

A SURVEY OF THE PARASITES OF  
STARLINGS (STURNUS VULGARIS L.) IN  
EL PASO COUNTY, TEXAS

by

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THESIS

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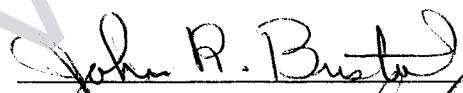
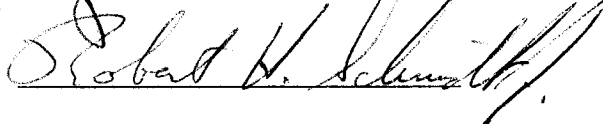
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## ABSTRACT

The Survey of the Parasites of Starlings (Sturnus vulgaris L.) in El Paso County, Texas, reveals the presence of Hymenolepis farciminosa, Choanotaenia sp., Mediorhynchus grandis, M. robustum, Oxyspirura petrowi, Contracaecum sp., Brueellia nebulosa, Menacanthus mutabilis, and Haemolaelaps casalis. The rates of infection are compared to selected local meteorological data and the results of previous North American surveys are compared to mean annual relative humidity and rainfall for the United States.

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PREVIEW

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INTRODUCTION

No parasite surveys of starlings have previously been conducted in any area of the Chihuahuan Desert, although they were first reported as migrant birds in El Paso in the winter of 1939-40 (Kessel, 1953). Prior to this survey, the only other survey conducted west of the 100th west meridian in North America was done by Ballard and Olsen (1966). The 100th W meridian is the approximate demarcation line between the xeric (western) and mesic (eastern) regions of the United States, and North America in general. Other surveys in North America have been conducted in mesic environments. Boyd (1951) conducted an extensive survey of starlings collected in Massachusetts, Connecticut, New York, Ohio, Maryland, and Indiana. Rodrick and Johnson (1971) reported from southeastern Kansas; Sommer (1937) reported on starlings from Illinois; and Cannon (1939) surveyed starlings in Quebec, Canada. Numerous surveys of starlings have been conducted in Europe, which has a mesic environment. The current survey is the first of starlings reported from a xeric environment.

The purpose of this survey was to examine the parasites of starlings from a xeric environment and to determine the following: (1) if the parasites recovered were different from those previously reported; (2) if infection rates are



different than have been reported elsewhere; (3) if juvenile starlings have different infection rates and parasites than mature starlings; (4) the relationship of the rate of infection and selected meteorological data; (5) and if seasonal variation in the parasite fauna exists in the El Paso area.

El Paso County, Texas, lies in the extreme western part of Texas at latitude 31° 48' N and longitude 106° 24' W, and at an altitude of 3918 feet above sea level (these figures are for the location of the National Weather Service Station at the El Paso International Airport). El Paso County is in the Basin and Range Physiographic Province and is characterized by bolsons with 4000 ft. basin floors. The Franklin Mountains (ca. 7200 ft.) and Hueco Mountains (ca. 6700 ft.) form the major topographic features. El Paso County is situated in the northern Chihuahuan Desert which is classified as a cool desert with a summer precipitation maximum, or a BWkw system using the Köppen system of climatic classification (Köppen, 1931). However, this classification is a marginal one for this region, which falls short of being classed as a hot desert by about 1° F (R. H. Schmidt, Ph.D., U.T.E.P., personal communication). The area has a 240 frost-free day growing season, an annual mean temperature, relative humidity and precipitation of 63° F, 39%, 6-8", respectively. The mean annual temperature range is 42° F to 81° F.

El Paso County is bordered by the Rio Grande on the west and south, New Mexico on the north, and Hudspeth County