

## CORRECTION OF A MISIDENTIFICATION OF DOMESTIC PIGEON (*COLUMBA LIVIA*) “LICE” IN OMETTO STOLF *ET AL.* (2018)

Corrección de un error de identificación de “piojos” de la paloma doméstica (*Columba livia*) en Ometto Stolf *et al.* (2018)

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**RESUMEN.**- Los profesionales de la salud comúnmente identifican de manera errónea los ectoparásitos de aves causantes de alteraciones de la salud humana. Recientemente, Ometto-Stolf *et al.* (2018) documentaron un caso de prurito agudo simple en humanos, el cual atribuyeron a la mordida de piojos de paloma doméstica. Sin embargo, las imágenes de piojos proporcionadas por Ometto *et al.* (2018) corresponden a ácaros chupadores de sangre que parasitan aves, posiblemente a alguna especie del género *Ornithonyssus* o *Dermanyssus*. Aparte de esta identificación incorrecta, aquí explicamos por qué los ácaros, y no los piojos, deberían ser causantes de aquel tipo de dermatosis. Primero, los piojos parasitan hospederos específicos y los piojos de aves no muerden a humanos. Segundo, los piojos que persisten en los nidos de aves raramente los abandonan. Finalmente, los ácaros del género *Ornithonyssus* y *Dermanyssus*, los cuales parasitan específicamente a aves, a menudo se desplazan fuera de los nidos una vez que los polluelos los abandonan y eventualmente pueden morder a los humanos causándole reacciones alérgicas en la piel. Enfatizamos que los errores de identificación en las publicaciones científicas deben ser siempre corregidos, ya sea por los mismos autores o por colegas, ya que eso contribuye a la robustez y credibilidad de la ciencia.

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Ometto-Stolf *et al.* (2018) described a case of acute prurigo simplex in four persons of the same family living in an urban area of Brazil, which the authors attributed to bites by pigeon (*Columba livia*) lice (Insecta: Phthiraptera). However, it is evident that the ectoparasites described and illustrated by Ometto-Stolf *et al.* (2018) are blood-sucking mites, a completely different group of arthropods (Arachnida: Acari). Besides correcting the authors' confusion, we argue that lice are not responsible for that type of dermatoses.

Firstly, lice are among the most host-specific parasitic organisms (Johnson & Clayton 2003). Louse species have adapted to a particular host species during millions of years of shared evolution. The three human-specific species, the head louse (*Pediculus humanus capitis*), body louse (*Pediculus humanus humanus*), and the pubic louse (*Phthirus pubis*), often bite humans causing a diverse

array of health problems. However, louse species from other host species, particularly from birds, rarely bite humans. All bird-specific lice have developed particular physical and behavioral adaptations for their attachment to feathers and bird skin, not to mammal hairs or skin (Marshall 1981).

Secondly, Ometto-Stolf *et al.* (2018) provide a photograph showing the presumed lice walking over an interior wall of the affected family house. Normally, lice do not abandon their host during their entire life cycle, unless the host is in direct contact with a member of the same species. On rare occasions, lice leave the host and walk on eggs during incubation (see Thompson 1936).

Thirdly, based on careful and detailed analysis of the images included in the paper by Ometto-Stolf *et al.* (2018), we are confident that the parasites photographed and labelled as “adult pigeon lice” are not lice but blood-



**Figure 1.** An adult female of the tropical fowl mite (*Ornithonyssus bursa*). Dorsal view. Photography: scanning electron microscope Hitachi SU3500 at the laboratory of parasites and wildlife disease, Veterinary Faculty, University of Concepción.

sucking mites, presumably of the genus *Ornithonyssus* or *Dermanyssus* (Fig. 1). Species of these two genera are bird parasites (e.g. Denmark & Cromroy 2012) and often move from their nests to surrounding areas after the nestlings have abandoned the nest. These mites can bite humans (see below) causing lesions similar to those observed by Ometto-Stolf *et al.* (2018). Wambier & Wambier (2012) –cited by Ometto-Stolf *et al.* (2018)– include a good review of avian-mite dermatitis, also known as gamasoidosis or acariosis.

More specifically, the mites photographed by Ometto-Stolf *et al.* (2018) likely belong to one of the following species: the northern fowl mite (*Ornithonyssus sylviarum*, see Lucky *et al.* 2001); the tropical fowl mite (*Ornithonyssus bursa* [Fig. 1], see Denmark & Cromroy 2012); or the red mite (*Dermanyssus gallinae*; see Boyt 1937, Abdigoudarzi *et al.* 2013, Lucky *et al.* 2001). All these mite species can contact and bite humans.

Furthermore, we would like to point out that the alleged species of pigeon louse *Mallophaga columbicola*,

as mentioned by Ometto-Stolf *et al.* (2018) in their Discussion (page 287), does not exist! The taxon *Mallophaga* only refers to the ordinal or subordinal levels, while the taxon *Columbicola* is a genus of pigeon louse, as in the species *Columbicola columbae*, correctly mentioned by Ometto-Stolf *et al.* (2018).

Finally, we should point out that we submitted this note to *Anais Brasileiros de Dermatologia*, but its editor refused to publish it. The explanation for such rejection was that, according journal policies, authors of the original article must first reply to our comments. Since Ometto-Stolf *et al.* failed to do so after a period of about one year, we have decided to publish this note here. We strongly believe that errors in publications as those discussed here should always be corrected.

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