

First detailed dietary information for Rusty-barred Owl *Strix hylophila*

Rusty-barred Owl *Strix hylophila* is a forest species found in southern Brazil, south-east Paraguay and north-east Argentina, and is considered globally Near Threatened^{7,8,12}. Knowledge of its feeding ecology is scarce^{4,5,8}. Here, we present the first detailed information on its diet.

In August 2014, we collected six complete pellets and several fragments below the roost of an individual, in the Floresta Estadual 'Edmundo Navarro de Andrade', Rio Claro, São Paulo, Brazil (22°25'S 47°31'W; 670 m). The area lies in the semi-deciduous forest domain, but is currently dominated by *Eucalyptus* spp. plantations with regenerating native vegetation of different ages⁶.

We identified 46 prey items in the pellets (Table 1). Most were small mammals (93.5%), with the rest comprising invertebrates (6.5%). Rodents made up 76.1% of prey items, marsupials 15.2%, bats 2.2% and insects 6.5%.

Table 1. Contents of Rusty-barred Owl *Strix hylophila* pellets collected at Rio Claro, São Paulo, Brazil.

Taxon	No. of individuals	% of total prey
Rodentia		
Cricetidae		
<i>Oligoryzomys</i> sp.	1	2.17
<i>Oligoryzomys</i> cf. <i>flavescens</i>	12	26.1
<i>Oligoryzomys</i> cf. <i>nigripes</i>	14	30.43
<i>Akodon</i> sp.	2	4.35
<i>Juliomys</i> sp.	3	6.52
<i>Juliomys</i> cf. <i>pictipes</i>	2	4.35
<i>Oxymycterus</i> sp.	1	2.17
Didelphimorphia		
Didelphidae		
<i>Gracilinanus microtarsus</i>	7	15.22
Chiroptera		
Phyllostomidae		
<i>Anoura</i> sp.	1	2.17
Coleoptera		
Lampyridae	2	4.35
Orthoptera	1	2.17

Published information concerning the diet of *S. hylophila* is limited to large groups of vertebrates and invertebrates. According to Schubart *et al.*¹¹, Höfling *et al.*⁴, Holt *et al.*⁵ and König *et al.*⁸, the species feeds on insects (including grasshoppers, Acrididae), crustacea, fish, amphibians, reptiles, birds and mammals. Thus, the items found in the pellets at Rio Claro are expected for the species, but permit more detailed knowledge of this owl's feeding habits.

Regarding mammals, in general the prey appeared to be widespread species, e.g. *Oligoryzomys* spp. and *Akodon* sp., fairly common rodents in the Atlantic Forest and Cerrado regions in São Paulo^{1,2}. The genera *Akodon* and *Oligoryzomys* are associated with disturbed areas such as forest edges and secondary forest fragments^{9,13}. The same is true of leaf-nosed bats (genus *Anoura*), which include nectarivores found both in forests and open areas^{2,3}. In this region, the species *A. caudifer* and *A. geoffroyi* are both possible. Potentially, the rodent *Oxymycterus* sp. is also widespread, but without identification to species level it is impossible to be certain, and species of this genus have very different habits^{2,10}. Finally, it is worth noting that the rodent genus *Juliomys* and the marsupial *Gracilinanus microtarsus* are less common in mammalian inventories and are forest taxa, with *Juliomys* being endemic to the Atlantic Forest of south and south-east Brazil, in both secondary and mature forests⁹. The distribution of this genus¹⁰ is very similar to that of *S. hylophila*⁸.

Most of the taxa preyed on were arboreal (*Juliomys* sp. and *Gracilinanus microtarsus*) or scansorial small mammals (*Oligoryzomys* spp.), totalling 39 individuals, whereas terrestrial species (*Akodon* sp. and *Oxymycterus* sp.) were represented by just three individuals. This might reflect the preference of *S. hylophila* to hunt in middle / high forest strata. On the other hand,

in fragmented and / or altered Atlantic Forest areas, endemic or arboreal species of small mammals become less dominant than others such as *Akodon* and *Oligoryzomys*, as well as some understorey marsupials^{9,13}. Therefore the large number of *Oligoryzomys* spp. ($n = 27$) might be evidence that *S. hylophila* also hunts in fragmented / altered habitats, or even in transitional areas between Atlantic Forest and Cerrado. Nonetheless, endemic taxa, such as *Juliomys*, were taken.

The presence of prey species from both edges and the interior of forests suggests that *S. hylophila* hunts in different environments and prefers prey that inhabit middle to high forest strata. However, further work is needed to better understand the foraging habits of Rusty-barred Owl. Studies of this type are among the few opportunities to learn more about the habits of little-known and nocturnal species.

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