from necropsied central New Jersey dogs. *E. hartmanni* and *Giardia* are reported herein for the first time from Wisconsin wolves.

Giardia has been recovered from a number of wild animals including beaver (Center for Disease Control, 1977, Morbidity and Mortality Weekly Report 26:169–175). The presence of *Giardia* in beaver is of interest because 16.8% of a wolf's diet in Wisconsin consists of beaver (Mandernack, 1983, M.S. Thesis, University of Wisconsin–Eau Claire). It is possible that *Giardia* is cycling between wolves and beaver in Wisconsin.

Giemsa-stained blood samples from 7 live-trapped wolves contained no protozoans or microfilariae.

A total of 43 ticks, *Dermacentor variabilis,* was collected from 2 live-trapped wolves. Two female voucher specimens are deposited at the USNM, accession numbers RML 117978 and RML 117979.

The Wisconsin wolf populations are endangered and continuous monitoring of all aspects of their health is necessary to insure their survival.

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Research Note

Helminth Parasites of Six Lizard Species from Southern Idaho

ROBERT E. LYON
Department of Biology, Idaho State University, Pocatello, Idaho 83209

The Helminth fauna of lizards from the western states has been studied in southern California (Telford, 1970, American Midland Naturalist 83: 516–554); Arizona and Nevada (Babero and Kay, 1967, Journal of Parasitology 53:168–175; Babero and Matthias, 1967, Transactions of the American Microscopical Society 86:173–177); Utah (Woodbury, 1934, Copeia 1:51–52; Grundmann, 1957, Proceedings of the Utah Academy of Sciences 34:147–148; Grundmann, 1959, Journal of Parasitology 45:394; Pearce and Tanner, 1973, Great Basin Naturalist 33:1–18); central Oregon (White and Knapp, 1979, Proceedings of the Helminthological Society of Washington 46:270–272); and Idaho (Waitz, 1961, Journal of Parasitology 47:51). The present study reports the helminths infecting 5 species of Iguanidae, *Sceloporus graciosus, S. occidentalis, Uta stansburiana, Phrynosoma platyrhinos,* and *Crotaphytus wislizeni,* and 1 species of Teiidae, *Cnemidophorus tigris* from southern Idaho. Idaho represents the northern limits in the range of these 6 lizard species. Host and locality records for the 6 helminth species reported in this study are presented in Table 1.

Lizards were collected from 10 arid localities on the Snake River Plain between May and September 1982 and 1983. Lizards were collected by noosing and either drowned in warm water for immediate dissection or preserved in 70% ethanol for later necropsy. The nares, mouth, pharynx, coelom, mesenteries, and intact organs were examined for helminths. All internal organs were removed separately to individual dishes for microscopic examination. Examination of gut contents revealed that the hosts had fed chiefly on arthropods. Recovered worms were preserved in 70% ethanol. Nematodes were cleared and mounted in glycerine; cestodes were stained with Grenacher's alcoholic borax-carmine.

Three specimens of the cestode *Oochoristica scelopori* Voge and Fox, 1950 were recovered from the duodenum of 1 adult female sagebrush lizard, *Sceloporus graciosus.* It also was collected from the duodenum of 2 adult female western fence lizards, *S. occidentalis,* which harbored 14

Table 1. Host and locality records for 6 helminth species of lizards in the western United States.

Parasite	Host	Locality	Reference
Nematoda			
Physalopteridae			
Skrjabinoptera phrynosoma (Ortlepp, 1922)	*Sceloporus graciosus*	California	Stebbins and Robinson (1946; cited by Pearce and Tanner, 1973)
	S. occidentalis	Utah	Pearce and Tanner, 1973
		Idaho	Waitz, 1961
	Cnemidophorus tigris	California	Telford, 1970
	Phrynosoma platyrhinos	California	Telford, 1970
		Nevada	Babero and Kay, 1967
		Utah	Grundmann, 1959; Woodbury, 1934
		Idaho	Waitz, 1961; *nobis*
	Crotaphytus wislizeni	Idaho	*nobis*
Atractidae			
Cyrtosomum readi Gambino, 1958	*Sceloporus graciosus*	Utah	Pearce and Tanner, 1973
	Phrynosoma platyrhinos	California	Telford, 1970
		Nevada	Babero and Kay, 1967
		Idaho	Waitz, 1961; *nobis*
	Crotaphytus wislizeni	California	Telford, 1970
		Idaho	Waitz, 1961; *nobis*
Pharyngodonidae			
Pharyngodon giganticus Read and Amrein, 1953	*Sceloporus graciosus*	California	Telford, 1970
		Oregon	White and Knapp, 1979
	S. occidentalis	California	Telford, 1970
		Utah	Pearce and Tanner, 1973
		Idaho	*nobis*
	Uta stansburiana	California	Telford, 1970
Cestoda			
Anoplocephalidae			
Oochoristica scelopori Voge and Fox, 1950	*Sceloporus graciosus*	California	Telford, 1970
		Utah	Pearce and Tanner, 1973
		Idaho	Waitz, 1961; *nobis*
	S. occidentalis	California	Telford, 1970
		Oregon	White and Knapp, 1979
		Idaho	*nobis*
	Crotaphytus wislizeni	California	Telford, 1970
O. bivitellobata Loewen, 1940	*Cnemidophorus tigris*	California	Telford, 1970
		Nevada	Babero and Matthias, 1967
		Utah	Grundmann, 1959
		Idaho	*nobis*
O. phrynosomatis (Harwood, 1932)	*Phrynosoma platyrhinos*	Nevada	Babero and Kay, 1967
		Utah	Grundmann, 1959
		Idaho	*nobis*

and 9 cestodes, respectively. The latter finding represents the first record of *O. scelopori* in *S. occidentalis* from Idaho. One and 4 *Pharyngodon giganticus* Read and Amrein, 1953 were recovered from the large intestine of 1 adult male and 1 adult female *S. occidentalis,* respectively. All 5 *P. giganticus* were gravid. Idaho represents a new locality record for *P. giganticus.* Differences in helminth prevalences among lizard populations at the 10 collection localities are recorded in Table 2.

Oochoristica bivitellobata Loewen, 1958 was removed from the duodenum of 6 adult female and 4 adult male western whiptailed lizards, *Cnemidophorus tigris.* An additional 3 *C. tigris* (1 male and 2 female) each harbored one immature tapeworm, tentatively identified as *O. bivitellobata.* The number of *O. bivitellobata* within an individual *C. tigris* ranged from 1 to 27 with a median of 2 cestodes per host. Idaho constitutes a new locality record for *O. bivitellobata.*

Table 2. Prevalence of helminths in 6 species of lizards from 10 localities in southern Idaho, USA.

	Total (by locality number*)	Helminth habitat
Oochoristica scelopori		
S. graciosus	1/118 (0/39 loc. 1; 0/8 loc. 2; 1/50 loc. 3; 0/21 loc. 4)†	Small intestine
S. occidentalis	2/19 (0/4 loc. 5; 0/1 loc. 7; 2/14 loc. 9)	Small intestine
Pharyngodon giganticus		
S. occidentalis	2/19 (0/4 loc. 5; 0/1 loc. 7; 2/14 loc. 9)	Large intestine
Oochoristica bivitellobata		
C. tigris	13/32 (2/11 loc. 4; 3/6 loc. 8; 8/15 loc. 10)	Small intestine
Oochoristica phrynosomatis		
P. platyrhinos	4/10 (1/3 loc. 9; 3/7 loc. 10)	Small intestine
Skrjabinoptera phrynosoma		
P. platyrhinos	6/10 (1/3 loc. 9; 5/7 loc. 10)	Stomach
C. wislizeni	2/14 (0/1 loc. 6; 0/1 loc. 8; 0/2 loc. 9; 2/10 loc. 10)	Stomach
Cyrtosomum readi		
P. platyrhinos	4/10 (0/3 loc. 9; 4/7 loc. 10)	Cecum
C. wislizeni	3/14 (0/1 loc. 6; 0/1 loc. 8; 0/2 loc. 9; 3/10 loc. 10)	Cecum

* Expressed as number of hosts infected/number examined.

† The 10 collection localities are numbered as follows: 1, Idaho Falls; 2, Ammon; 3, Pocatello; 4, Massacre Rocks; 5, Twin Falls; 6, Filer; 7, Malad Gorge; 8, Bruneau Dunes; 9, Swan Falls; 10, Murphy.

Twenty-seven male and 20 female specimens of the side-blotched lizard, *Uta stansburiana,* were examined. No helminths were found in these lizards.

Three helminth species were recovered from the desert horned lizard, *Phrynosoma platyrhinos*: *Oochoristica phrynosomatis* (Harwood, 1932), *Skrjabinoptera phrynosoma* (Ortlepp, 1922), and *Cyrtosomum readi* Gambino, 1958. The number of *O. phrynosomatis* per male host was 8, 23, and 38; 1 female horned lizard harbored 5 tapeworms. Idaho represents a new locality record for *O. phrynosomatis. Skrjabinoptera phrynosoma* was present in the stomach of 3 male and 1 female *P. platyrhinos.* A single gravid female *S. phrynosoma* was found in the large intestine of one horned lizard. *Cyrtosomum readi* occupied the cecum of 3 female and 1 male *P. platyrhinos.* Six *P. platyrhinos* were infected with helminths. Four lizards each harbored 2 species and 2 *P. platyrhinos* were infected with all 3 species of helminths.

Recovered from the leopard lizard, *Crotaphytus wislizeni,* were 2 nematode species. *Cyrtosomum readi* was collected from the cecum of 2 male and 1 female *C. wislizeni. Skrjabinoptera phrynosoma* was present in the stomach and large intestine of 1 male *C. wislizeni,* and in the stomach, small intestine, and large intestine of another. One male *C. wislizeni* harbored both *C. readi* and *S. phrynosoma.* The discovery of *S. phrynosoma* in *C. wislizeni* represents a new host record. All previous reports indicate the stomach as the habitat for *S. phrynosoma.* Presumably, the female *S. phrynosoma* recovered from the small and large intestines of *Phrynosoma platyrhinos* and *C. wislizeni* were worms migrating to the rectum to be expelled with host's feces (see Lee, 1955, Journal of Parasitology 41:70–74). As these lizards were dissected immediately after death, the presence of *S. phrynosoma* outside of the stomach is not likely due to postmortem migration. No differences in prevalence of helminths due to host sex were observed in the 6 lizard species.

This study is part of the author's thesis for the M.S. degree in Biology at Idaho State University. Representative specimens of the 6 helminth species reported in this study have been deposited in the Harold W. Manter Laboratory at the University of Nebraska State Museum and correspond to the accession numbers HWML 22984 through HWML 22991. I thank Dr. Gerald D. Schmidt for confirming identifications of the helminths and am grateful to Bethany and Angeline Lyon for their assistance in the field.