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Sarcocystis in Striped Skunks

Lynn F. Erdman*

Sarcocystis have been observed in skeletal muscle of the striped skunk, *Mephitis mephitis*, but have not been described. Neitz, 1965, described a *Sarcocystis* in a South African mustelid, *Mellivora capensis*, but little is known of *Sarcocystis* spp. in North American mustelids to date.

**Materials and Methods**

Four puppies (ages 8–12 weeks) were housed separately in metal cages and fed canned dog food. Fecal flotations of 5 consecutive days were negative for *Sarcocystis*-like sporocysts.

Three freshly-killed adult striped skunks were obtained from the Iowa Conservation Commission at Boone, Iowa. The skunks had been trapped in Green County, Iowa. Portions of heart, diaphragm, esophagus, and iliopsoas muscles were harvested. Selection of infected muscle was made from frozen sections cut from fresh muscles, then stained by hematoxylin-eosin. Infected muscle was minced and mixed with canned dog food, then fed to the pups. The pups were not starved and at first were reluctant to take the muscle mixture.

**Observations and Results**

Sarcocysts were found in all four muscles of the three skunks, determined by H & E sections. Little host reaction was observed in the infected muscles, however, this observation is not reliable because the frozen sectioning caused vacuolization of the tissues. The sarcocysts attained a length of approximately 300 μm. Trabeculae extending from the wall into the cyst were not as clearly defined as in other species (Howell et al, 1975 and Rzepczyk and Scholtyseck, 1976).

Ten days after feeding the infected muscles, two pups passed *Sarcocystis*-like sporocysts. One dog was terminated the next day. The other passed sporocysts daily for 5 days and was terminated on the 6th day. Paired and single sporocysts averaged 10 × 12 μm.

**Summary**

Sarcocysts have been found in cardiac, esophagus, diaphragm, and iliopsoas muscles of striped skunks. *Canis familiaris* served as a definitive host, the prepatent period was 10 days. Other canids, e.g., the coyote, *Canis latrans*, may also serve as another suitable host. The author wishes to study this *Sarcocystis* more thoroughly in regard to host specificity and transmissibility, morphology, and ultimately, final host immunity.

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**REFERENCES**


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