

FIRST RECORD OF *CUTEREBRA* SP. (DIPTERA:  
CUTEREBRIDAE) INFECTION IN *OTOTYLOMYS PHYLLOTIS*  
(RODENTIA: MURIDAE).

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Maggots of the fly genus *Cuterebra* (bot flies) are cutaneous tissue parasites of wild species of rodents and lagomorphs. The latter are their natural hosts, although other accidental or aberrant hosts as cats, dogs, deer, cattle, mules, skunks and even humans are known to harbour *Cuterebra* larvae (Sabrosky 1986). The distribution of the 72 known species is restricted to the New World; 36 have nearctic distribution, 36 neotropical and four overlap their geographic distribution (Catts 1982). Most of these species appear to be host specific to the rodent species infected or to a group of closely related species.

The genus *Cuterebra* has been reported in six genera of rodents (*Microtus*, *Neotoma*, *Peromyscus*, *Sciurus*, *Tamias* and *Thomomys*) (Catts 1982, Sabrosky 1986). The former three are murids with distribution in the Americas (Wilson & Reeder 1993). From January of 1997 through May of 1998, a population study of wild rats was carried in a dry tropical forest in the locality of Hobonil (20°00'58"N, 89°01'13"W) in the Mexican state of Yucatan (Southeast Mexico). Monthly trapping samples were carried during five days in an area of 1200 m<sup>2</sup>. Rats were live-trapped using Sherman traps.

The rats were examined for bot infection. Detection of infection was done visually and by palpation and infection signs and reports ranged from cyst location to larvae extraction. From an overall sample of 427 rats of *Heteromys gaumeri* (269 individuals/ 62.99% of overall population), *Ototylomys phyllotis* (122/28.57%), *Oryzomys melanotis* (27/6.32%), *Peromyscus yucatanicus* (7/1.64%) and *Sigmodon hispidus* (2/0.46%), 16 rats were found to be infected with larvae of *Cuterebra* sp. All the *Cuterebra* larvae or infection signs were founded in *Ototylomys phyllotis*. This is the first record of *Cuterebra* infection in the genus *Ototylomys*, the big-eared climbing rats.

Nine *Cuterebra* sp larvae were collected (one of second instar and eight of third instar). The larvae were found in cutaneous cysts close to the genitals and anus in twelve rats; close to the forelegs in two rats, and in both once. In four of the reported rats, the detection was merely done by palpation and observation of the cyst.

The incidence of infection in the population of *Ototylomys phyllotis* was 13.11%. Thirteen of the infected rats were adult males (86.67%) and three adult females (13.33%). Excepting for two rats (male and female), that had two larvae, all had only one each. From the rats where myiasis was detected for the first time, eight were re-captured without showing any re-infection signs and one was re-infected.

The first infected rat was observed in February of 1997, five during October and September, four in January of 1998, and six during February and March (Fig. 1).

Five larvae were cultured and three adult female flies emerged, two larvae were preserved in alcohol 75%. Specimens could only been identified to genus and are deposited at the Coleccion Entomologica Regional, Universidad Autonoma de Yucatan. Although the specimens were identified as *Cuterebra* according to Sabrosky (1986),

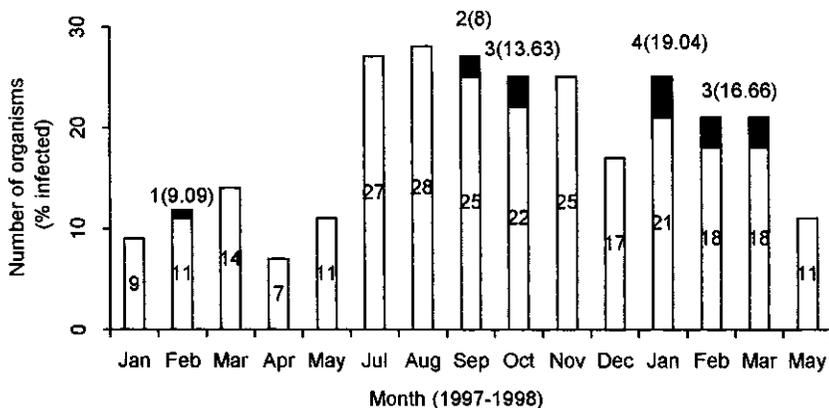


Fig. 1. Incidence of *Cuterebra* infection in a population of *Ototylomys phyllotis* at Hobonil, Yucatan, Mexico. The white area indicates the abundance of the population of the rats and the black area indicates the incidence (percent of hosts infected).

more taxonomical work is needed. The internal arrangement of *Cuterebra* stills under discussion because some authors (Sabrosky, 1986) have decided to recognize at least two genera within the genus (the Nearctic *Cuterebra* and the Neotropical *Metacuterebra*), while others have synonymized most of the genus-group names under *Cuterebra* (Chillcott, 1965; Guimarães, 1967).

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#### SUMMARY

This work is the first report of infection caused by *Cuterebra* on rodents in the genus *Ototylomys*. In a wild population of *Ototylomys phyllotis*, 16 of 122 mice were infected. Nearly 87% of infected individuals were adult males, and displayed cysts around the genital organs and anus, and on the arms. Of those animals showing first-time miasis, eight recaptured individuals did not show signs of re-infection and one individual was re-infected.

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