Mem. Inst. Oswaldo Cruz, Rio de Janeiro,
Vol. 82(4): 585-586, out./dez. 1987

RESEARCH NOTE

ASPECTS OF THE ECOLOGY OF SANDFLIES AT THE SERRA DOS ÓRGÃOS NATIONAL PARK, STATE OF RIO DE JANEIRO. VI. SHELTERS AND BREEDING PLACES (DIPTERA, PSYCHODIDAE, PHLEBOTOMINAE)

GUSTAVO MARINS DE AGUIAR & MAURÍCIO LUIZ VILELA
Instituto Oswaldo Cruz, Departamento de Entomologia, Caixa Postal 926, 20001 Rio de Janeiro, RJ, Brasil

During studies performed on the ecology of the sandflies of the Serra dos Órgãos National Park we gathered some observations on their natural shelters and breeding places.

In order to determime the ecotopes used as shelters we collected material from trunks, roots and hollows of trees, burrows of wild animals, fissures on rocks, leaves collected from the forest ground and tufts of vegetation. These places were searched with flash-lights and the sandflies were aspirated with Castro catching tubes. For hollows where the interior was difficult to see we used the Damasceno trap, placed on these shelters so that one person in our team could stay inside, catching the sandflies driven away by cigarette smoke. The work was carried out during a whole year, from May 1984 through April 1985, during 82 hours.

A total of 1196 sandflies belonging to the following species were collected: *Brumptomyia cardosoi* Barretto & Coutinho, 1941; *B. guimaraesi* Coutinho & Barretto, 1941; *B. troglodytes* Lutz, 1922; *Brumptomyia* sp.; *Lutzomyia fischeri* Pinto, 1926; *L. pessoai* Coutinho & Barretto, 1940; *L. ayrozai* Barretto & Coutinho, 1940; *L. hirsuta* Mangabeira, 1942; *L. edwardsi* Mangabeira, 1941; *L. aragaoi* Costa Lima, 1932; *L. barrettoi* Mangabeira, 1942; *L. microps* Mangabeira, 1942 *L. monticola* Costa Lima, 1932 and *Lutzomyia* sp.

The distribution of these sandflies according to type of shelter is seen in the Table, where the species are listed in a decreasing order of frequency. The most numerous species was *L. barrettoi*, followed at a distance by *B. guimaraesi*. These species, as well as *B. cardosoi, L. aragaoi, B. troglodytes, Brumptomyia* sp. and *L. microps*, were only captured in armadillo burrows, where all had been previously seen by other authors. *L. hirsuta* and *L. ayrozai*, the two more frequent species of the local sandfly fauna revealed through captures on human or animal baits and light-traps (Aguiar & Soucasaux, 1984, *Mem. Inst. Oswaldo Cruz, 79* : 197-209) were not collected in relevant numbers in shelters. *L. hirsuta* was captured in rock crevices and on vegetation tufts. In the shelters,

Sandflies collected in different types of shelters, in the Serra dos Órgãos National Park, May 1984 to April 1985

Species	Tree trunks, roots and hollows		Wild animal burrow		Rock crevices		Leaves on forest soil		Tufts of vegetation		Total		
	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	Total
L. barrettoi	–	–	218	674	–	–	–	–	–	–	218	674	892
B. guimaraesi	–	–	21	108	–	–	–	–	–	–	21	108	129
B. cardosoi	–	–	–	39	–	–	–	–	–	–	–	39	39
L. aragaoi	–	–	6	25	–	–	–	–	–	–	6	25	31
L. hirsuta	–	–	–	–	3	9	–	–	8	6	11	15	26
L. ayrozai	–	–	–	–	–	–	6	18	–	–	6	18	24
B. troglodytes	–	–	–	16	–	–	–	–	–	–	–	16	16
L. fischeri	14	–	–	–	–	–	–	–	1	–	15	–	15
L. edwardsi	–	7	–	–	–	–	–	–	–	–	–	7	7
Brumptomyia sp.	–	–	5	–	–	–	–	–	–	–	5	–	5
L. monticola	1	–	2	–	–	–	–	–	1	–	4	–	4
L. pessoai	3	–	–	–	–	–	–	–	–	–	3	–	3
Lutzomyia sp.	2	–	–	–	1	–	–	–	–	–	3	–	3
L. microps	–	–	2	–	–	–	–	–	–	–	2	–	2
Total	20	7	254	862	4	9	6	18	10	6	294	902	1196
Hours	28		20		12		14		8				82

With a grant from CNPq.

Received September 3, 1987.
Accepted September 22, 1987.

the males of the majority of species, were much more numerous than the females, but the opposite ocurred with *L. fischeri*, of which only females were collected.

The breeding places of sandflies are poorly known in Brazil, because the immature stages develop in a very scattered way being difficult to find. We used three methods to locate them: a) the exam of samples with a stereoscopic microscope; b) floating in a sweetened solution according to the technique of McCombie-Young et al., 1926 (*Ind. J. Med. Res., 13* :961-1021) and c) placing samples in a porous clay container kept humid under a glass funnel and observed daily during 60 days, to search for emerged adults. From the 98 samples taken from several potential breeding places only two were positive. From the first, a portion of earth taken from an armadillo burrow, one male *L. barrettoi* ecloded 36 days after. From the second, which was a group of leaves collected from the forest soil, one *L. ayrozai* male emerged after 32 days. These breeding places coincide with the shelters of the two species.

Acknowledgements: To Dr. Leonidas M. Deane for orientation and revision of the text. Also to Rosimar Baptista Lima, Thais Soucasaux Mendes Pires and Pedro d'Almeida Schuback for technical assistance.