

Identification and density of coccidian parasites (Apicomplexa: Eimeriidae) of wild birds in an area of Atlantic Forest near the Serra dos Órgãos National Park

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The Atlantic Forest is among the first of the list of global hotspots because its remaining area is less than 8% of its original extent. In its remnant areas Conservation Units become essential because they preserve the habitat of the species. Among the several Brazilian Conservation Units is the Serra dos Órgãos National Park, which is located in the Serra do Mar mountain complex in the State of Rio de Janeiro. In general, areas around Conservation Units are fragmented or deforested for livestock, agriculture or urbanization activities, predisposing these areas to the edge effect. The edge effect due to loss and fragmentation of the forest threatens the biodiversity of the Atlantic Forest, because in addition to the direct impacts on fauna, flora and microbiota, indirectly favor the transmission and susceptibility of wild animals to parasites. In this context, emerge the importance of knowledge about the parasites of wild birds, especially of groups little studied, as coccidia that has importance in terms of biodiversity as well as in its dynamics and specificity. Thus, the aim of this study was to examine the feces from wild birds captured in an area of Atlantic Forest in the municipality of Guapimirim near the Serra dos Órgãos National Park. Five expeditions were carried out in august and november 2015, and march, july and december 2016. A total of 101 birds were captured with mist nets. The birds were kept in individual boxes and feces collected immediately after defecation. After identification of the species, the bird was photographed and released and stool samples were placed in centrifuge tubes containing a potassium dichromate 2.5% solution at 1:6 (v/v). Samples were carried to the Laboratório de Biologia de Coccídios, UFRRJ. Samples were incubated at room temperature for 10 days. Oocysts were isolated by flotation in Sheather's solution and quantified by OPD (oocysts per fecal drop) conferring the densities. Morphological observations, photomicrographs and measurements were made using an optical microscope coupled to a digital camera. A total of 101 wild birds were captured and examined and 25 of them were positive for seven coccidian species, of which four had morphology undescribed in the scientific literature. The three coccidian species identified and their respective hosts were: *Eimeria curvata* Adriano, Thyssen, Cordeiro, 2000 from the ruddy ground-dove *Columbina talpacoti* (Temminck, 1809); *Isospora cetasiensis* Coelho, Berto, Neves, Oliveira, Flausino, Lopes, 2011 from the saffron finch *Sicalis flaveola* (Linnaeus, 1766); and *Isospora massardi* Lopes, Berto, Luz, Galvão, Ferreira, Lopes, 2014 from thrushes *Turdus* spp. Linnaeus, 1758. The highest densities were observed from fecal samples of *Leptotila verreauxi* Bonaparte, 1855 and *Tangara seledon* (Müller, 1776), which had OPDs of 11695 and 3664, respectively. The unidentified species are still in the process of identification and

description, however these preliminary results demonstrate the diversity and distribution of these coccidia in this area of Atlantic Forest near the Serra dos Órgãos National Park.

Keywords: Coccidia, oocysts, diagnostic, Taxonomy, Ecology, Parque Nacional da Serra dos Orgãos