SHORT COMMUNICATION

Infestation of *Rhynchopsyllus pulex* (Siphonaptera: Tungidae) on *Molossus molossus* (Chiroptera) in Southestern Brazil

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The infestation of Rhynchopsyllus pulex *on the bat* Molossus molossus *was observed using mist-nets opened between constructions in the Primatological Center, in Guapimirim, State of Rio de Janeiro, Brazil.*

Key words : *Rhynchopsyllus pulex* - Siphonaptera - *Molossus molossus* - Brazil

Rhynchopsyllus pulex Haller, 1880 is an obligate parasite of bats, with the females attached to bats, and males being unknown for long. After another species, *R. megastigmata* have been considered conspecific with *R. pulex* by Méndez (1977); males are now known. According to Hastriter and Méndez (2000), females have been captured frequently on chiropteran hosts while males have been collected only from bat guano associated with species of *Molossus* in Colombia and Panamá. Twelve species of bats have already been reported with this interaction: *Phyllostomus hastatus* (Family Phyllostomidae), *Myotis nigricans*, *Eptesicus brasiliensis*, *Histiotus velatus* (Family Vespertilionidae), *Tadarida brasiliensis*, *M. molossus*, *M. obscurus*, *M. major*, *M. ater*, *Eumops perotis* and *Nyctinomops macrotis* (Family Molossidae). This same infestation has been reported on rodents and birds, although, probably, representing accidental reports (Tipton & Machado-Allison 1972). This flea occurs in the Neotropical Region, with only one species known from Brazil, at Pernambuco, Bahia, Minas Gerais, Rio de Janeiro, São Paulo and Paraná (Linardi & Guimarães 2000). The ingurgitated female is visible to the naked eye.

From 1998 to 1999, during a bat sampling in the Centro de Primatologia do Rio de Janeiro, Guapimirim, State of Rio de Janeiro, southeastern Brazil, this flea was observed infesting *M. molossus*. Bats were captured in this area using three mist nets opened between the houses during seven nights. All the netted bats are marked with necklaces made by tier-ups with colored cylinders for individual identification (Esbérard & Daemon 1999) and released after measurement. Ectoparasites were not removed.

A large colony of *M. nigricans* and *M. molossus* was identified, into the roof of one house. In the roof of another house, *M. nigricans*, *M. ater*, *M. molossus* and *P. hastatus* were captured. Using mist nets during seven nights (252 h/nets) 356 *M. molossus* were netted. The prevalences of infestation from April 1998 to June 1999 are presented in the Table. In the second roost the use of mist net was not possible due to the height of the roof and the sampling was restricted to manual capture, including youngs of *M. ater*.

Of the total of *M. molossus* netted, 8.14% had *R. pulex* (Fig. 1). Fleas attached preferentially on the bat's head (Fig. 2), with a single parasite observed on right forearm. A number of 65 fleas was obtained from 29 adult bats (14 males and 15 females). In male, 22 parasites were counted, with variance from 1 to 6 fleas and average of 1.57 (±1.41). None bat captured in the second roof has any flea. Forty-three fleas were observed on female bats, with variance from 1 to 9 fleas and average of 2.87 (±3.27). Higher parasitic load could be expected in females, because they appeared to be more sessile than males, but it was not founded ($t = 2.0127$, $p = 0.0637$). Males *M. molossus* usually move to another shelter after mating, while the females remain in maternities for birthing. The males, if remained in the same shelter, do not have contact with the females (Nowak 1995). Infestation of *R. pullex* on other species of bats was not observed, even on bats cohabitating with the parasitized *M. molossus*, totalizing 142 *M. nigricans*, 5 *E. brasiliensis*, 4 *P. hastatus* and 25 *M. ater*.

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Fig. 1: female *Rhynchopsyllus pulex* taken from *Molossus molossus*

Fig 2: *Rhynchopsyllus pulex* on *Molossus molossus*

TABLE

Infestation of *Molossus molossus* by *Rhynchopsyllus pulex*

	Month/year of sampling							
	4/1998	6/1998	7/1998	8/1998	9/1998	11/1998	06/1999	Total
Captured	89	121	62	31	34	10	9	356
%	25	33.9	17.4	8.7	9.5	2.8	2.5	100
Infested	3	3	6	1	33	7	6	29
%	3.4	2.5	9.7	3.2	8.8	70	66.6	8.1

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