THE MOSQUITO VECTORS (DIPTERA: CULICIDAE) OF YELLOW FEVER IN SOUTH OF MARANHÃO STATE, BRAZIL, 1993 - 1994[1].

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Yellow Fever (YF) virus has been active from April to June, 1993 in three counties of south- eastern Maranhão State: Barra do Corda, Esperantinópolis and Mirador. The latter county was the most affected, with 62 confirmed human cases. Three localities in Mirador county have been surveyed for infected mosquitoes: Caiçarinha, Cana Brava and Araponga. Only one strain of YF virus has been isolated from *Haemagogus janthinomys* mosquitoes (real infection rate: 0.35 %) collected in Araponga. Based upon the importance of the epidemic and the fact that high densities of "capuchin" monkeys (*Cebus apella*) were noticed in the area, it was interesting to verify the hypothesis that YF would circulate again in 1994. Human YF has been diagnosticated in April, 1994 in a county (Pastos Bons) situated more or less 100 km South-East of Mirador. Thus, collecting of mosquitoes has been done both at the place "positive" in 1993 and in Pastos Bons county.

1196 (48 pools) and 1245 (55 pools) *Hg. janthinomys* have been collected in Araponga and Pastos Bons, respectively, and inoculated in new-born mice. Other potential vectors of YF were *Sabethes chloropterus* (267 or 13 pools and 73 or 3 pools from Araponga and Pastos Bons, respectively) and *Hg. leucocelaenus* (only 1 pool of 23 individuals from Araponga).

Sixteen strains have been isolated from *Hg. janthinomys* collected in Pastos Bons. The estimated real infection rate was 1.34 %, *i. e.* a much higher value than that obtained for the former year, indicating a high level transmission rate. In this context, as was also the case during Campo Grande, MS epizootics in 1992, one strain has been isolated from *Sa. chloropterus* mosquitoes (real infection rate = 1.67 %).

The relative abundance of these vectors (nr. of landings on one human bait / hour [collecting period: 10:00 - 15:00 h]) is varying according to the places and periods:

- *Hg. janthinomys* : Araponga, 1993: 299/194 = 1.5; Araponga, 1994: 1196/480 = 2.4; Pastos Bons, 1994:1245/350 = 3.5. It is noteworthy that the densities of *Hg. janthinomys* were much higher in 1994 than in 1993.

Another important factor for estimating the vectorial capacity of a mosquito population is the proportion of parous females. Preliminary results show that in Pastos Bons, 49.3 % (68/138) of the *Hg. janthinomys* females were parous. The only suitable data for comparisons are the parous rates of the populations of *Hg. janthinomys* estimated during the 1992 epizootics in Campo Grande area - MS, which were higher, varying from 57.5 to 61.8 %.

It is concluded from these data that, contrary to what occurred in Southern Mato Grosso in 1992, it was the high relative density of vectors which accounted for the high transmission rate.

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