

RECOGNITION OF TRICHOMONIASIS IN DOVES

BY CARLTON M. HERMAN

Trichomoniasis is a disease of doves and other birds which manifests itself by the presence of visible lesions in the throat and elsewhere. It is caused by a flagellated protozoan: *Trichomonas gallinae*. The most typical lesions are usually called cankers. The disease is often referred to as "roup" and the term "frounce" has been used extensively to designate the malady in trained falcons. Its occurrence in North American birds has recently been reviewed by Stabler and Herman (1951).

Trichomoniasis is very frequent in the common pigeon (*Columba livia*) in many areas in North America. Hawks, chickens, turkeys, and other birds also may be affected. It has been reported from wild doves and pigeons from many regions of the United States and in recent years has been implicated as the cause of extensive losses among mourning doves in Alabama and other southeastern states (Haugen, 1952). Some facts about the nature of the disease have been uncovered from earlier studies. For example it is now known that the infection is transmitted from parent to young in the normal feeding process and that it may spread through flocks at watering or feeding sites. Relatively little is known, however, about the occurrence, distribution, and significance of the infection in our wild dove and pigeon populations.

Severity of infection depends on several factors including potency of the strain of the parasite involved. Though some birds obtain infections sufficiently virulent to cause death, many affected birds may recover or even fail to show the characteristic lesions. Such birds often serve as sources of infection particularly for next year's brood. These carriers can be diagnosed only by microscopic examination of mucous from the throat or of throat cultures.

In early stages of the infection, cankers may appear in the mouth as pinpoint-size yellow spots. These occur particularly in the roof of the mouth or often at the base of the tongue. They may grow in size as the disease progresses and form large lumps of yellowish, cheesy but firm, material. These growths frequently block the passage of food and often hinder swallowing or breathing. They may be so extensive that the infected bird is unable to close its mouth. Such birds show drastic weight loss and weakness, and usually die within a few days.

The yellowish growths may extend into the esophagus and crop, and even into the surrounding tissues of the neck. In advanced cases these lesions, known as "yellow buttons," may appear as round, raised areas having a conical spur in the center. Such lesions may involve extensive areas of the neck and are readily visible externally. However, they are less common than lesions in the throat.

In some cases, lesions in the throat extend upwards into the skull and may affect the eyes. At first there may be only a watery discharge, but production of exudate about the eyes may finally result in blindness.

Lesions may also occur elsewhere in the body (internally). However, they will not be observed except at autopsy.

Bird banders occasionally see doves in advanced stages of this disease. Even in typical cases, however, a microscopic examination is still

necessary to confirm a diagnosis. Those versed in the use of a microscope can demonstrate the tiny organisms that are the cause of the disease. They are very active and usually present in great numbers.

For diagnosis, it is particularly important that the specimen be examined in a fresh condition for the parasites do not survive long after the bird is dead. If the dead bird is to be shipped to a laboratory for confirmation of field diagnosis, it must not be frozen or otherwise preserved but simply wrapped in several thicknesses of newspaper. Such a package, if marked "perishable" and "rush" will usually reach the laboratory in good condition except during the summer months. In hot weather, unless the specimen can be delivered quickly to the laboratory, shipment is useless because of rapid decomposition. Even during cooler weather, if the bird has been dead any length of time or will be in transit for more than 2-3 days, it is a waste of time and expense to ship it, for it will then be impossible for a technician to find recognizable trichomonads. Anyone in a position to examine numbers of doves could probably arrange to have on hand a supply of culture tubes for isolation of the parasites from the fresh specimens, or even for determination of possible carriers.

We know already that the disease is widespread geographically. However, incidence and intensity of infection in dove populations are important factors upon which we have little information. The examination of an occasional dove will add little to our current knowledge but individuals trapping or otherwise handling large numbers of doves can aid considerably in the procurement of needed data.

Bird banders concentrating on mourning doves are urged to assist in obtaining quantitative evidence on seasonal incidence of this widespread disease. Findings should be reported to local game authorities, or to the U. S. Fish and Wildlife Service, and, whenever possible, field diagnosis should be confirmed by laboratory study.

LITERATURE CITED

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A DEVICE FOR REMOVING OVERLAPPED BANDS FROM BIRDS' LEGS

By B. M. SHAUB*

Bird-banders who band the Evening Grosbeak, the Cardinal or any of the other strong-beaked birds will quickly discover that the repeat birds, unless banded with the heavy rigid band designed for these birds, will occasionally bring back badly mutilated bands. Unless one uses a closing pliers for a particular sized band, overlapped bands may occasionally result, and it is often desirable to remove the overlapped band rather than chance an injury to the bird after it is released.