

Abstract of the DVM thesis No. 722177 , , Faculty of Veterinary Medicine, Urmia

University.

The Academic Year: 2022-2023

Author: Milad Zeinali

Title of thesis: Investigation of coccidial infestation of finches and canaries in bird shops of Urmia city

Keywords: Coccidia, Isospora, finch, canary, Urmia

This study was conducted to identify and investigate the morphology of protozoan Isospora parasites in various species of canary birds in bird shops in Urmia city. To investigate the presence of Isospora parasites in these birds, 200 samples were collected from bird shops across the city, and bird infestation with Isospora parasites was confirmed in 28 (14%) of the samples. The number of oocysts in 22 cases was less than 100, and in six cases, this number was reported to be more than 100 oocysts per gram of feces. Isospora oocysts were extracted from bird feces and their morphological features were studied. The average dimensions obtained for the oocysts in morphological observations in 28 samples were approximately similar to each other. The obtained oocysts were spherical and sub-spherical, the dimensions of the parasite's oocyst were on average equal to 19.1×20.86 ($18.3-20.1 \times 19.8-22.6$), and the shape index (length/width) of this parasite was calculated to be 1.09; no micropyle, residual body, and polar granule were observed in this parasite. The sporocyst of this parasite is egg-shaped, with dimensions on average measuring 12.57×8.62 ($11.3-13.7 \times 7.4-9.4$); the sporocyst wall is smooth and at the front of the parasite a round stieda body is visible and below it a button-shaped sub-stieda body can be seen. The residual sporocyst is seen as scattered granules between sporozoites. Commonly, the identification of Isospora parasites is done by their morphological features. Oocyst dimensions are the main characteristics for identifying parasites, also the shape of the oocyst and the presence or absence of structures inside the oocyst when the dimensions of the oocyst are relatively identical will help differentiate between two parasites. The parasite examined in this study has the most morphological similarity to I.serini parasite identified by Box; in phylogenetic study, the most similarity of the test parasite is with Isospora sp. JRBarta-2021c observed in the United States.