PREVALENCE OF THE NASAL MITE, *TINAMINYSSUS ZENAIDURAE* (ACARINA: DERMANYSSIDAE), IN MOURNING DOVES, *ZENAIDURA MACROURA,* FROM NORTHWESTERN OKLAHOMA

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The nasal mite, *Tinaminyssus zenaidurae,* was first reported from the mourning dove, *Zenaidura macroura,* by Crossley (1) in Texas and Georgia. Owen (2) reported 14 of 44 mourning doves infected by *T. zenaidurae* in Alabama and also mentioned its occurrence in Mississippi. Wilson (3) found *T. zenaidurae* in three of 27 mourning doves from California and Pence (4,5), in his nasal mite studies concerning birds of Louisiana, reported one of 11 mourning doves infected with *T. zenaidurae*. Although several recent papers (6,7,8) have dealt with the biology of the mourning dove in Oklahoma, these have not been concerned with parasitism. At present, there are no records of nasal mites from Oklahoma birds (9). Consequently, an investigation concerning parasitism of Oklahoma mourning doves by nasal mites was initiated.

During the fall hunting seasons of 1981 and 1982 mourning doves were collected in Blaine and Dewey Counties, Oklahoma (near Canton Reservoir) as well as Woods County, Oklahoma (14 km nw of Alva). The nasal passages were examined for nasal mites by dissection with scissors beneath a stereomicroscope. Nasal mites recovered were preserved in 70% ethanol and later mounted using Berlese's medium for final identification. All nasal mites were identified as *T. zenaidurae* using keys prepared by Pence (9).

Seventy-nine birds were examined during the fall of 1981 and 112 birds were examined during the fall of 1982 (Table I). Nasal mites were recovered from 19% of the birds examined during the fall of 1981 and were found occurring in 16% of the birds examined during the fall of 1982. Two-by-two chi-square tests were used at the 5% confidence level in comparing frequency of occurrence rates for nasal mites in mourning doves for the fall of 1981 and 1982. There was no significant difference in frequency occurrence. When data for both fall seasons were combined, 17.2% of 191 mourning doves were found infected by *T. zenaidurae.* The number of mites per infection ranged from one to seven with an average infection size of 2.5. Ninety-five birds collected during the fall of 1982 were aged. They were separated into two groups, i. e., first-year birds and those over one year of age. Of the 59 first-year birds (under one year old), nine (15%) were infected, whereas six (23%) of the 26 birds older than one year were infected by nasal mites.

Previous workers have reported prevalence of *T. zenaidurae* in mourning doves ranging from 53% (1) to 9% (5) and average infection sizes up to 2.28 mites per infection (2) during the fall. However most previous studies have dealt with smaller samples (11 to 44 birds) than the present study (191 birds). Couch *et al*. (10) reported 24 (28%) of 86 mourning doves infected (average of 2.8 mites per infection) from Denton County, Texas collected from May through September. He reported a higher prevalence during the fall than the spring and also suggested that immature birds were more susceptible to infestation than mature birds (10). However we have found in this study that there was no significant difference in prevalence between mature and immature birds using the chi-square test at the 5% confidence level. Amerson (11) has suggested that nasal mites are acquired prior to leaving the nesting area in sooty terns, but the time and mode of transmission of *T. zenaidurae*

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TABLE 1. Tinaminyssus zenaidurae *from Oklahoma mourning doves.*

Date	County	No. of birds examined	No. of birds infected	No. of mites collected
Sept 1981	Woods	21	4	8
Sept 1981	Dewey	10	1	4
Sept 1981	Blaine	13	2	10
Oct 1981	Blaine	35	8	23
Sept 1982	Woods	38	8	12
Sept 1982	Dewey	74	10	25
Totals		191	33	82

in mourning doves is unknown. We found no evidence of pathology associated with nasal mites in this study, although it has been suggested (10) that the incidence of infestation by nasal mites in mourning doves is related to a sanguineous condition found in nasal tissues and mucous secretions of the doves.

Apparently, *T. zenaidurae* is a normally occurring parasite of mourning doves throughout much of their range. This report represents the first record of *T. zenaidurae* from Oklahoma and extends the geographical range of the parasite 385 km northward to within 10 km of the 37th parallel.

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