NEW HOST AND DISTRIBUTION RECORDS FOR THE MITE GENERA DERMANYSSUS, ORNITHONYSSUS AND PELONYSSUS (ACARI: MESOSTIGMATA: LAELAPOIDEA) IN FLORIDA1,2,4

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ABSTRACT

Host and distribution records of dermanyssid and macronyssid mites are reported for the first time. New records for Florida are presented for Dermanyssus gallinae (DeGeer), Ornithonyssus bursa (Berlese), O. bacoti (Hirst), O. sylviarum (Canestrini and Fanzago), and Pellonyssus passeri (Clark and Yunker). Dermanyssus is probably an uncommon genus in Florida. Ornithonyssus bursa and O. bacoti were the 2 macronyssids reported to attack humans in Florida. The most commonly encountered ectoparasitic mite of the domestic chicken, Gullus gallus, was O. sylviarum. Pellonyssus passeri was collected in large numbers particularly in the nests of the house sparrow Passer domesticus and mockingbird, Mimus polyglottis.

Dermanyssid and macronyssid mites are among the most important ectoparasites of wild and domestic birds and often attack man in the absence of a suitable avian host. Such attacks may produce severe dermatitis in humans and are commonly initiated by the ectoparasitic mites of edificially nesting birds.

In spite of the importance of these mites, there are no host or distribution records for Florida. The number and diversity of potential avian hosts in Florida make it an ideal area for the study of these mites.

Mites in several collections were examined in addition to mites collected from birds and bird nests in the Gainesville, Florida area from June 1972 until September 1974. The mites collected were primarily from nests of the house sparrow, Passer domesticus, and the mockingbird, Mimus polyglottis, because of their close association with man and man-made structures.

WAP indicates specimens in the collection of William A. Phillis, III, and FSCA and HLC indicate records taken from the mite collections in Florida State Collection of Arthropods, Division of Plant Industries, Gainesville, Florida and the acarine collection of Dr. H. L. Cromroy, respectively.

Three genera of mites were encountered; Dermanyssus (Dermanyssidae), Pellonyssus, and Ornithonyssus (Macronyssidae).

Dermanyssus gallinae (DeGeer, 1778)

Dermamyssus gallinae (DeGeer)
Acarus gallinae DeGeer, 1778:106
Dermamyssus gallinae Dugès, 1834:18

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The genus Dermanyssus was collected only once. Moss et al. (1970), in their
survey of new and previously-reported records for the genus Dermanyssus, did
not include any from Florida. It appears to be an uncommon species in Florida
and the practice of identifying any reddish mite taken from a bird as a
Dermanyssid is often incorrect.

Ornithonyssus bursa (Berlese, 1888)

Ornithonyssus bursa (Berlese)
Leiognathus bursa Berlese, 1888:208
Liponyssus bursa Hirst, 1916:243
Ornithonyssus bursa Sambon, 1928:107

Gallus gallus (FSCA), Bradenton; 13.V.1965, J. M. Conat coll., in house and
on man (DFI); Pinellas Park, 17.V.1965, Bill Allen coll., in house (FSCA); Ft.
Lauderdale, 6.VI.1966, V. E. Parker coll., biting man (FSCA); Ft. Pierce,
20.VII.1966, E. Frange coll., in house (FSCA); Orlando, 6.VI.1966, R.
Houghton coll., inside dwelling (FSCA); Winter Haven, 11.IV.1972, J. T.
Griffiths coll., in apartment (FSCA); Gainesville 15.VI.1974, W. A. Phillips
coll., biting 5 year old human in apartment (WAP); St. Luci Co., 14.V.1974,
Paul W. Sykes Jr., coll., from nest and nestlings of the everglades kite,
Rostrhamus sociabilis plumbeus (WAP); Broward Co., 30.IV.1969, Paul W.
Sykes Jr., coll., from nest and nestlings of the everglades kite, R. sociabilis
plumbeus (WAP); Miami Beach, 6.VI.1960, J. Porter coll., on man (FSCA);
North Palm Beach, 25.IV.1967, J. R. Dominguez coll., biting man (FSCA);
Tampa, 20.II.1970, E. R. Burnett coll., biting man (FSCA); Vero Beach,

Ornithonyssus bursa was collected in large numbers from the bedroom of a
5 year old male human who developed severe dermatitis as a result of the mite
attack. These mites entered the bedroom through a crack in a broken cinder
block within which a house sparrow nest was located. Nine other reports of
this mite biting man or entering a human habitation were found. One
interesting new host record is the everglades kite.

Ornithonyssus sylviarum (Caneistrini and Fanzago)

Ornithonyssus sylviarum (Caneistrini and Fanzago)
Dermatophagoides sylviarum Caneistrini and Fanzago, 1878
Leiognathus sylviarum Caneistrini, 1884
Ornithonyssus sylviarum Sambon, 1928:105

Records. Callahan, 20.III.1959, B. L. McMurry coll., from chicken, Gallus
gallus (FSCA); Callahan 29.IV.1963, M. Shinkle coll., from chicken, G. gallus
(DPI); Callahan, 6.III.1967, J. R. Strayer coll., from chicken, G. Gallus (DFI);
Gainesville, VII.1960, Sathena Caffy coll., from mockingbird Mimus
polyglottis (FSCA); Duval Co., 10.IX.1958, H. S. Mayeux coll., from chicken,
G. gallus (FSCA); Dade City, 26.I.1959, Dr. D. S. Jaquette coll., from chicken,
G. gallus (FSCA); Winter Haven, 10.I.1963, N. Agey coll., from chickens, G.
gallus (FSCA); Alachua Co., VIII.1966, Sathena Caffey coll., from mocking-
bird nest, Mimus polyglottis (FSCA); Gainesville, 16.VI.1966, Ladonia
O'Berry coll., from blue jay, Cyanocitta cristata (FSCA); Gainesville,
13.VI.1969, D. G. Young coll.; from chicken, G. gallus (HLC); Gainesville,
6.V.1973, W. A. Phillips III coll., from nest of brown thrasher, Toxostoma
rufum rufum (WAP) Vero Beach, 21.I.1974, H. Ray coll., from chicken,
G. gallus (FSCA); Cassadaga, 25.V.1966, H. A. Denmark coll. on Quercus
virginiana (FSCA); Ft. Pierce, 21.IV.1960, M. H. Muma coll., in litter (FSCA); Indian
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Ornithonyssus sylviarum infrequently attacks man (Strandtmann and Wharton 1958, Baker et al. 1966), and no records of O. sylviarum attacking man were found from Florida. This mite was encountered in large numbers in the nests of the mockingbird and brown thrasher. O. sylviarum is probably the principle ectoparasitic mite attacking the domestic chicken in Florida.

Ornithonyssus bacoti (Hirst)

Ornithonyssus bacoti (Hirst)

Bdellonyssus bacoti Fonseca, 1941:262
Macronyssus bacoti Buitendijk, 1945:295
Leiognathus bacoti Hirst, 1913:119
Ornithonyssus bacoti Bregetova, 1956:165

Records. Pensacola, 3.III.1967, E. N. Stehpins coll., biting man (FSCA);
Tampa, 5.II.1963, A. Gonzalez coll., from house (FSCA); St. Petersburg,
27.XII.1964, J. N. Layne coll., from cotton rat, Sigmodon hispidus (FSCA).

Ornithonyssus bacoti is not an avian parasite but was included due to the records of it attacking man. O. bacoti is a cosmopolitan parasite of rats, usually associated in Florida with the cotton rat, Sigmodon hispidus. It was collected from a human habitation and as “biting man” in the material examined.

Pellonyssus passeri (Clark and Yunker 1956:94)

5.V.1965, H. A. Denmark on Pinus clausa (FSCA).

Pellonyssus passeri is a common ectoparasitic mite of birds in the Gainesville area where it was encountered in large numbers in the nests of 4 species of birds. This mite has been reported from widely scattered regions of the United States; Florida (Phillis and Cromroy 1972); San Diego Co., California (Vincent 1972), S. W. Virginia (Mitchell and Turner 1968), and Maryland (Clark and Yunker, 1966). It has also been reported from New Guinea (Allred 1970).

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