

BIOECOLOGICAL STUDIES ON MOSQUITO VECTORS OF ARBOVIRUSES IN BRAZILIAN AMAZONIA: THE GONOTROPHIC CYCLE AND SURVIVAL*.

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The potential of a mosquito population for arboviruses' transmission is mostly related to its mean daily survival rate. This may be estimated by the mean duration of the gonotrophic cycle, used as the root exponent of the parity rate of the mosquito population. Although the duration of the gonotrophic cycle may be relatively easily determined under natural conditions by mark/release/recapture experiments, almost no data is available concerning the south american species of vectors of arboviruses. In a forested area near Belém (PA, Brazil), eight different species of mosquitoes (*Haemagogus janthinomys*, *Hg. leucocelaenus*, *Sabethes chloropterus*, *Sa. cyaneus*, *Sa. belisarioi*, *Sa. amazonicus*, *Sa. quasicyaneus* and *Sa. glaucodaemon*) were collected and engorged on human bait, powdered with fluorescent dyes (5 different colours on 5 successive days), and released each day on May, 8, 9, 12, 15 and 16, 1989. Catching sessions have been conducted daily to July, 6, 1989.

8 *Hg. janthinomys* out of the 74 marked (10,8 %) have been recaptured. The mean duration of the gonotrophic cycle, estimated by the median value, was 15 days. The "older" individual have been recaptured 19 days after its release. The second species in abundance was *Sa. chloropterus*, another vector of Yellow fever in Brazil. 12 out of 59 marked (20,3 %) have been recaptured. Although the first mosquitoes began to go back to bite on the 6th, 8th and 11th days, a peak may be distinct from 15th to 18th day. 1 mosquito have been recaptured after 44 days, showing a very long survival. 7 out of 32 (21,9%) and 7 out of 62 (11,3 %) specimens have been recaptured for *Sa. amazonicus* and *Sa. cyaneus*, respectively. The former species have furnished marked specimens between the 14th and the 39th days, suggesting both a long gonotrophic cycle and high survival rate. Individuals of the latter species have been recaptured almost evenly from the 7th day to the 24th. Only 2 out of 34 (5,8 %) *Sa. belisarioi* have been recaptured, one of them twice. *Hg. leucocelaenus* and *Sa. quasicyaneus* have furnished each only one recaptured mosquito, 21 days "old".

From these preliminary results, it is deduced that: (i) *Hg. janthinomys* has a longer gonotrophic cycle than previously inferred from laboratory studies and (ii) the *Sabethes* species may be very long-lived and probably with a more complex pattern of blood-feeding cycle.

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ARTHROPOD-BORNE VIRUS INFORMATION EXCHANGE

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