

PARASITES OF THE WATER PIPIT  
(*ANTHUS SPINOLETTA ALTICOLA*) FROM MONTANA

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During the summers of 1963 and 1964, in the course of field work on the Beartooth Plateau, Park County, Wyoming and Carbon County, Montana, at an elevation of ca 3550 m, we preserved parasites from 52 adult specimens of the Water Pipit (*Anthus spinoletta alticola*). Since there is a paucity of information about the parasites of this species in North America, we thought it important to publish the results and to present a compilation of known parasites (Table 1).

*Mallophaga*.—The earliest comprehensive listing of North American Mallophaga (Kellogg, 1899) does not report any lice from the genus *Anthus*. A subsequent compilation (Malcomson, 1960) does mention two species: *Bruelia corydalla* (Host: *Anthus pratensis*) from Iceland (Timmermann, 1950) and *Ricinus japonicus* (Host: *Anthus s. japonicus*) from Japan (Uchida, 1915). Gross (1937) recorded *Philopterus subflavescens* (Host: *A. s. rubescens*) from the coast of Labrador. Hopkins and Clay (1952), however, regard *subflavescens* as a descriptive phrase and not as a name, and thus do not list the genus *Anthus* as host of the genus *Philopterus*. Recently, Balát (1955) found three species of Mallophaga (*Philopterus hanzaki*, *Ricinus japonicus* and *Menacanthus* sp.) on *A. s. spinoletta* from the Tatra Mountains of Czechoslovakia.

On the Beartooth Plateau we found four of the 52 pipits infested with *Ricinus japonicus*, two with *Menacanthus* sp. and one with both *Menacanthus* sp. and *Bruelia* sp.. Specimens of these lice have been deposited in the collections of the Department of Entomology, University of Minnesota. The present known distribution of Mallophaga from the genus *Anthus* is shown in Table 2.

*Acarina*.—In 1964 five birds were sacrificed in search of nasal mites. Two of these five birds, both females, contained respectively 16 and six *Ptilonyssus* sp.. Neither Pereira and Castro (1949) nor George (1961) list the genus *Anthus* as host for the genus *Ptilonyssus*. The specimens are deposited in the collection of the Department of Zoology, University of Montana.

*Nematoda*.—Two of the 52 adult birds were infested with *Diplotrriaena ozouxi*. The parasites were located in the body cavity and air sacks in the region of the trachea and gizzard. The same species was reported by Spasskaja (1949) for the Tree Pipit (*Anthus trivialis*) from Western Siberia. The specimens are deposited with the collection of the Department of Zoology, University of Montana (U of M 778-779-780).

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TABLE 1. ANNOTATED LIST OF WATER PIPIT (ANTHUS SPINOLETTA) METAZOAN PARASITES

	Host	Location	Source
TREMATODA	<i>Uroleochus rossillensis</i>	West of Wales	Williams, 1960, 1961
	<i>Plagiorchis notabilis</i>	Scotland	Nicoll, 1909
	<i>A. s. petrosus</i>	Scotland	Nicoll, 1909
ACANTHOCEPHALA	<i>A. s. petrosus</i>	West of Wales	Williams, 1961
CESTODA	<i>Prosthorrhynchus cylindraceus</i>	Saghalin	Yamaguti, 1958
	<i>Anomolactenia arhynchia</i>	West of Wales	Williams, 1961
	<i>A. spiniolella</i>	West of Wales	Williams, 1961
NEMATODA	<i>A. spiniolella</i>	Wyoming-Montana	This paper
	<i>A. s. alticola</i>	Finland	Nordberg, 1935
	<i>A. spiniolella</i>	Fair Isle, Scotland	Williamson, 1955
SIPHONAPTERA	<i>Ceratophyllus borealis</i>	Czechoslovakia	Rosicky, 1959
		Finland	Nordberg, 1935
		Fair Isle, Scotland	Williamson, 1955
		?	Costa & Hathaway, 1946
	<i>Ceratophyllus gallinae</i>	Czechoslovakia	Rosicky, 1955
		Caucasus Mts.	Danskaja, 1950
			(c. f. Anderson, 1959)
MALLOPHAGA	<i>Ceratophyllus balati</i>	Fair Isle, Scotland	Williamson, 1955
	<i>Ceratophyllus frigidus</i>	Labrador	Gross, 1937
	<i>Dasypsyllus gallinulae</i>	Czechoslovakia	Balát, 1955
		Czechoslovakia	Balát, 1955
	* <i>Philopterus subflavescens</i>	Wyoming-Montana	This paper
	<i>Philopterus hanzaki</i>	Wyoming-Montana	This paper
	<i>Menacanthus sp.</i>	Czechoslovakia	Balát, 1955
	<i>Menacanthus sp.</i>	Japan	Uchida, 1915
	<i>Bruelia sp.</i>	Wyoming-Montana	This paper
	<i>Ricinus japonicus</i>	Wyoming-Montana	This paper
	<i>Ricinus japonicus</i>	Wyoming-Montana	This paper
	<i>Ricinus japonicus</i>	Skokholm, Scotland	Stansfield, 1955
	<i>Philonysus sp.</i>	Skokholm, Scotland	Stansfield, 1955
ARACHNIDA	<i>Ornithomyia fringillina</i>	Skokholm, Scotland	Stansfield, 1955
DIPTERA	<i>Ornithomyia avicularia</i>	Skokholm, Scotland	Stansfield, 1955

\*Not recognized as a species by Hopkins and Clay (1952).

TABLE 2. DISTRIBUTION OF THE MALLOPHAGA OF THE GENUS ANTHUS

Mallophaga	<i>A. s. spinoletta</i>	<i>A. s. alticola</i>	<i>A. s. japonicus</i>	<i>A. pratensis</i>
<i>Philopterus hanzaki</i>	+			
<i>Menacanthus</i> sp.	+	+		
<i>Ricinus japonicus</i>	+	+	+	
<i>Bruelia</i> sp.		+		
<i>Bruelia corydalla</i>				+
Location Source	Czechoslovakia Balát, 1955	Montana- Wyoming This paper	Japan Uchida, 1915	Iceland Timmermann, 1950

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