Sclerurus macconelli may use roosting sites with high fidelity

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The *Sclerurus* genus belongs to the Furnariidae family, and there are currently six described species in Brazil [1]. These species are quite similar in terms of morphology (although their bills may vary in length and curvature), behavior and ecology [2]. Their center of abundance consists of low altitude tropical environments [3]. Furthermore, their relative abundances fluctuate from uncommon to relatively common, as they are highly sensitive to anthropic and natural disturbances [4]. The *Sclerurus* species usually inhabit humid forests in Central America, in the western portion of South America, and in Brazil's coastal forests.

These birds spend most of the time on the forest floor looking for food resources, rummaging in the leaf litter using their bill as a tool [2]. Their diet consists mainly of insects and other small animals [5,6]. Commonly, their nests are built on walls or interspersed in the roots of fallen trees [7]. These walls, made of soil or rock, as well as tabular roots, may also be chosen for roosting sites [8]. Such behavior has already been described by Van Wels and Whitney [9] and there are two photographic records on the website Wikiaves [10]. Campos e Silva [8] observed that, for three consecutive nights, an individual of the *Sclerurus* genus returned to the same roosting spot, thus suggesting that the species of this genus may show a certain degree of fidelity to these spots.

Our work aims to corroborate and complement previous observations of this behavior. During routine nocturnal monitoring, we found a *Sclerurus macconnelli* roosting on a soil wall (23º27'632"S, 045º08'493"W) (Figure 1) in the ONG Projeto Dacnis's private reserve and began monitoring its behavior in order to verify the accounts of roosting fidelity. The monitoring period of the first individual began on August 2015 and ended on February 2016. We visited the roosting site 41 times during this period, and every single time the individual was using the same spot. A second individual of the same species was found roosting in another site during this period (23º27'04"S, 045º08'984"W) (Figure 2). It was discovered in January 2016 and monitored during two months. We visited its roosting site 12 times and the individual was always there to be found every single night, using the same roosting spot and showing a similar fidelity to the spot as the first individual.

Roosting behavior in Neotropical birds lacks extensive and profound investigation [9]. The different strategies adopted by different bird species leads to both positive and negative outcomes. For instance, communal roosting promotes a higher efficiency in food location, mainly for frugivorous birds, as this type of roosting may serve as information centers about food sources [10]. Nevertheless, communal roosting sites may attract higher numbers of predators and act as disease transmission centers [11,12]. Leaftossers are solitary in nature; they stroll and roost alone [2]. Possibly, this solitary roosting behavior may be influenced by the birds' diet: leaftossers are insectivorous, meaning that food resources are more evenly distributed throughout the environment. Therefore, the success of *Sclerurus macconnelli* foraging does not rely on the information sharing that occurs in communal roosting. Eiserer[13] suggests that solitary individuals select their roosting spots in sites that offer protection against predators and harsh weather conditions, and that are close to food resources. Thus, once established, the fidelity to the use of the same spot may become an advantageous behavior.

The results of the present work shows that *Sclerurus macconnelli* uses with high fidelity its roosting sites, corroborating the suggestions of previous work [8]. Efforts should be deposited in new observations of this type of behavior in other species of birds in general, thus providing a more complete database on the natural history of roosting behavior.

Acknowledgments

We would like to thank Projeto Dacnis and Alex Mariano for support in the field work.

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Figure 1. *Sclerurus macconnelli* roosting on a soil wall at 1,83 m above the ground. Photo by Edélcio Muscat.

Figure 2. A second individual of *Sclerurus macconnelli* was found displaying the roosting behavior on a rock wall at 1,25 m above the ground. Photo by Edélcio Muscat.

Figure 3. Mark left by the frequent use of the same spot by *Sclerurus macconnelli*. Photo by Alex Mariano.