

AVIAN TUBERCULOSIS IN FREE WILD BIRDS.

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The occurrence of avian tuberculosis in domestic birds and wild birds in captivity has been reported and reviewed frequently [Hastings and Halpin (1913), Van Es and Schalk (1914), Gallagher (1921), and Mitchell and Duthie (1929)].

Van Es and Schalk (1914) "observed a well-marked case of tuberculosis in a sparrow which had access to an infected poultry yard." They cite a tuberculous sparrow mentioned by Metschnikoff (1888), but it is not clear whether this was a bird in captivity. In 1929 Mitchell and Duthie reported avian tuberculosis in *Corvus b. brachyrhynchos*, from western Ontario where the birds were dying in large numbers. In a private communication (1933), Dr. Mitchell very generously communicated the following material: "In addition to this preliminary report considerable work has been carried out which has never been published. We examined over six hundred common crows. . . . Approximately 8% of the crows captured were tuberculous. . . . All . . . were wild. With one exception all cases were closely associated with the usual avian type of tuberculosis."

The writers wish to report a case of tuberculosis, apparently of the avian type, in a male eastern sparrow hawk (*Falco s. sparverius*) which was found dead, but still warm, on a street in Yellow Springs, Ohio, on January 20, 1933.

Upon dissection the breast muscles were seen to be greatly emaciated allowing the ridge of the carina to stand out prominently. The gizzard was empty and no fat was seen on the hawk's body. Imbedded in the lobes of the liver were many yellowish tubercles approximately 1.5 × 2.5–3.0 mm. in dimension. Smaller tubercles were found on the mesenteries holding the convolutions of the intestine while on the intestine there were large flat irregular tubercles which reached diameters of 4.5 mm.

The lesions or tubercles from the liver approximated Pfander's second type of nodules (Van Es and Schalk, 1914). Sections of the necrotic liver material stained by the Ziehl-Neelsen method revealed acid-fast bacilli. Large numbers of

bacilli were in and surrounding the capsule but very few were in the central hyaline area.

Our results were checked through the kindness of Dr. Charles B. Morrey, Ohio State University, who wrote: "Dr. Fred Speer has stained material from the specimen of liver. . . . He finds acid-fast bacilli and there is no doubt that it is Avian Tuberculosis."

On the day after the diseased hawk was found, potato slants were streaked with material from a crushed liver tubercle. After one month smears taken from five cultures revealed only a small number of acid-fast bacilli on one slant. Subcultures were made in glycerin broth; complete results are not yet available.

Where this sparrow hawk contracted tuberculosis is problematical, possibly from the infected remains of domestic fowl disposed of carelessly or accidentally killed by automobile or interurban car along a nearby highway. Another possibility is that the disease might have been picked up from a wild or "domestic" mouse (Van Es and Schalk, 1914).

With increased investigation avian tuberculosis will probably be found in many other families of wild birds. Indicative of this is a statement in a letter from Milton B. Trautman, Bureau of Scientific Research, Ohio Conservation Division: "In the examination of some 1,000 wild birds, . . . I have found very little of what I considered tuberculosis, . . . In several cases I have seen these yellow lesions or tubercles in the mesenteries and liver and in one or two cases have also found tubercles on the kidneys."

BIBLIOGRAPHY.

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Scientific Research.

It is said that a depression may end with the consumption of existing perishable goods, but prosperity is dependent on new developments which come only through research and its application. This volume weaves the threads of romance and adventure into the story of research, and makes of it a most fascinating tale. Each student intending to enter a life of experimental work should be required to read it.—L. H. S.

The Romance of Research, by L. V. Redman and A. V. H. Mory. x+149 pp. Baltimore, The Williams and Wilkins Co., 1933.