

XI.—THE DISEASES OF THE FOX.

It is not my purpose to enter into a detailed discussion of the diseases of the fox, nor do I intend to dwell upon the methods of combating specific disorders or infections. Such details must be dealt with by individuals specially trained in the diagnosis and treatment of disease who are conversant with the action and uses of drugs. From what I have been able to gather, the fox is subject to disorders peculiar to his species, and also possesses a certain susceptibility to drugs not observed in other varieties of animals. There is more to be learned in this connection, and naturally those veterinarians most intimately associated with the industry best able to offer advice and deal with disorders at first hand. As our knowledge of their pathology increases as applied to the fox, then the advice which may be given will be of a more exact nature than is at present possible.

I have already pointed out some features worthy of more than passing interest, from the sanitary viewpoint, when dealing with the construction and protection of the ranch (chapters IV and V). As these considerations have been included as a means of preventing disease, it will be timely for me to mention some of the infectious diseases that have already occurred which will prove a constant menace to the success of the industry.

Internal Parasites.—By internal parasites I particularly refer to such as may occur in the intestines, securing the nutriment for their existence from the food that has been prepared by the digestive functions for the nourishment of its host. Probably the most serious infectious process at present confronting the industry is caused by the *Ascaris mystax*, a round worm peculiar to the fox, infesting the stomach and intestines. It has been my privilege to autopsy two fox pups twenty-six days old, and in each case death resulted from infestation with this parasite. The only means of combatting such an infection is to eliminate it before the pups are born, for to have a worm infestation in the pups we must have worms in the adults, the vixen or the male. The worms maturing within the body of the adult lay their eggs within the intestinal contents, pass out with the excreta, contaminate the mammae or teats of the vixen, to be taken into the stomach of the new-born pup with his first nourishment. These worms may attain a length of from one and a half to eight inches. The treatment of little pups is a very hazardous procedure, and may be as disastrous as the parasite it is desired to combat. Treatment, however, is indicated even in the small pups, but with such valuable animals as the silver black foxes, I believe that an examination should be made of the excreta of each adult in September, and if the eggs of this parasite are present, adequate treatment should be undertaken for their elimination, and reinfection prevented. This means some expense, but by the saving of a single pup it would prove an economical investment.

Not only may this worm be present, but there may also be any one of a number of varieties of similar parasites. The *Ascaris mystax* is mentioned as it is the most commonly met with. Some of the others are more difficult to combat, yet all may be eliminated providing the proper measures are followed under trained supervision.

Tapeworms have been found in Canadian foxes, and have caused the death of a number of animals. Of the tapeworms infesting the fox there are nine varieties which have been described. Each of these nine has its own characteristic life-history and a host from which the fox may become infested. A tapeworm is found as such in the intestine of its host, in this instance it is the fox, where it grows by absorbing the partially digested food contained therein. The tapeworm is always provided with suckers, and in some instances with small hooklets for attaching itself in the most favourable portion of the intestine or where the food supply is most suitable. After attaining a certain development the mature segments are fertilized, break away from the head portion and pass out with the excreta. Upon being voided by the animal the eggs contained in the segment are liberated, and if moistened for a few days become fully developed, from each of which emerge a small water parasite.

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