

## ECOLOGY OF THE SANDFLIES OF ITAGUAÍ, AN AREA OF CUTANEOUS LEISHMANIASIS IN THE STATE OF RIO DE JANEIRO. FOOD PREFERENCES (DIPTERA, PSYCHODIDAE, PHLEBOTOMINAE)

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The occurrence of human cases of cutaneous leishmaniasis in an old farm, São Sebastião, Municipality of Itaguaí, Rio de Janeiro State led us to perform there a series of studies on the ecology of the local sandflies and their role in the transmission of the disease. In this report we deal with the preference of the females for the source of blood meal.

Captures on humans being essential, we used members of our team as baits, but at the same time collected the sandflies on a dog, a donkey and a chicken. The captures were made outdoors, between 6 and 10 p.m., the baits being placed one next to the other, while one or two members of our party collected the insects. These were taken alive to the laboratory in paper cups with labels specifying the bait, place and time.

From March 1985 through February 1986, 2322 sandflies belonging to eight species were captured, all pertaining to genus *Lutzomyia* França, 1924. The most numerous were *L. intermedia* (58%); *L. migonei* (17%); *L. fischeri* (16%) and *L. longipalpis* (8%). Except for *L. schreiberi*, which was very scarce, all other species fed on man. *L. fischeri* was the most anthropophilic (67%), being closely followed by *L. intermedia* (66%) which, however, was the

most important species because of its preponderance and also by often feeding on the other local hosts of cutaneous leishmaniasis, the donkey (24%) and the dog (9%), being little attracted by the chicken (1%). *L. longipalpis*, on the contrary, preferred the chicken (76%) to humans (6%). *L. migonei* bit more frequently the donkey (44%), followed by the chicken (24%), and the dog (21%), but showed less interest in human blood (11%) (Table and Figure).

The sandflies bit man on any exposed part of the body, but on donkeys and dogs the favourite places were the genitals, specially if wounds were present. In chickens they preferred the feet and comb. Unlike the females, the male sandflies were found hopping on the baits, mostly on donkeys, always in areas covered by fur.

In captures performed at sea level and at 100 and 350 meters of altitude, *L. intermedia* was obtained only at the two first levels, and *L. longipalpis* and *L. whitmani* at the third.

We thought it is interesting to present this note in view of the fact that no similar experiments had been previously carried out in relation to the species of sandflies mentioned.

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Sandflies collected in different types of baits, in Itaguaí, State of Rio de Janeiro, March 1985 to February 1986

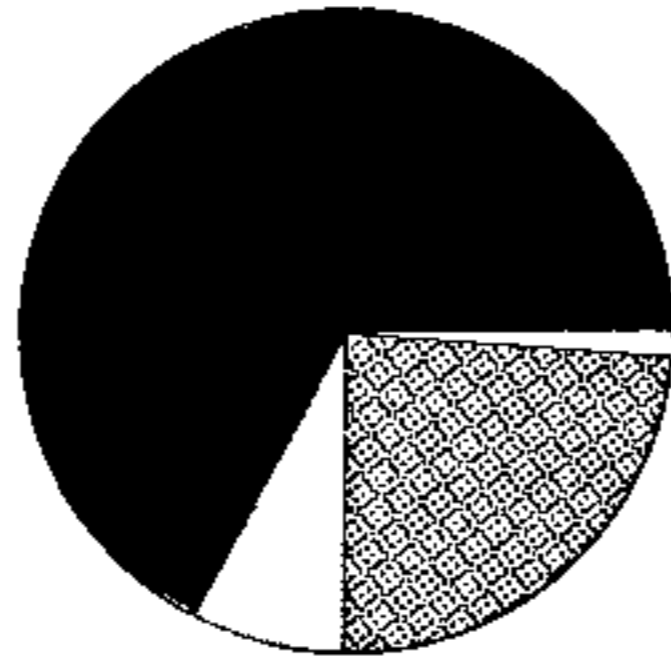
| Species               | Number |      |     |        |         | Percentage |     |        |         |
|-----------------------|--------|------|-----|--------|---------|------------|-----|--------|---------|
|                       | Total  | Man  | Dog | Donkey | Chicken | Man        | Dog | Donkey | Chicken |
| <i>L. intermedia</i>  | 1357   | 889  | 127 | 327    | 14      | 66         | 9   | 24     | 1       |
| <i>L. migonei</i>     | 399    | 44   | 84  | 174    | 97      | 11         | 21  | 44     | 24      |
| <i>L. fischeri</i>    | 368    | 246  | 26  | 38     | 58      | 67         | 7   | 10     | 16      |
| <i>L. longipalpis</i> | 181    | 11   | 19  | 14     | 137     | 6          | 10  | 8      | 76      |
| <i>L. whitmani</i>    | 12     | 8    | 3   | —      | 1       | 67         | 25  | —      | 8       |
| <i>L. pessoai</i>     | 2      | 2    | —   | —      | —       | 100        | —   | —      | —       |
| <i>L. monticola</i>   | 2      | 1    | 1   | —      | —       | 50         | 50  | —      | —       |
| <i>L. schreiberi</i>  | 1      | —    | 1   | —      | —       | —          | 100 | —      | —       |
| Total                 | 2322   | 1201 | 261 | 553    | 307     | 52         | 11  | 24     | 13      |

A total of 96 hours on each bait.

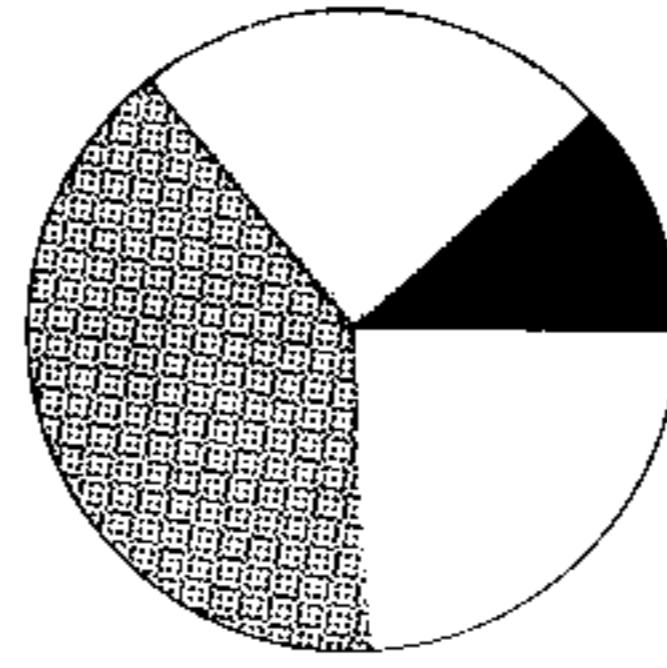
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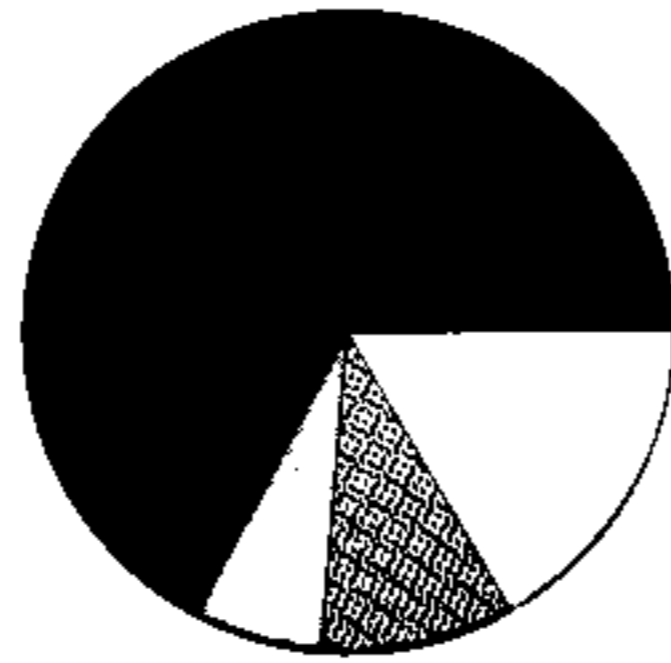
Accepted September 29, 1987.



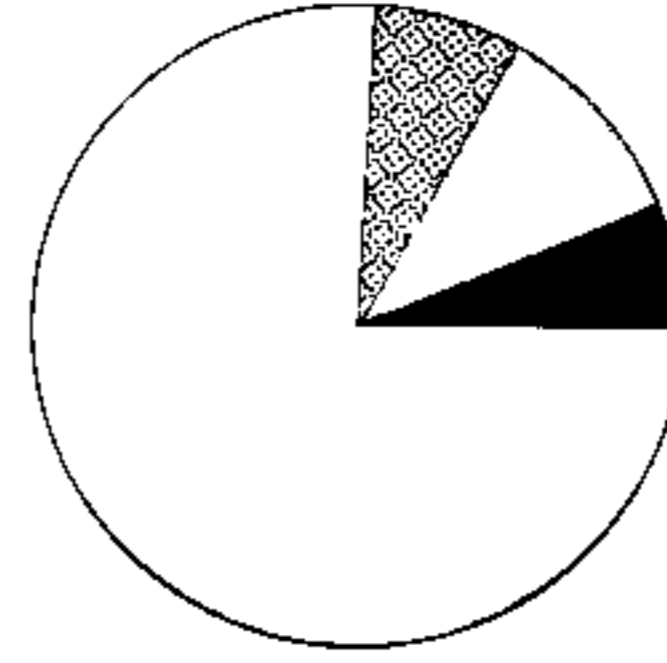
**L. intermedia**



**L. migonei**



**L. fischeri**



**L. longipalpis**

■ man    □ dog    ▨ donkey    □ chicken

Food preferences in percentages, of four species of sandflies from Itaguaí.