

# PARAGONIMUS KELLICOTTI WARD, 1908 (TREMATODA: PARAGONIMIDAE) FROM RED AND GRAY FOXES OF SOUTHERN ILLINOIS

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## ABSTRACT

*Paragonimus kellicotti* was observed in the lungs of 7 (1.2%) of 543 *Urocyon cinereoargenteus* taken in Jackson, Johnson, Union, and Williamson counties, southern Illinois, between November, 1959 and October, 1963 and in the lungs of 4 (2.4%) of 165 *Vulpes vulpes* taken in Jackson, Union, and Williamson counties between November, 1960 and February, 1964.

## INTRODUCTION

In conjunction with examination of stomach and intestinal contents of a large number of *Vulpes vulpes* and *Urocyon cinereoargenteus* to ascertain their food habits, there was opportunity to examine lung tissues for the digenetic fluke, *Paragonimus kellicotti* Ward, 1908.

## MATERIALS AND METHODS

One hundred and sixty-five red foxes were either shot or trapped in Union, Williamson, and Jackson counties, southern Illinois, between November, 1960 and February, 1964. Likewise, 543 gray foxes were similarly taken in Union, Williamson, Johnson, and Jackson counties between November, 1959 and October, 1963. The lungs of each animal were removed and examined for encysted flukes. Detected flukes were fixed in alcohol-formalin-acetic acid (AFA), stained with either Harris' or Delafield's hematoxylin and mounted in Canada balsam.

## RESULTS AND DISCUSSION

*Paragonimus kellicotti* was observed in the lungs of 7 (1.2%) of 543 *U. cinereoargenteus* and 4 (2.4%) of 165 *V. vulpes*. Most foxes had but a single cyst contain-

ing two sexually mature flukes confined to a single lobe of the lung. A few animals had cysts containing three to four flukes.

While this parasite has been reported from cats, dogs, domestic swine, muskrats, bobcats, opossum, striped skunks, goats, raccoons, red foxes, minks and human beings in North America, on the basis of the frequency of natural infections, minks are believed to be the natural host. Foxes are unusual hosts for this fluke. It was first reported from *Vulpes vulpes* in North America by Erickson (1944) who detected 31 *P. kellicotti* from a red fox collected near Redwood Falls, Minnesota. A later identification was recorded from *V. vulpes* in Michigan (Stuht and Youatt, 1972). To my knowledge, this fluke has not been reported from *U. cinereoargenteus*.

According to Ameel (1934), mammals become infected either by ingesting cray fish containing the metacercarial stage or by ingesting carrier host infected with immature adult flukes. Infections in this investigation were probably acquired by ingesting contaminated crayfishes, as these remains were detected in fox stomachs.

#### LITERATURE CITED

- Ameel, D.J. 1934. *Paragonimus*, its life history and distribution in North America and its taxonomy (Trematoda:Troglorematidae). Am. J. Hyg. 19:279-317.
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