

FIRST REPORT OF *Ornithonyssus sylviarum* (ACARI: MACRONYSSIDAE) ON BLACK VULTURE (*Coragyps atratus*) NESTLINGS FROM BRAZIL*

PATRÍCIA S. SERAFINI¹; LUIZ DOS ANJOS¹; MÁRCIA ARZUA²; GRAZIELE VOLPATO¹; EDISON VARGAS¹; FÁBIO POLLETO¹

ABSTRACT.- SERAFINI, P.S.; ANJOS, L. DOS; ARZUA, M.; VOLPATO, G.; VARGAS, E.; POLLETO, F. **First report of *Ornithonyssus sylviarum* (Acari: Macronyssidae) on Black Vulture (*Coragyps atratus*) nestlings from Brazil.** [Primeiro registro de ectoparasitismo por *Ornithonyssus sylviarum* (Acari: Macronyssidae) em ninhegos de *Coragyps atratus* no sul do Brasil.] *Revista Brasileira de Parasitologia Veterinária* v. 12, n. 2, p. 92-93, 2003. Curso de Pós-Graduação em Ciências Biológicas, Universidade Estadual de Londrina, Depto de Biologia Animal e Vegetal, Londrina, PR 86051-990, Brazil. E-mail: patriciaserafini@yahoo.com.br

Ornithonyssus sylviarum (Canestrini and Fanzago) (Acari: Macronyssidae) is reported for the first time from the Black Vulture (*Coragyps atratus*) nestlings within a preserved natural area, Mata dos Godoy State Park (23°27'S, 51°15'W), Paraná State, Brazil. *Coragyps atratus* has been associated with human activity, being abundant around many cities and agricultural areas. This behavior may contribute to increase the risk of infestation of natural bird populations.

KEY WORDS: *Ornithonyssus sylviarum*, *Coragyps atratus*, Habitat Fragmentation, Brazil.

RESUMO

O parasitismo por *Ornithonyssus sylviarum* (Acari: Macronyssidae) foi relatado pela primeira vez em ninhegos de *Coragyps atratus* em um remanescente de Mata Atlântica no sul do Brasil, o Parque Estadual Mata dos Godoy (23°27'S, 51°15'W). *Coragyps atratus* pode desempenhar papel na modificação da distribuição de populações de parasitas em uma comunidade natural de aves, pois utiliza tanto o ambiente natural quanto o antropizado e pode agir como vetor em ambas as direções.

PALAVRAS-CHAVE: *Ornithonyssus sylviarum*, *Coragyps atratus*, Fragmentação Florestal, Brasil.

Human activities such as agriculture, urban development, and others are creating fragmented landscapes containing forest remnants surrounded by patches of altered vegetation

and human land use. The ability of fragmented landscapes to conserve a region's biota is of concern to all those interested in biological conservation (WARBURTON, 1997). Fragmentation allows closer contact between domestic animals and wildlife. This contact may alter the original prevalence of parasites (MARINI et al., 1996) affecting wild populations dynamics and ecosystem health (VANLEEUEWEN et al., 1998). Infectious and noninfectious diseases are being recognized as an increasing challenge to wildlife conservation, and there is a increasing need to consider this issues in conservation and management programs (MARINI et al., 1996; DEEM et al., 2001; FRIEND et al., 2001).

One nest of the Black Vulture (*Coragyps atratus*) was studied in the Mata dos Godoy State Park (MGSP) during a three week period in September 2001. MGSP (656 ha; 23°27'S, 51°15'W) is one of the last remnants of Atlantic Forest in north of Paraná State, southern Brazil. Much of the area around the reserve has been deforested and it is being used for agriculture, poultry or cattle raising. The nest (350 m from the forest edge) was on the ground in a hole at a base of a tree (*Gallesia integrifolia*; Apocynaceae). Ectoparasites were collected from two weeks age nestlings (two individuals) and from the nest itself. In the next visit the nestlings were

*Supported by CNPq and CAPES.

¹Pós-Graduação em Ciências Biológicas, Depto de Biologia Animal e Vegetal, Universidade Estadual de Londrina, 86051-990 Londrina, PR.

²Museu de História Natural Capão da Imbuia, Depto de Zoologia, Prefeitura Municipal de Curitiba.

absent, possibly due to predation or even nest abandonment probably caused by the massive infestation of blood feeding mites. Nevertheless, there were no clues at the study site that could indicate either one.

Both nestlings were highly infested with mites, all mites collected were adults identified as *Ornithonyssus sylviarum* (Acari: Macronyssidae), using criteria proposed by Guimarães et al. (2001). Voucher specimens were deposited at the Parasitological Collection of the Museum of Natural History "Capão da Imbuia" (MHNCI 1627 to 1636), in the City of Curitiba.

Ornithonyssus sylviarum is known as the northern fowl mite and is widely described in more temperate zones (e.g., DICK 1981; KLICH et al., 1996; MASÁN, 1997). In Brazil it has been reported in commercial laying hens flocks (GUIMARÃES et al.; 2001) and in caged canaries (FACCINI et al., 1991). *Ornithonyssus* spp. remain on the host most of the time and cause considerable loss of blood (BOWMAN, 1999). Massive infestation may cause the death of the bird (GUIMARÃES et al.; 2001).

The proximity of the natural reserve Mata dos Godoy to several commercial poultry flocks may contribute to the risk of exchange of parasite species carried by animals that use anthropomorphic environments, as is the case of *C. atratus*.

ACKNOWLEDGMENTS. We acknowledge the Conselho Nacional de Pesquisa (CNPq) and Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) for financial support (grants Lda - 350054/95-9 CNPq and PPS - CAPES). We appreciated the laboratory assistance of Profs. Dr. Milton Hissashi Yamamura, V.N. Teixeira and A. Ataliba during ectoparasite identification, and Instituto Ambiental do Paraná (IAP) to permit us to work at the Mata dos Godoy State Park.

REFERENCES

- BOWMAN, D. D. *Giorgis' Parasitology for Veterinarians*. 7th ed. Philadelphia: W.B. Saunders Company, 1999. 414p.
- DEEM, S.L.; KARESH, W.B.; WEISMAN, W. Putting Theory into Practice: Wildlife Health in Conservation. *Conservation Biology*, v. 15, n. 5, p. 1224-1233, 2001.
- DICK, T. A. Ectoparasites of sharp-tailed grouse, *Pediacetes phasianellus*. *Journal of Wildlife Diseases*, v. 17, n. 2, p. 229-235, 1981.
- FACCINI, J.L.H.; REITE, R.C.; LEITE, R.C. Sobre três casos de parasitismo por ácaros. *Arquivos da Universidade Federal Rural do Rio de Janeiro*, v.14, n. 1, p. 97-100, 1991.
- FRIEND, M.; MCLEAN, R.G.; DEIN, F.J. Disease emergence in birds: challenges for the twenty-first century. *The Auk*, v. 118, n. 2, p. 290-303, 2001.
- GUIMARÃES, J.H., TUCCI, E.C.; BARROS-BATTESTI, D.M. *Ectoparasitos de importância veterinária*. São Paulo: Plêiade, 2001. 213p.
- KLICH, M.; LANKESTER, M.W.; WU, K.W. Spring migratory birds (Aves) extend the northern occurrence of blacklegged tick (Acari: Ixodidae). *Journal of Medical Entomology*, v. 33, n. 4, p. 581-585, 1996.
- MARINI, M.Â.; REINERT, B.L.; BORNSCHEIN, M.R.; PINTO, J.C.; PICHORIM, M.A. Ecological correlates of ectoparasitism of Atlantic Forest birds, Brazil. *Ararajuba*, v. 4, n. 2, p. 93-102, 1996.
- MASÁN, P. Changes in infestation rate and age structure of *Dermanyssus hirundinis* and *Ornithonyssus sylviarum* (Acarina) during nidification and breeding period of penduline tit. *Journal of Medical Entomology*, v. 34, n. 6, p. 609-614, 1997.
- VANLEEUEWEN, J.A., NIELSEN, A.; WALTNER-TOEWS, D. Ecosystem health: an essential field for veterinary medicine. *Journal American Veterinary Medical Association*, v. 212, n. 1, 53-57, 1998.
- WARBURTON, N.H. Structure and Conservation of Forest Avifauna in Isolated Rainforest Remnants in Tropical Australia. In: LAURANCE W.F.; BIERREGAARD JR. R.O. (Eds.) *Tropical Forest Remnants: Ecology, Management and Conservation of Fragmented Communities*. Chicago: University of Chicago Press, 1997. p. 191-206.

Received on October 6, 2003.

Accepted for publication on December 11, 2003.