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PARASITOLOGY

Review of arthropod parasites and epifauna taken from the Ovenbird *Seiurus aurocapilla* in North America

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Abstract

A review of arthropod associates taken from Ovenbirds is provided. Two species of louse flies (Diptera: Hippoboscidae), one species of blow fly (Diptera: Calliphoridae), four species of lice (Psocodea: Menoponidae, Philopteridae), three species of feather mites (Sarcoptiformes: Proctophyllodidae, Trouessartiidae), one or two species of nasal mites (Mesostigmata: Rhinonyssidae), one species of quill mite (Trombidiformes: Syringophyllidae), and five species of ticks (Ixodida: Ixodidae) have been collected from Ovenbirds. A number of other arthropods have also been collected from Ovenbirds, or in one case are suspected to occur based on symptoms.

Introduction

The Ovenbird *Seiurus aurocapilla* is a New World warbler in the family Parulidae that can be found breeding as far north as Newfoundland and the Northwest Territories in Canada and wintering as far south as Colombia and Venezuela. It is a ground-nesting species that feeds primarily on insects (Cornell Lab of Ornithology 2024). The Ovenbird is host to a number of arthropod commensals and parasites: louse flies, blow flies, lice, feather mites, nasal mites, quill mites, and ticks. Some other arthropods have been collected from Ovenbirds, including biting midges, Collembola, chiggers, and plant-feeding mites. This paper presents a review of observations of arthropod associates taken from the Ovenbird.

Louse flies

Ornithoctona fusciventris (Wiedemann) (Diptera: Hippoboscidae) was the only louse fly known from Ovenbirds in Florida (Forrester & Spaulding 2003) until Hribar (2013) collected another hippoboscid specimen, tentatively identified as *Microlynchia furtiva*.

Blow flies

Streby et al. (2009) reported on infestations of Ovenbird nestlings by the blow fly *Trypocalliphora braueri* (Calliphoridae) in Minnesota.

Lice

Four species of lice have been reported from the Ovenbird, three Menoponidae and one Philopteridae. Among the Menoponidae, *Menacanthus chrysophaeus* was described by Kellogg (1896) as *Colpocephalum chrysophæum* from specimens taken from “Samuels’ Long Sparrow” “*Melospiza fasciata samuelis*” in Palo Alto, California. This host bird in now known as the San Pablo Song Sparrow *Melospiza melodia samuelis*. Peters (1933) reported “*Menacanthus chrysophæum*” from Ovenbirds from two localities in New York, Elmhurst and Mohonk Lake. *Menacanthus aurocapillus* was described from Ovenbirds collected in Maryland (Carriker 1958, Price

et al. 2003) and has been collected there more recently (Hahn et al. 2000). It is also known from Ovenbirds in Newfoundland, Canada (Threlfall & Wheeler 1986). *Menacanthus eurysternus* has been taken from Ovenbirds (Price 1975). An unidentified species of *Myrsidea* was collected from Ovenbirds in Illinois by Bueter et al. (2009). An undescribed species of *Brueelia* (Philopteridae) was found on Ovenbirds in Arkansas and Illinois (Bueter et al. 2009, Brewer & Sweet 2023). Hribar (2022) reported an unidentified louse nymph from an Ovenbird in Florida.

Feather mites

Three species of feather mites are known from Ovenbirds. Mironov & Chandler (2017) described *Amerodectes seiurus* from Ovenbirds in Georgia. This species has since been reported from Ovenbirds in Arkansas, Florida, Missouri, and Tennessee (Matthews et al. 2018, Hribar 2022). The specimens reported by Hribar (2013) prior to description of the species have not been re-examined but likely are *A. seiurus*. Hribar (2013) reported a *Proctophyllodes* species feather mite from an Ovenbird. Later, additional specimens were identified as *Proctophyllodes breviquadratus* (Hribar 2022, 2023). Atyeo & Braasch (1966) described the species in part from specimens taken from an Ovenbird in Tennessee. Mironov & Chandler (2020) described *Trouessartia seiurus* from Ovenbirds collected in Georgia. This species was taken from Ovenbirds in Florida (Hribar 2022); again, the specimens reported by Hribar (2013) have not been reexamined but most likely are *T. seiurus*.

Nasal mites

Nasal mites (Rhinonyssidae: *Ptilonyssus*) unidentified to species (but probably *Ptilonyssus sairae*) were reported from an Ovenbird in Florida by Hribar (2023). Castro (1948) and Pence & Casto (1976) reported *P. sairae* from several Parulidae in Florida, including the Ovenbird. Knee et al. (2008) collected a related nasal mite, *Ptilonyssus japubiensis*, from 11 parulid species including the Ovenbird in Manitoba, Canada. (Pence & Casto (1976) synonymized *P. japubiensis* with *P. sairae*; Knee et al. (2008) consider them to be separate species.)

Quill mites

Clark (1964) described *Betasyringophiloidus seiuri* (as *Syringophilus seiuri*) (Syringophyllidae) from Ovenbirds collected in Maryland. Kethley (1970) and Bochkov & Galloway (2001) reported *B. seiuri* (as *Syringophiloidus seiurus*) from Ovenbirds in Florida and Manitoba, Canada, respectively. Grossi & Proctor (2020) reported *B. seiuri* from Alberta, Manitoba and Ontario in Canada, and described the distribution of this mite on the bodies of Ovenbirds.

Ticks

There are conflicting opinions on the suitability of Ovenbirds as hosts for ticks. LoGiudice et al. (2003) and Loss et al. (2016) determined that Ovenbirds were likely to be good hosts for ticks based on the biology and behaviour of the species. Weisbrod & Johnson (1989), Morris et al. (2007) and Elias et al. (2011) found Ovenbirds to be one of the most commonly infested species in Wisconsin and in Maine. Giardina et al. (2000), however, found that the Ovenbird was not a good reservoir of ticks in spite of its biology and behaviour. Five tick species have been collected from Ovenbirds. The number of species reported is lower than at first glance because of the taxonomy of *Ixodes scapularis*. In 1979, Spielman et al. (1979) described *Ixodes dammini* as a species distinct from *Ixodes scapularis*. Difficulties in separating the two species prompted a re-examination of specimens and it was determined that the two putative species were conspecific (Oliver et al. 1993). Keirans et al. (1996) then redescribed *Ixodes scapularis* in all life stages and accounted for geographic variation in morphology. Records of ticks collected from the Ovenbird are shown in Table 1. Where the original paper reports *Ixodes dammini*, I have used *Ixodes scapularis* (=*Ixodes dammini*) to indicate the synonymy and current specific epithet. Some authors did not specify what ticks were found on what bird species. Snetsinger et al. (1970) collected *Ixodes dentatus* and *Haemaphysalis leporispalustrus* from a number of bird species in New Jersey, including the Ovenbird. Scott et al. (2010) collected a tick from an Ovenbird in Canada. Cumbie et al. (2021) also collected *Ixodes* ticks from a number of bird species, including the Ovenbird. Other authors did not specify collection locality (Brinkerhoff et al. 2011).

Table 1: Tick species taken from Ovenbirds. Species are listed in alphabetical order, not phylogenetic order.

Tick species	Location	Reference
Amblyomma auricularium	Texas	Cohen et al. (2015)
Hemaphysalis leporispalustrus	Not specified	Brinkerhoff et al. (2011)
	Illinois	Hamer et al. (2012)
	South Carolina	Reeves et al. (2002)
Ixodes brunneus	Not specified	Brinkerhoff et al. (2011)
	South Carolina	Reeves et al. (2002)
Ixodes dentatus	Not specified	Brinkerhoff et al. (2011)
	Connecticut	Stafford et al. (1995)
	Illinois	Parker et al. (2017)
	New York	Battaly et al. (1987)
Ixodes scapularis	Not specified	Brinkerhoff et al. (2011)
	Canada	Scott et al. (2018, 2019)
	Ontario/Quebec	Scott and Pesapane (2021)
	Massachusetts	Scharf (2004)
	Connecticut	Stafford et al. (1995)
(reported as *Ixodes dammini*)	Connecticut	Anderson et al. (1986, 1990)
(reported as *Ixodes dammini*)	Connecticut	Magniarelli et al. (1991)
(reported as *Ixodes dammini*)	New York	Battaly et al. (1987)

Other taxa

Dietsch (2005) reported a small number of Ovenbirds harbouring unidentified chiggers in Chiapas, Mexico. Arendt (1992) reported a "scaley-leg" condition on an Ovenbird in Puerto Rico but did not collect any parasites. Haché et al. (2016) also reported deformity of Ovenbird feet seemingly consistent with scaly-leg mite infestation but they recovered no mites. Scaly-leg is a deformation of birds caused by mites in the subfamily Knemidokptinae of Epidermoptidae (Latta & O'Connor 2001). One Ovenbird from Florida was harboring three other invertebrate taxa (Hribar 2023): a collembolan, *Seira dowlingi* (Entomobryidae); a biting midge, *Culicoides* sp. (Ceratopogonidae); and the red palm mite, *Raoiella indica*, (Tenuipalpidae). Collembola can disperse via birds (Christiansen & Bellinger 1994, Lebedeva & Krivolutsky 2003). Many *Culicoides* species feed are facultative or obligate bird feeders (Garvin and Greiner 2003).

When examining host specimens for epifauna it is important to remember to interpret results with caution. "Stragglers" exist, parasites and commensals that normally occur on a different host (Bahiraei et al. 2024). For example, feather mites have been taken from rats on South Pacific islands and lice normally found on Anseriformes have been found on raptors (Ramsay & Peterson 1977, Palma & Jensen 2005). These most likely are the result of predators or scavengers being contaminated while feeding.

The Ovenbird is a host for a number of arthropod associates. Some of these are parasites or commensals; others are probably accidental infestations. Some parasitic groups, like chiggers and scaly-leg mites, are of uncertain association and need to be investigated further. Undoubtedly, there is much more to learn about Ovenbirds and their associates.

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