic Plateau of São Paulo, altitudinally ranging from 800 to 1050 m a.s.l., with a topography dominated by hills and small valleys (Ponçano *et al.* 1991). The mean daily temperatures ranges from 11°C to 27°C during the year and the total annual rainfall is about 1400 mm, with a dry season between June and August (Veloso *et al.* 1991). The landscape where the nest was recorded is fragmented with patches of Montane Rain Forest and matrix of *Eucalyptus* spp., corn, pasture, and roads.

All observations were made on 10 November 2009 between 12:00 and 18:00 h by the authors. The nest was discovered with the naked eye and afterwards observed with binoculars (7x50). During a later inspection by RMC, the nest interior was recorded with a digital camera, and diameter and depth were taken using a tape measure. The nestling remained in the nest all the time but was removed for a few minutes for the photographic record of the nest interior.

RESULTS

The nest was found on an *Araucaria angustifolia* tree around 9.5 m above the ground and near to rural house (Fig. 1a). Inside the nest were an adult individual (Fig. 1b) and a nestling (Fig. 1c). The latter was in juvenile and about half the size of the adult, indicating an age of less than one month.

The nest was bowl-shaped, 40 cm in diameter, and 6 cm in depth (measured from the edge to the floor). The building material was composed of stems, twigs and leaves of pine and *Araucaria*, without any kind of protection at the bottom of the incubator chamber (Fig. 1d). Approximately 1.5 m above the

nest mentioned, there was another with the same characteristics as the first, but that was not inspected because it is located out of reach at the top of the tree. The shape and materials used to build the nests, the aggressive behavior displayed by individuals of Guira cuckoos (*Guira guira*) during the nest inspection, and an egg of the latter species found nearby the tree indicated that the nest occupied by the Tropical Screech Owl was overtaken from the cuckoos. The latter species builds bowl-shaped nests (Melo & Macedo 1997) using irregular sticks (Euler 1900), and presents colonial breeding and egg ejection behavior of other group members (Macedo *et al.* 2004). Moreover, the absence of cavities found in the tree and in the immediate surroundings reinforces the idea that the owls used this nest for the complete breeding cycle.

DISCUSSION

The present report adds new facts about the reproduction of the Tropical Screech Owl because the nest was located outside a cavity and at a height greater than 5 m. In Brazil, seven nests of this species were described, all inside a cavity and situated at a height of 5 m. Motta-Junior (2002) and Motta-Junior *et al.* (2010) recorded three nests in *Eucalyptus* dead-trunk cavities in heights between 0.6 and 1.5 m in state of São Paulo. In Rio de Janeiro city, Euler (1900) found a nest in a cavity at 1 m height. Marini *et al.* (2007) documented two nests at 2.1 and 4.5 m of height in Minas Gerais, and Oliveira (1984) reported a nest of this species in the roof of a small rural house in Porto Alegre, southern Brazil. Quesnel (2003) in Talparo, Republic of Trinidad and Tobago, monitored for six years a couple of the Tropical Screech Owl that nested in a cavity on the roof of a house at a height of about 3 m. In Argentina, the species was found nesting in tree cavities with heights between

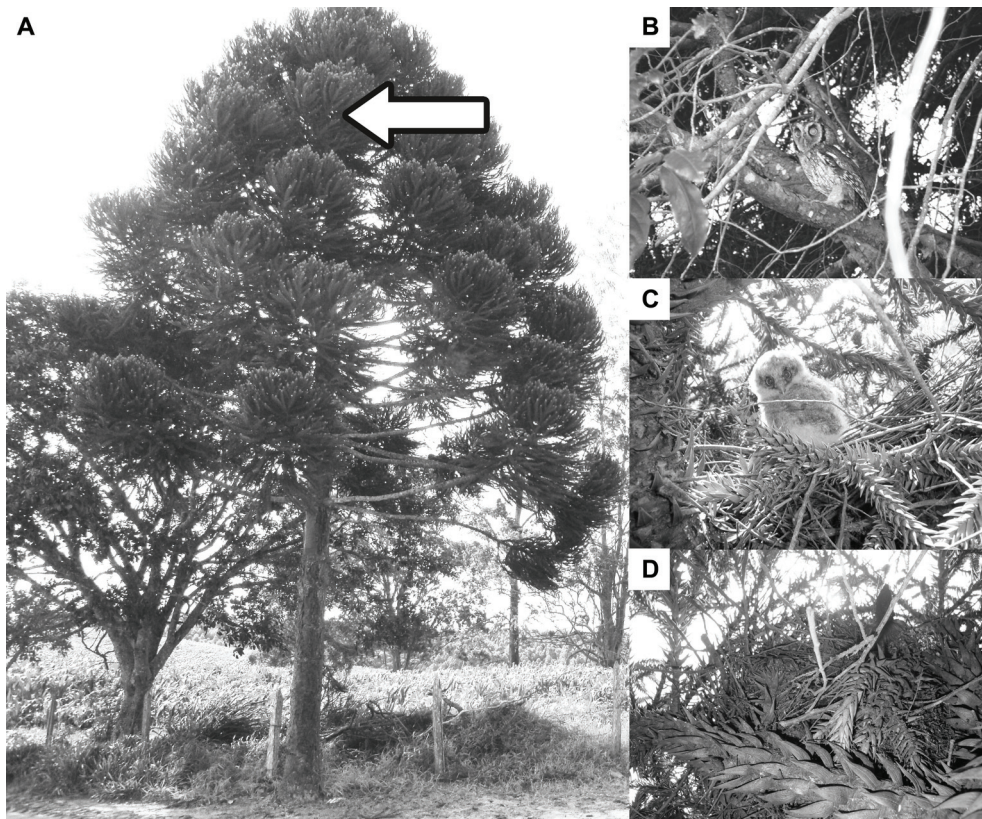


FIG. 1. Nest site and characteristics of the Tropical Screech Owl (*Megascops choliba*) at Capão Bonito, São Paulo, Brazil; A) nesting tree of *Araucaria angustifolia* (with arrow indicating exact location of nest), B) adult after leaving the nest, C) nestling found inside the nest, D) inside view of the nest of the Guira Cuckoo (*Guira guira*) occupied by *M. choliba*.

1.7 to 4 m (Marini *et al.* 2007, König *et al.* 1999).

The location and characteristics of the nests are important and often crucial for the reproduction of the species. For example, the height and diameter of the opening of the nest cavity are main factors to be considered because they may facilitate the ascent and entry of predators (Korpimäki 1987, Belthoff & Ritchison 1990, Severinghaus 2007). In our record, the increase in nest height could minimize the chances of predation by climber species, and the presence of a

nest above the occupied nest could reduce vulnerability to flying species (Rodríguez *et al.* 2006).

Another factor that may have influenced the overtaking of a cuckoo's nest by the Tropical Screech Owl could be the scarcity of dead tree trunks and the absence or rarity of woodpeckers in this fragmented environment, as these factors may lead to lowering the number of available cavities for nesting (Pereira *et al.* 2009, Korpimäki 1987). Hence, this reduction may affect the species that are depending on arboreal cavities, as almost all owl species,

and force them to explore new strategies for nesting (Belthoff & Ritchison 1990).

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