

## **THE ISOLATION OF AVIAN TUBERCULOSIS FROM A STARLING 1**

Authors: YATES, VANCE J., and MILLER, LOUISE T.

Source: Bulletin of the Wildlife Disease Association, 2(3) : 84-85

Published By: Wildlife Disease Association

URL: <https://doi.org/10.7589/0090-3558-2.3.84>

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*O. osheroffi*, and therefore *O. cro-talicola* Alexander and Alexander, 1957 is not a valid species and should rightly fall into synonymy with *O. osheroffi* Meggitt, 1934.

E. A. WIDMER

Dept. Biology, LaSierra College  
LaSierra, Calif., 28 March, 1966

#### THE ISOLATION OF AVIAN TUBERCULOSIS FROM A STARLING<sup>1</sup>

On March 27, 1965, a poultryman in southern Rhode Island noticed an inactive, apparently sick starling (*Sternus vulgaris vulgaris*) near the pens housing his egg-producing chicken flock. He was especially interested in this sick starling because his flock was suffering from an outbreak of a severe respiratory illness. Feeling that feral birds may have been responsible for transmitting the causative organisms, he caught the sick starling and submitted it to the diagnostic laboratory at the University of Rhode Island.

Postmortem examination revealed lesions consistent with a tentative diagnosis of tuberculosis. The liver and spleen were moderately enlarged and contained numerous small (pin-head size) grayish-white nodules. Tissues from these organs were retained for bacteriological and histological examination.

Smears made of the liver nodules revealed a large number of slender, relatively long acid-fast bacteria. This same tissue was used to inoculate tubes of Petraghani

and Lowenstein media (Difco). Two weeks after inoculation, small, cream-colored colonies containing acid-fast bacilli were found on the inoculated slants. Washings of these slants were used for metabolic study as well as for intravenous inoculation of 2 rabbits, 2 guinea pigs and 2 chickens. The experimental animals were semimature at the time of inoculation. The isolate was found to be catalase positive. Eighteen days after inoculation, one rabbit and one guinea pig died and the chickens were inactive with ruffled feathers and shrunken, pale combs and wattles. One chicken died 28 days post inoculation. Portions of the liver and spleen from this chicken, as well as inoculated tubes of media were submitted to the National Animal Disease Laboratory, Ames, Iowa, where identification of the organism was made through the courtesy of Dr. W. D. Yoder.

By means of metabolic studies, serological and histological findings, as well as animal inoculations, the isolate from the starling was identified as *Mycobacterium avium*.

This isolation is of interest because feral birds are not commonly infected with tuberculosis. However, when infection is found, it is assumed that it is the result of contact with diseased chickens (Feldman, 1965; Disease of Poultry, Biester & Schwarte). In Rhode Island, avian tuberculosis is not a common infection and only rarely is the disease found in chickens submitted to the diagnostic laboratory. Since tuberculosis is seldom found in commercial chickens in

<sup>1</sup>Rhode Island Agricultural Experiment Station Contribution Number 1187.

this area, one can conclude that starlings and other feral birds either have some other source of infection, or have a higher incidence of tuberculosis than previously suspected. The finding of a suspected case of tuberculosis in a ruffed grouse (*Bonasa umbelus umbelus*) (Snoeyenbos, 1966, Bull.

W.D.A., 2:9) strongly supports the latter conclusion. An investigation of this source may be helpful in understanding present patterns of tuberculosis epidemiology.

VANCE J. YATES  
LOUISE T. MILLER

Dept. of Animal Pathology  
Univ. of Rhode Island  
Kingston, R. I., 6 April, 1966

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ALLEN, D. L., Ph.D., Dept. Forestry & Conserv., Purdue Univ., Lafayette, Ind. 47907  
 ALLISON, R., Ph.D., Dept. Zool. & Entomol., Auburn Univ., Auburn, Ala.  
 ARMSTRONG, J. N., DVM, P. O. Box 434, Livingston, Montana 59047  
 ASHBY, H. C., D.V.M., 411 S. Market St., Lee's Summit, Mo. 64063  
 BECKER, H. N., DVM, P. O. Box 66, Philo, Illinois 61864  
 BERRY, R. L., 3434 Canal St., Apt. 2, New Orleans, La. 70119  
 BOX, Edith D., Sc.D., Dept. Microbiol., Univ. of Texas Med. Br., Galveston, Tex.  
 COATS, D. W., DVM, 205 E. University, Champaign, Ill.  
 CREITZ, J. R., B. S., 1st U. S. Army Med. Lab. #1, Ft. Meade, Md. 20755  
 CURNOW, R. D., 121 E. Lake St., Ft. Collins, Colo. 80521  
 DASGUPTA, B., Ph.D., Zool. Dept., Gov'n't Coll., Darjeeling, West Bengal, India  
 ELLINGSON, R., Box 55, Stillwater, Minn. 55082  
 EMMONS, R. W., M. D., Viral & Rickettsial Lab., 2151 Berkeley Wy., Berkeley, Cal.  
 ENRIGHT, J. B., Ph.D., Sch. of Vet. Med., Univ. Calif., Davis, Calif. 95616  
 EVELAND, W. C. Ph.D., Sch. Public Health, Univ. Michigan, Ann Arbor, Mich.  
 FOLZ, S. D., Dept. Vet. Sci., Univ. of Wisconsin, Madison, Wisc. 53705  
 FREDERICKSON, L. E., D.V.M., 609 Woodott Rd., Nashville, Tenn.  
 GRAIKOSKI, J. T., Ph.D., Bur. Comm. Fisheries, Box 640, Ann Arbor, Mich. 48107  
 HINSHAW, W. R., D.V.M., 140 Kline Blvd., Frederick, Md.  
 HOWARD, W. E., Ph.D. Dept. Animal Physiol., Univ. Calif., Davis, Calif. 95616  
 JEFFERS, E. E., 313 N. Blanche Ave., Madison, So. Dak. 57042  
 KORITANSKY, R. C., 662 Trumbull Ct., Columbus, Ohio 43210  
 MALEK, E. A., Dept. Trop. Med., Tulane Med. Sch., New Orleans, La. 70112  
 MURRELL, K. D., MSPH, Dept. Parasitol., Univ. North Carolina, Chapel Hill, N. C.  
 NELSON, W. O., Jr., Bureau Sports Fisheries & Wildlife USDI, Washington, D. C.  
 ORTEGA, J. J. Z., Dr., Estacion Biologica de Donana, Paraguay St. N. 1., Sevilla, Spain  
 SCHIEGEL, M. W., B. S., 199 North 43d., Corvallis, Oregon  
 SELF, J. T., Ph.D., Dept. Zoology, Univ. Oklahoma, Norman, Okla. 73069  
 SEVERIN, ELLA A. Baruch Foundation, Bellefield Plantation, Georgetown, S. C. 29440  
 SHIFRINE, M., Ph.D., USDA-ARS, EAVRO, Box 32, Kikuyu Kenya  
 SIMMONDS, R. C. D.V.M., Arctic Aeromed, Lab., Box 46, APO Seattle, 98731  
 STAUBER, E. H., DVM, Washington State Univ., Dept. Vet. Microbiol., Pullman, Wash. 99163  
 STUHT, J. N., 1440 Pear St., Apt. #4, Ann Arbor, Michigan  
 TESH, R. B., M.D., Depts. Pediatrics & Epidemiol., Tulane Univ., New Orleans, La. 70112  
 THAYER, C. B., D.V.M., Univ. of Iowa, 413 Med. Lab., Iowa City, Ia.  
 VICE, T. E., D.V.M., 8221 Broadway, San Antonio, Texas  
 WAGGONER, R. E., B.S.A., Apt. 25, East Park Apts., Auburn, Ala. 36830  
 WALTON, A. C., Ph.D., 1575 N. Broad St., Galesburg, Illinois 61401  
 WEDIG, J. H., 536 S. Forest, Apt. 14-E, Ann Arbor, Mich.  
 WELLINGS, S. R., M.D., Univ. of Oregon Med. Sch., Portland, Ore. 97201  
 WOOD, J. W., M. S., 8124 N. E. 157th St., Bothell, Wash. 98011  
 YATES, V. J., D.V.M., 20 Springhill Rd., Kingston, R. I., 02881

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