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DIROFILARIASIS IN IOWA COYOTES

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Abstract: Heartworms (*Dirofilaria immitis*) were found in eight of 220 (3.6%) coyotes (*Canis latrans*) collected from fur buyers in Adams, Carroll, Cass, and Warren counties in southwestern Iowa. Infections ranged from one to 23 worms per coyote.

INTRODUCTION

Dirofilaria immitis now exists in a widespread but uneven distribution throughout the Midwest, with canine infections reported from Ohio, Michigan, Illinois, Minnesota,[7] Kansas,[4] and Iowa.[1] Midwestern reports from wild canids include the coyote (*Canis latrans*)[3,5] and the red fox (*Vulpes fulva*)[8] as hosts.

In Iowa the number of coyotes claimed for bounty has increased in recent years from 2,000 in 1965 to 7,000 in 1974.[2] The coyote is now classified as a game animal with no season or bag limit restrictions. A survey of *D. immitis* was made possible through the cooperation of fur buyers.

METHODS

During February and March, 1975, 220 coyote carcasses were collected from fur buyers in Adams, Carroll, Cass, and Warren counties. Although precise locations were not available, most coyotes came from southwestern Iowa, with perhaps a few from northwestern Missouri.

Carcasses were frozen when received and were subsequently thawed for heart removal. Ventricles, atria, and pulmonary arteries were examined.

RESULTS AND DISCUSSION

Adult *D. immitis* were recovered from the right ventricles of eight of 220 (3.6%) hearts. Numbers varied from one worm in two coyotes to as many as 23 in one of the remaining six cases.

These data indicate a considerably lower prevalence of heartworm infection in coyotes from southwestern Iowa than in northeastern Kansas, where 8% of 111 coyotes were reported positive.[5] Canine reports are also lower in Iowa; 6.5%[1] as compared with 16.7% in Kansas.[4]

There is disagreement in the literature regarding the status of wild canids in the epidemiology of heartworm infection. Otto[7] considered wild mammals only accidental hosts for *D. immitis* and not important in transmission to domestic dogs. However, Monson *et al.*,[6] in a survey on foxes and wild canids in New York, concluded that such species may be important reservoir hosts. Infectivity trials and studies of microfilarial development and transmission are necessary to determine whether wild canids may function as reservoir hosts of *D. immitis*.

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