

Nasal Mites of the Mourning Dove¹

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Crossley (1952) described a species of nasal mite, *Neonyssus zenaidurae*, from the mourning dove (*Zenaidura macroura*) collected in Texas and Georgia. In his study mites were obtained from 10 of 19 doves examined. Owen (1958) found this species of mite in mourning doves collected in Alabama. He reported an infestation of 4 out of 10 birds (average: 1.5 mites per dove), for one county; and 3 of 10 birds (average: 2.6 mites per dove) for another county.

Our method of recovery was similar to that described by Owen. The nasal cavities were separated sagittally, with scissors, from the tip of the beak to the anterior region of the brain. Each half was examined under a wide-field microscope. The parasites when present were found embedded in the mucous secretions and upon the tissues of the nasal cavities. Dissecting needles were used to extricate the specimens and to place them in 70% alcohol. The mites were macerated in 20% KOH for 24 hours to remove adhering tissues. Hoyer's medium is recommended for mounting; if the specimen is mounted in Hoyer's medium and heated soon after the mounting procedures are complete, maceration in KOH is unnecessary.

From May 1 to September 2, 1960, 86 mourning doves were collected by shooting 4 miles west of Celina, Denton County, Texas. A total of 68 mites were taken from 24 specimens (27.9%). The number of parasites per dove varied from 1 to 7, with an average of 2.8. Sixteen of 45 immature birds (35.5%) and 8 of 41 mature birds (19.5%) were infested. In regard to sex, 16 of 46 males (34.8%) and 8 of 40 females (20%) were positive. Eighteen percent of the spring collection and 31% of the fall collection were infested. We suggest that immature, male doves were more susceptible to infestation than mature doves or immature females. Our data for those birds collected in the fall indicate that the incidence of infestation of immature males is 45.8%; mature males, 25%; mature females, 15.3%; immature females, 26.3%. We sug-

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gest, furthermore, that the incidence of infestation is related to a sanguineous condition found in the nasal tissues and mucous secretions of the doves. It is often difficult to determine whether blood in the nasal cavities is the result of shooting or other conditions. We did not find mites, however, in nasal cavities that were free of blood and the sanguineous condition.

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LITERATURE CITED

- Crossley, D. A., Jr. Two new nasal mites from columbiform birds. *J. Parasit.* 38 (5): 385-390, 1952.
- Owen, B. L. Records of nasal mites of the mourning dove. *Tex. J. Sci.*, 10 (14): 447, 1958.