

Research Note

THE MITE ORNITHONYSSUS SYLVARIUM (C. AND F.) (ARACHNIDA: ACARINA-MACRONYSSIDAE) ATTACKING FOWL IN PUERTO RICO¹

Ornithonyssus is a small macronyssid genus containing nine species of mites all of which are ectoparasitic on different animals. *O. sylvarium*, the northern fowl mite, is herein reported for the first time in Puerto Rico. The species was identified by Guilford S. Ide, from the Acarology Laboratory, the Ohio State University, at Columbus, Ohio.

Two other species of the genus, namely, *O. bacoti* (Hirst) and *O. bursa* (Berlese) have been reported on the island. *O. bacoti* is not too common on rats according to Fox². This and other publications refer to this species as *Bdellonyssus bacoti* (Hirst).

O. sylvarium and *O. bursa*, the tropical fowl mite, attack birds, including domestic fowl. Fox³ reported *O. bursa* breeding on the Puerto Rican grackle (*Holoquiscalus niger brachypterus*) and attacking man. During the summer of 1976 the senior author again collected this species breeding in very large numbers in the nests of the grackle and annoying man in a factory near El Maní, Mayagüez. Van Volkenberg⁴ recorded it as *Liponyssus bursa* and as commonly found on fowl.

The two specimens attacking fowl are similar in their life cycles and in the damage they can inflict. Both are blood feeders, lay their eggs on the feathers, molt three times on the feathers, and their life history may take 10 to 15 days to complete. Very heavy infestations kill fowl from irritation and loss of blood, and commonly, bloody scabs may be found on the skin.

The authors found *O. sylvarium* attacking hens in a poultry farm at Adjuntas, Barrio Guayabo Dulce, road No. 135, km 63. The elevation at this place is about 450 m; thus, it is a relatively cool place. Three large sheds in the farm hold a flock of 20,000 layer Leghorn hens of the Shaver line imported through a cooperative concern, from Georgia, U.S.A. when about 20 weeks old. Eggs, nymphs, larvae, and adults were found on the feathers. Scabs were abundant near the vent and on the breast.

¹ Manuscript submitted to the editorial board February 3, 1977.

² Fox, I., A new genus *Borinquolaelaps*, and new species of mites from rats in Puerto Rico, *J. Parasitol.* 32(5): 445-52, 1946.

³ Fox, I., *Ornithonyssus bursa* (Berlese) attacking man in Puerto Rico, *J. Econ. Entomol.*, 50(6): 838, 1957.

⁴ Van Volkenberg, H. L., An annotated check list of the parasites of animals in Puerto Rico, *P. R. Agric. Exp. Sta. at Mayagüez*, 22: 1-2, 1939.

The attack was intense. More than five mites were collected from a feather from each of five places in a line between the vent and the end of the breast bone. This is the standard procedure, recommended by the USDA⁵, to estimate the intensity of mite attack on fowl. The nest and birds were treated by spraying and dipping with malathion, Sevin⁶, and Coral as recommended by the Agricultural Extension Service of the University of Puerto Rico⁷. After three consecutive treatments at weekly intervals with Coral the attack was controlled. Birds with only one or two treatments with any of these insecticides were still heavily infested.

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⁵ Anonymous, Survey methods for some economic insects, ARS-USDA, pp 1-137, May 1969.

⁶ Trade names are used in this publication solely for the purpose of providing specific information. Mention of a trade name does not constitute a guarantee or warranty of equipment or materials by the Agricultural Experiment Station of the University of Puerto Rico or an endorsement over other equipment or materials not mentioned.

⁷ González Flores, M., e Inserni, J., Combate de plagas en la avicultura, Publicación Servicio Extensión Agrícola, pp. 9, 1976.