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Bert B. Babero

Arctic Health Research Center, U. S. Public Health Service

Robert Rausch

Arctic Health Research Center, U. S. Public Health Service

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Notes on Some Trematodes Parasitic in Alaskan Canidae

BERT B. BABERO and ROBERT RAUSCH

Arctic Health Research Center, U. S. Public Health Service, FSA, Anchorage,
Alaska

Except for the report of Hadwen (1922) and a few miscellaneous records, little information is available relative to the helminth parasites infecting canine animals in Alaska. During the past two years, 520 autopsies on canids have been performed in connection with the investigation of animal-borne diseases. The purpose of this note is to record the occurrence of four species of trematodes observed in Alaskan canids during the course of these studies; one species is apparently reported for the first time from North America. These four parasites are mentioned separately below:

Metorchis albidus (Braun, 1833)

Ackert (1937) recorded this trematode from an Eskimo dog which had been imported into the United States from Alaska. The present report is the second record of the species from North America.

One of 18 Eskimo dogs, autopsied at Kotzebue in the fall of 1950, was infected with this parasite. Most of the several hundred specimens obtained were found in the bile ducts, but a few apparently had entered the intestine after the death of the host. Ackert (1937) has pointed out certain differences between his specimens and the typical European form; our material agrees very closely with Ackert's description. Dollfus and Callot (1945) have demonstrated some of the variation observed in *M. albidus*, and we consequently concur with Ackert that there is little justification to consider the North American material specifically distinct. Baer (1943) has also recorded observations on variation in *M. revilliodi* Baer, 1931.

The animal from which these parasites were taken was obtained in the course of routine parasitological investigation and showed no obvious pathological condition.

Cryptocotyle lingua (Creplin, 1825)

Although previously recorded from the United States and Canada, *C. lingua* has never been observed in Alaskan canids. Moderate infections with this trematode were observed in the small intestine of six of 18 dogs autopsied at Kotzebue during November, 1950. A maximum number of about 200 worms was obtained from a single animal. The specimens studied were typical in morphological detail.

Alaria canis LaRue and Fallis, 1936

We have obtained this trematode from eight red foxes (*Vulpes fulva alasceensis*, Merriam), all but one of which were collected about 200 miles northeast of Anchorage. The other animal was collected along the Alaska Highway about 50 miles west of the Canadian border. The infections were light to moderate, with as many as 200 trematodes in one animal. Although we have examined a large number of red foxes from Northern Alaska, we have not yet recorded *A. canis* from that region.¹ We have obtained this parasite once from a wolf, *Canis lupus* ssp., collected in the same region where the infected foxes were taken. This trematode was first described from a dog imported to the United States from Northern Canada, and Erickson (1944) has reported it from red and grey foxes in Minnesota. Some observations on the morphology of the Alaskan specimens have been given by Dubois and Rausch (1950).

Plagiorchis massino Petrov and Tikhonov, 1927

(Fig. 1)

Trematodes belonging to the genus *Plagiorchis* were taken from the small intestine of an Alaskan red fox, collected approximately 200 miles northeast of Anchorage. There does not appear to be any record of trematodes of this genus from North American canids, although two species, *P. massino* Petrov and Tikhonov, 1927, and *P. popowi* Palimpsestow, 1929, have been recorded from dogs in Russia.

The status of many species of the genus *Plagiorchis* is uncertain. Schul'ts (1933), as quoted in Africa and Garcia (1937), stated that the large number of species in the genus (more than 50) probably could be reduced to 15 or 20. While our specimens do not agree entirely with any of the previously-described species, it seems advisable to assign them tentatively to the species *P. massino*, from which they differ only in minor detail. The primary difference lies in the degree to which the vitellaria extend anteriorly. Our specimens are also smaller than those previously reported.

In view of the uncertain basis for assigning this form to any known species, we are including herewith a brief description:

DIAGNOSIS: Plagiorchidae. Small trematode with bluntly rounded extremities. Body from 800 μ to 1.2 mm. long by 200 to 270 μ wide. Oral sucker subterminal, 144 to 166 by 120 to 134 μ . Prepharynx apparently absent. Pharynx 61 to 80 by 69 to 96 μ . Esophagus short or absent. Intestinal ceca extend to near posterior end of body. Oval acetabulum situated at posterior edge of anterior body-third, 102 to 120 by 96 to 108 μ . Ovary ovoid with smooth edges, 61 to 86 by 48 to 67 μ , located posterior and slightly dextral to acetabulum; spherical to ellipsoidal testes smooth, obliquely placed in second

¹Since this paper was submitted, two dogs from Fort Yukon, Alaska, eight miles north of the Arctic Circle, were found infected with this species.

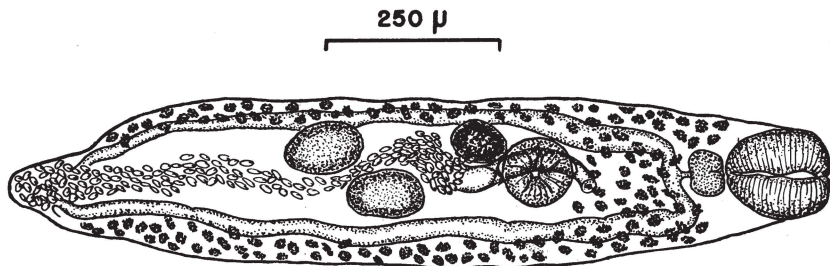


Fig. 1. *Plagiorchis massino* Petrov and Tikhonov, 1927.

body-third. Anterior testis 74 to 102 μ long. Posterior testis 67 to 124 by 45 to 108 μ . Relatively long cirrus sac overlaps acetabulum; posterior swelling slight; seminal vesicle present. Uterus without transverse loops; average egg-size 33 by 22 μ . Descending ramus of uterus passes between testes and widens near posterior end of body; ascending ramus, nearly devoid of eggs, narrows into long metraterm. Genital pore anterior to acetabulum. Vitellaria composed of large follicles which extend from level of posterior margin of pharynx to near posterior end of body; vitellaria confluent anterior to acetabulum.

HOST: *Vulpes fulva alascensis* Merriam.

A slide containing whole mounts of this trematode has been deposited in the Helminthological Collection of the United States National Museum, slide No. 47091.

Continued parasitological investigation of this host-group may reveal additional species of trematodes. A compilation of parasites of the Canidae obtained to date is presently being made, and it is expected that a record of these findings may be reported in a later publication.

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