

Parasitological Tracking of Wild Passerines in Group for the Rehabilitation of Native Fauna and Its Habitat

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Abstract : The order Passeridae corresponds to the richest and most abundant group of birds, with approximately 6500 species, making it possible to assert that two out of every three bird species are passerines. They are globally distributed and exhibit remarkable morphological and ecological variability. While numerous species of parasites have been identified and described in wild birds, there has been little focus on passeriformes. Seventeen passerines admitted to GREFA, a Wildlife Rehabilitation Center, throughout the months of October, November and December 2022 were analyzed. The species included *Aegithalos caudatus*, *Anthus pratensis*, *Carduelis chloris*, *Certhia brachydactyla*, *Erithacus rubecula*, *Fringilla coelebs*, *Parus ater*, *Passer domesticus*, *Sturnus unicolor*, *Sylvia atricapilla*, *Turdus merula* and *Turdus philomelos*. Data regarding past history was collected, and necropsies were conducted to identify the cause of death and body condition and determine the presence of parasites. Additionally, samples of intestinal content were collected for direct/fecal smear, flotation and sedimentation techniques. Sixteen (94.1%) passerines were considered positive for the presence of parasitic forms in at least one of the techniques used, including parasites detected in necropsy. Adult specimens of both sexes and tritonymphs of *Monojoubertia microhylla* and ectoparasites of the genus *Ornithonyssus* were identified. Macroscopic adult endoparasitic forms were also found during necropsies, including *Diplotrriaena* sp., *Serratospiculum* sp. and *Porrocaecum* sp.. Parasitism by coccidia was observed with no sporulation. Additionally, eggs of nematodes from various genera were detected, such as *Diplotrriaena* sp., *Capillaria* sp., *Porrocaecum* sp., *Syngamus* sp. and *Strongyloides* sp., eggs of trematodes, specifically the genus *Brachylecithum* and cestode oncospheres, whose genera were not identified. To our knowledge, the respiratory nematode *Serratospiculum* sp. found in this study is being reported for the first time in passerines in the Iberian Peninsula, along with the application of common coprological techniques for the identification of eggs in the intestinal content. The majority of parasites identified utilize intermediary hosts present in the diet of the passerines sampled. Furthermore, the discovery of certain parasites with a direct life cycle could potentially exert greater influence, particularly in specific scenarios such as within nests or during the rehabilitation process in wildlife centers. These parasites may impact intraspecific competition, increase susceptibility to predators or lead to death. However, their cost to wild birds is often not clear, as individuals can endure various parasites without significant harm. Furthermore, wild birds serve as important sources of parasites across different animal groups, including humans and other mammals. This study provides invaluable insights into the parasitic fauna of these birds, not only serving as a cornerstone for future epidemiological investigations but also enhancing our comprehension of these avian species.

Keywords : birds, parasites, passerines, wild, spain

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