Florida Field Naturalist 39(4):138-141, 2011.

ECTOPARASITES COLLECTED FROM COMMON YELLOWTHROATS (*Geothlypis trichas*) ON VACA KEY, FLORIDA

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There are very few records of ectoparasites from the Common Yellowthroat (*Geothlypis trichas*) from Florida (Forrester and Spalding 2003). In autumn of 2010, two female Common Yellowthroats were found dead outside a building on Vaca Key in Marathon, Monroe County, Florida. Both birds apparently had collided with a plate glass window. One bird was found on 30 September, and another on 3 October. Each bird was washed immediately upon collection with a mild detergent and the liquid was passed through a cone made from coarse filter paper. The filtrate was examined under a dissecting microscope.

The bird collected on 30 September was found harboring several hundred feather mites. The second bird had only about a dozen feather mites. Mites were cleared in a solution of phenol and ethanol and mounted in Canada balsam on microscope slides according to the technique of Wirth and Marston (1968). Slide mounts were sent to specialists for identification. Both birds were found to be harboring an undescribed species of the genus *Amerodectes*, most similar to *A. geothlypis* (Acari: Astigmata: Proctophyllodidae). All of the slide-mounted specimens taken from the first bird were *Amerodectes* near *A. geothlypis* except for one male *Analges* sp. (Astigmata: Analgidae). All mites from the second bird were determined as specimens of the same undescribed species of *Amerodectes*. The mites collected from *G. trichas* on Vaca Key differ from *A. geothlypis* (Berla) in the structure of the male genitalia and female lobar shield, a plate-like structure on the dorsal side (Berla 1973). They also differ from another closely related species, *A. havliki* (Černý), which has strong punctae (small pits in the exoskeleton) whereas the new species lacks punctae (Valim and Hernandes 2006, 2010; Fig. 1). Voucher specimens were deposited in the collections of the University of Alberta (Edmonton, Alberta, Canada), the Russian Academy of Sciences (St. Petersburg, Russia), the University of Michigan Museum of Zoology (Ann Arbor, Michigan), the Florida State Collection of Arthropods (Gainesville, Florida), and the U.S. National Collection of Acari (Beltsville, Maryland).

It is unknown why the two bird specimens harbored different numbers of mites. One possibility is that they were collected at different times after death. Some parasites leave the host's body after host death, whereas others remain on the host and die (Kierans 1975, Clayton and Walther 1997). Feather mite load appears not to be related to the health of the host bird. In fact, feather mites may not be parasites at all. According to some authors, the relationship between feather mites and their bird hosts is better described as commensalism or even mutualism (Proctor and Owens 2000, Blanco et al. 2001, Dowling et al. 2001). Feather mites are commonly found on birds. McClure (1981) working in California, trapped and examined over 47,000 birds belonging to 90 species, most of them passerines; 40% of the birds examined, belonging to 47 species, harbored feather mites.

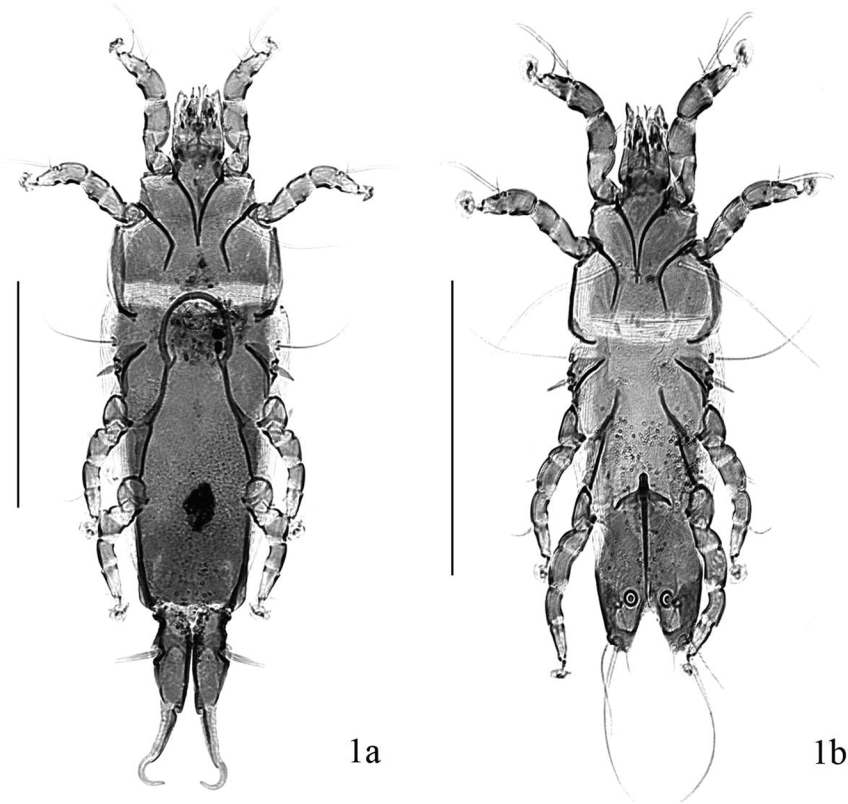

Figure 1. Adult female (left) and male (right) of an undescribed *Amerodectes* sp. from Common Yellowthroats (*Geothlypis trichas*) on Vaca Key, Florida.

The bird collected on 30 September also was harboring a single thrips (Insecta: Thysanoptera). The specimen was cleared and slide-mounted in the same manner as were the mites. It was determined to be *Frankliniella bispinosa* (Morgan). This thrips species is found on a wide range of host plants and is a pest of agricultural crops in Georgia and Florida (Childers 1999). The specimen was deposited in the US National Insect Collection (Thysanoptera), Beltsville, Maryland.

It is uncommon but not unknown to collect thrips from birds, e.g., *Aeolothrips* sp. (Aeolothripidae) was found on bird feathers (Lewis 1973) and *Apterothrips secticornis* Trybom (Thripidae) on feathers of a Lesser Whitethroat, (*Sylvia curruca*; Morison 1973). This appears to be the first record of a thrips on a parulid. Why the thrips was on the bird is open to speculation. Analyses of stomach contents reveal that thrips do not make up a significant portion of the diet of parulids, making acquisition during feeding unlikely (Terrill and Ohmart 1984, Strong 2000). However, absence of thrips from bird stomach contents may be due to their being too small to be worth the effort expended in catching them, or it may be due to their being so rapidly digested that they are not detected (Arvidsson and Klaesson 1986).

More commonly, thrips are collected from birds' nests. Dobroscky (1925) reported *Limnothrips denticornis* (Haliday) and *Haplothrips verbasci* (Osborn) from nests of

unidentified birds in New York. *Neohydatothrips interruptus* (Hood) (Thripidae) was described in part from specimens collected in a bird's nest in Maryland (Hood 1927). Hicks (1953) reported several thrips species from nests of American Robin (*Turdus migratorius*), Yellow-billed Cuckoo (*Coccyzus americanus*), Common Grackle (*Quiscalus quiscula aeneus*), Eastern Phoebe (*Sayornis phoebe*), and Gray Catbird (*Dumetella carolinensis*) in Iowa. In a study over the course of 15 years, 38 species of thrips (Thripidae and Phlaeothripidae) were recorded from nests of birds and mammals in Slovakia (Fedor et al. 2001, 2002; Pelikán et al. 2002). Additional records include *Myceterothrips albidicornis* (Knechtel) from nests of *Turdus merula*, *T. philomelos*, *Turdus* sp. and *Passer* sp. in Slovakia (Fedor 2006). Among the Parulidae, there are a few records of thrips (*Frankliniella tritici* (Fitch) and several other specimens either unidentified or doubtfully indentified to genus) from nests of the Prairie Warbler (*Dendroica discolor*) in Indiana (Nolan 1955, 1959). Thrips often are collected from birds' nests, but it is not known exactly why they are there although they might be preying on nidicolous arthropods (i.e., those living in the nest) or probing the skins of the birds (Pinent et al. 2002). The thrips are probably carried to the nests by the birds (known as zoochorous transport) on nesting material (Fedor et al. 2008, 2010).

Acknowledgments

We thank H. Proctor, University of Alberta, and S. Mironov, Russian Academy of Sciences, for identifying the mites, and S. Nakahara, Systematic Entomology Laboratory, USDA-ARS, for confirming our identification of the thrips. We also thank R. Ochoa and N. Woodley, USDA-ARS, Systematic Entomology Laboratory; G. Evans, USDA-APHIS-PPQ; and Renee Carleton for their manuscript reviews and helpful suggestions. D. Adamski, USDA-ARS-SEL, provided the photographs. USDA is an equal opportunity provider and employer.

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