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HELMINTH PARASITES OF THE ROBIN FROM SOUTH BASS ISLAND, OHIO

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Abstract: Fifty robins, *Turdus migratorius,* from South Bass Island, Ottawa County, Ohio were examined for helminth parasites. Twelve species of helminth parasites were found, two species of trematodes, three of cestodes, six of nematodes, and a single species of acanthocephalan. Two of these helminths, the nematodes *Capillaria contorta* and *C. ovopunctatum,* represent new host records.

INTRODUCTION AND METHODS

Records of helminth parasitism in the robin are largely limited to reports of bird parasites in general or reports of specific helminth parasites. The only intensive study of the helminth parasites of the robin is that of Slater.[1]

The purpose of this study was to determine the prevalence and intensity of helminth parasite infection in robins from South Bass Island, Ottawa County, Ohio. South Bass Island is located in the western basin of Lake Erie. A large roosting site on this island serves several species of birds, brown-headed cowbirds, grackles, red-winged blackbirds, robins, and starlings, which forage throughout the western basin region. The feeding activities of these birds during the late summer months is of considerable concern to the agricultural community of the region.

Fifty robins, 19 adults and 31 juveniles (young-of-the-year), were shot on South Bass Island from August 1969 to June 1971. Birds were examined immediately and the brain, nasal, and body cavities were examined grossly and with a dissecting microscope. Preparation of the helminths for identification followed standard techniques; the trematodes, cestodes, and acanthocephalans were killed in heated Ringer's 'Warm' solution, fixed in Landowsky's AFA solution, stained with Semichon's Carmine, and mounted in Piccolyte Medium. The nematodes were cleared and studied in a glycerine-alcohol solution.

RESULTS AND DISCUSSION

Twelve species of helminth parasites were removed from 48 of the 50 birds examined. Two of the 50 birds were not infected. The trematodes *Leucochloridium variae* and *Lutztrema monenteron* and the cestodes *Choanotaenia iola* and *Hymenolepis farciminosa* have been previously recorded from the robin. The nematodes *Capillaria contorta* and *C. ovopunctatum* are recorded from this host for the first time. The results are summarized in Table 1. Individual birds harbored as many as six species of parasites, more often three or four.

The cestode *Dilepis undula,* the nematodes *Capillaria exilis, Dispharynx nasuta, Porrocaecum ensicaudatum* and *Syngamus trachea,* and the acanthocephalan *Plagiorhynchus formosus* have also been previously recorded from the robin. The presence of these helminths in high percentages in both adults and recently fledged birds indicates that this host plays an important role in the maintenance and dispersal of these parasites in the avian community on South Bass Island. The results of this study do not indicate that helminth parasites are present in sufficient numbers in this locality to be factors which control the numbers of fully fledged juvenile or adult robins under natural conditions. The effect of helminth parasitism on nestlings is not known.

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TABLE 1. Helminth parasites of 50 Robins from South Bass Island, Ohio

Parasite	Site of Infection	Prevalence %	Number of Helminths		Number of Birds Infected	
			Average	(Range)	Adults N = 19	Juveniles N = 31
Trematode						
Leucochloridium sp.	Cloaca	2	1		1	0
Lutztrema monenteron	Gall bladder	20	5.9	(1-11)	10	0
Cestoda						
Choanotaenia iola	Intestine	10	2.6	(1-7)	0	5
Dilepis undula	Intestine	42	15.3	(1-84)	8	13
Hymenolepis farciminosa	Intestine	10	1.2	(1-2)	1	4
Nematoda						
**Capillaria contorta*	Esophagus	2	1		0	1
Capillaria exilis	Intestine	70	8.6	(1-35)	9	26
**Capillaria ovopunctatum*	Intestine	12	4.7	(2-15)	0	6
Dispharynx nasuta	Proventriculus	28	7	(1-26)	1	13
Porrocaecum ensicaudatum	Intestine	34	2.2	(1-8)	3	14
Syngamus trachea	Trachea	42	3.2	(1-8 pair)	5	16
Acanthocephala						
Plagiorhynchus formosus	Intestine	62	5	(1-47)	12	19

* Indicates new host record

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LITERATURE CITED

1. SLATER, R. L. 1967. Helminths of the robin, *Turdus migratorius* Ridgway, from northern Colorado. Am. Midl. Nat. 77: 190-199.

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