

Ecology of Helminth Worms in Cattle and Moose

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Project Number 90

The Secondary Host of the Fringed Tapeworm

The fringed tapeworm parasitizes wild ruminants of South and North America. It parasitizes domestic sheep and cattle in both continents, but is of economic importance only in domestic sheep. In these animals the tapeworm invades the bile ducts of the liver. The greatest economic loss is due to the condemnation of livers in which the parasite is found when the animal is slaughtered. This loss for the United States amounts to over one half million dollars annually.

The object of the project is to find the intermediate host of the cestode. This objective assumes there is an intermediate host. This conclusion is based on the fact that in all cases in which the life cycle of Anoplocephaline cestodes are known an intermediate host is involved.

This past summer invertebrates were collected from moose, elk and bighorn sheep dung, and from meadows where these animals grazed. The invertebrates were collected by sweeping with an insect net, by picking them from dung and ground, and by the use of Berlese funnels.

Some of the invertebrates were dissected and a search was made for cysticeroids. Most of the invertebrates were fed to sheep. They were divided into insects and arachnids before being fed. One sheep received the insects, a second the arachnids and the third was kept as a control.

Egg capsules of Wyominia tetoni were collected from dung and placed in containers in which there were oribatid mites and spring-tails. Both groups fed on the egg capsules.

None of the sheep used on this experiment became infected with cestodes. No cysticeroids were found in the mites and spring-tails which fed on the egg capsules of Wyominia tetoni, and no cysticeroids were found in invertebrates which were collected in the field and dissected.

Mr. Rex Allen, U.S.D.A. in Albuquerque worked part of the time with Mr. Honess.

Supported by the Wyoming Agricultural Experiment Station through Interregional Research Program.