

# ACCIDENTAL CAPTURE OF *Nyctibius griseus* (Gmelin, 1789) WITH MIST NET

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**ABSTRACT:** The use of mist nets for inventories and monitoring of birds and bats is a widespread practice today. Usually this methodology is used in daytime periods for birds and during the night to catch bats. The aim of this study is to report the accidental capture of *Nyctibius griseus* (NYCTIBIIDAE) in mist nets, armed to monitor bats. The activities were carried out in a forest fragment, inserted in the Atlantic Forest biome, located in the city of Dois Irmãos das Missões (north of Rio Grande do Sul, Brazil). On Dec. 25, 2009, the accidental capture of one *N. griseus* male individual was registered. Until that time, there had been no reports on the catching of this species using mist nets in the literature. The authors attribute this accidental capture of *N. griseus* to the fact that many large beetles were also trapped on the mist nets on the same date, and considering the food habit from these birds (exclusively insectivorous), the beetles may be acting as live baits, making the accidental capture easy.

**KEYWORDS:** Nyctibiidae; Atlantic Forest; Mist net; Accidental capture.

## CAPTURA ACIDENTAL DE *Nyctibius griseus* (Gmelin, 1789) EM REDE DE NEBLINA

**RESUMO:** A utilização de redes de neblina para realização de inventários e monitoramentos de aves e quirópteros é uma prática largamente difundida nos dias atuais. Normalmente utiliza-se esta metodologia em períodos diurnos para aves e no turno da noite para a captura de morcegos. O objetivo deste trabalho é relatar a captura acidental de *Nyctibius griseus* (NYCTIBIIDAE), em rede de neblina, armada para o monitoramento de quirópteros. As atividades foram realizadas em um remanescente florestal, inserido no bioma Mata Atlântica, localizado no município de Dois Irmãos das Missões (norte do Rio Grande do Sul, Brasil). No dia 25 de dezembro de 2009 foi registrada a captura acidental de um espécime macho de *N. griseus*. Até o momento não foi encontrado na literatura nenhum outro registro de captura dessa espécie, com rede de neblina. Os autores atribuem essa captura acidental de *N. griseus* ao fato de inúmeros coleópteros de grande porte terem ficado presos na rede de neblina, na mesma data e, em função do hábito alimentar essencialmente insetívoro dessa espécie de ave, os besouros podem ter atuando como iscas-vivas, facilitando a captura acidental.

**PALAVRAS-CHAVE:** Nyctibiidae; Mata Atlântica; Rede de neblina; Captura acidental.

## CAPTURA ACCIDENTAL DE *Nyctibius griseus* (Gmelin, 1789) EN MALLA DE NIEBLA

**RESUMEN:** La utilización de mallas de niebla para realización de inventarios y monitoreo de aves y quirópteros es una práctica extensamente difundida actualmente. Normalmente se utiliza esta metodología en periodos diurnos para aves y nocturno para captura de murciélagos. El objetivo de este estudio es relatar la captura accidental de *Nyctibius griseus* (NYCTIBIIDAE), en malla de niebla, armada para monitoreo de quirópteros. Las actividades se han realizado en un remaneciente forestal, inserido en el bioma Mata Atlántica, ubicado en el municipio de Dos Hermanos de las Misiones (norte del Rio Grande de Sur, Brasil). El día 25 de diciembre de 2009 se registró la captura accidental de una espécimen macho de *N. griseus*. Hasta el momento no se ha encontrado en la literatura ningún otro registro de captura de esa especie, con malla de niebla. Los autores atribuyen esa captura accidental de *N. griseus* al hecho de inúmeros coleópteros de gran tamaño que se han quedado atrapados en la malla de niebla, en la misma fecha y, en función del hábito alimentar esencialmente insectívoro de esa especie de ave, los escarabajos pueden haber actuado como carnada viva, facilitando la captura accidental.

**PALABRAS CLAVE:** Nyctibiidae; Mata Atlántica; Malla de niebla; Captura accidental.

### Introduction

The method of bats capturing, normally used for inventories and monitoring, is the use of mist nets instalated on probable routes of flight (ESBERARD, 2006). The mist nets were developed in Japan to capture birds for food, and were initially intended for use by the emperor (IBAMA, 1994). In the past, in the late 40's, the description of the Japanese nets and their efficiency in capturing wild birds (LOW, 1957), marked the begin to their widespread use, representing a re-

volution in research involving birds and bats, as an increasing number in obtaining information that were previously inaccessible (STRAUBE; BIANCONI, 2002). The objective of this study is to report the accidental capture of *Nyctibius griseus* (NYCTIBIIDAE) in mist nets, armed to the monitoring of bats.

The NYCTIBIIDAE family is composed of a single genus with seven species limited to the Neotropical Region (DEL HOYO *et al.*, 1999). Five of these species occur in Brazilian territory: *N. grandis* (Gmelin, 1789) Great Po-

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too, *N. aethereus* (Wied, 1820) Long-tailed Potoo, *N. griseus* (Gmelin, 1789) Common Potoo, *N. leucopterus* (Wied, 1821) White-winged Potoo, and *N. bracteatus* Gould, 1846 Rufous Potoo (CBRO, 2009). The members of this family are endowed with broad flat head, beak and short legs and huge eyes. The wings and tail are pretty long and the body is robust and muscular. They have nocturnal activity and a highly specialized camouflage composed of a colored grayish to brown, invariably mottled and with black spots, gray and light brown of various shades, shapes and sizes, scattered throughout the body, which is always darker on the dorsal region (STRAUBE, 2004). This camouflage is still more efficient because to the peculiar behavior of these birds. During the day it repose on a broken branch, oblique to the trunk and / or perpendicular to the ground, so they appear to be an extension of this (BARRERO, 1970; SKUTCH, 1970; SICK, 1997; DEL HOYO *et al.*, 1999; STRAUBE, 2004).

Among the family members *N. griseus* is the most common type, with distribution since Costa Rica on Central America (STRAUBE, 2004) and by almost entirely the South America (LOPES; ANJOS, 2005), except for the colder areas of the Andean-Patagonian (STRAUBE, 2004). According to Straube (2004), occurs both in the dense forests as the forest edges, barns and even in isolated trees of large cities. Compared with the other species, *N. griseus* is medium in size, about 40 cm and a weight of between 150 and 190 grams. This is the only species that occurs in Rio Grande do Sul (BELTON, 1993; BELTON 1994; BENCKE, 2001).

## Materials and Methods

### Study Area

This study was conducted in a forest remnant with approximately 460 hectares, in the city of Dois Irmãos das Missões (north of Rio Grande do Sul, Brasil), in the town of Linha Progresso, 5.5 kilometers away from the city seat. The area is inserted in the Atlantic Forest biome, and has an important sample of the contact area of two different forest types, the Araucaria Forest and Deciduous Seasonal Forest. The climate is defined as humid subtropical - Cfa (KÖPPEN, 1948).

### Methodology

During the monitoring activity of mammals, including bats (Aut. n. 092/09-NUFAU/IBAMA/SC), from 22 to 26/12/2009, were installed mist nets 6 m x 3 m, in two sample areas (UTM coordinates 22 J - 252548/6942965 = Area 1 and 252454/6942947 = Area 2) with seven and five mist nets each, respectively. The nets were opened at dusk, around 20:30 pm (Brazilian summer time - moon crescent) and remain active for 3 hours. Outside this period the nets were kept closed to prevent accidental capture of diurnal species (GAUNT *et al.*, 1999) or capture without the presence of researchers. The nets were examined every 30 min, when were registered the biometrics data, identification, photographic records and release of the captured individuals.

## Results and Discussion

On 25/12/2009, at approximately 21:30 pm, was caught accidentally in a mist net of Area 2, an individual male of *N. griseus* (Figure 1). The temperature at the time of capture was 24 °C, the relative humidity was 87% and the moon was in crescent.

Regarding the capture of Caprimulgiformes, with mist nets, Todd *et al.* (1998) captured 16 individuals of *Chordeiles minor* (Forster, 1771) for a study of diet and Fletcher *et al.* (2004), captured eight individuals of the same specie with mist nets, after attracting them using playback calls. Melo *et al.* (2000) reported the capture, of an individual male, of *Caprimulgus parvulus* Gould 1837, during the day, after the installation of nets around the nest site of the same.

It was not found in the literature other record of *N. griseus* caught with mist nets, probably because the absolute majority of studies with birds, performed using this type of methodology, are done during the day, and the record of nocturnal birds are usually done by vocalizations and visualizations.

According to Straube (2004) the members of NYC-TIBIIDAE family are exclusively insectivorous birds, with special predilection for large invertebrates, which compensate the energy spent to persecute them. Generally prefer to hunt insects in flight, capturing them in reason the shape of your mouth exceptionally large.

The authors attribute this accidental capture of *N. griseus* to the fact that many large beetles (approx. 5 cm) also were trapped on the mist nets and thus, these beetles may have facilitated the capture, acting as live baits.

After withdrawal of the bird of the net, the same was placed on a tree branch, where he remained motionless, without bothering with the presence of researchers (F. FISCH & D. PORT, pers. obs.) (Figure 2).



Figure 1: *Nyctibius griseus* captured in mist nets.



Figure 2: *Nyctibius griseus* after release.

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