Parasites of Prairie Rattlesnakes (Crotalus viridis viridis) and Gopher Snakes (Pituophis melanoleucus sayi) from the Eastern High Plains of New Mexico

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Parasites of Prairie Rattlesnakes (*Crotalus viridis viridis*) and Gopher Snakes (*Pituophis melanoleucus sayi*) from the Eastern High Plains of New Mexico

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ABSTRACT: Three prairie rattlesnakes (*Crotalus viridis viridis*) and two gopher snakes (*Pituophis melanoleucus sayi*) from the eastern high plains of New Mexico (USA) were examined for parasites. One cestode (*Oochoristica osheroffi*), and two nematode (*Kalicephalus inermis* and *Physoloptera retusa*) species were recovered from two infected rattlesnakes. One female gopher snake was infected with two nematode (*K. inermis* and *Rhabdias* spp.) and one mite (*Entonyssus halli*) species.

Key words: Prairie rattlesnake, *Crotalus viridis viridis*, gopher snake, *Pituophis melanoleucus*, Nematoda, Cestoda, Acari, survey.

Prairie rattlesnakes (*Crotalus viridis viridis*) and gopher snakes (*Pituophis melanoleucus sayi*) are common on the eastern high plains of New Mexico. Despite their local abundance little is known about their parasite fauna. Protozoans (Ayala, 1973; Wacha and Christiansen, 1975), cestodes (Meggitt, 1934; Widmer, 1967), nematodes (Baker, 1987) and Acari (Strandtmann and Wharton, 1958; Wilson and Kale, 1972; Tanigoshi and Loomis, 1974) have been reported from one or both of these hosts. However, parasites have been reported only once in New Mexico from *P. melanoleucus sayi* [the mite *Hyponeocula arenicola* by Tanigoshi and Loomis (1974) in Sierra County] and *C. viridis viridis* [the protozoan *Eimeria crotalviridis* by Duszynski et al. (1977) in Curry County]. Herein, we present the results of a very limited survey on the endoparasites of these two species because there is no information on their helminth or mite fauna in New Mexico; thus all the parasites recovered in this study represent new locality records.

Three *C. viridis viridis* were collected in Twin Buttes (33°58′N, 104°2′W), Chaves County, New Mexico (USA), while two *P. melanoleucus sayi* were collected in (34°10′30″N, 103°21′30″W) or near (34°10′N, 103°12′30″W) Portales, Roosevelt County, New Mexico (USA) during August through October 1987. Living specimens were brought to the laboratory where they were humanely decapitated and necropsied immediately.

Five blood smears were obtained from each host and fixed in Wright's stain following the method of Humason (1979). Cestodes were relaxed in cold tap water, treated according to standard procedures (de Bruin and Pfaffenberger, 1984), stained with Celestine blue B and mounted in Canada balsam. Nematodes were fixed (Pfaffenberger et al., 1984) in glacial acetic acid, stored in a mixture of 70% ethanol with 10% glycerine by volume, and identified in glycerine jelly mounts. Mites were cleared in 10% KOH overnight, subjected to a dehydrating alcohol series of 70, 95, and 100% ethanol and mounted in euparal (Pfaffenberger and de Bruin, 1986). Parasites were accessioned in the Eastern New Mexico University Medical Zoology Collection (Eastern New Mexico University, Portales, New Mexico 88130, USA; accession numbers 1826 to 1839) and the U.S. National Parasite Collection (Beltsville, Maryland 20705, USA; accession numbers 80433 to 80438).

Hematozoa (Ayala, 1973) and microfilaria (Clark and Bradford, 1969) were not observed in blood smears from *C. viridis viridis* and *P. melanoleucus sayi*. One species of cestode (*Oochoristica osheroffi*) and two species of nematodes (*Kalicephalus inermis* and *Physoloptera retusa*) were recovered from two of three prairie rattlesnakes. Taken from the small intestine of one female rattlesnake were 15 *K.*

inermis, while one *O. osheroffi*, two *K. inermis* and one *P. retusa* were recovered from the small intestine of the male host. The uninfected host was a female.

Both gopher snakes were females and only one was infected. Two species of nematodes (*K. inermis* and *Rhabdias* spp.) and one species of mite (*Entonyssus halli*) were recovered from the infected host. One specimen of *K. inermis* was taken from the small intestine, while nine *Rhabdias* spp. and 13 *E. halli* were collected from the lungs.

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