

IV, and V oocytes appeared from 90 to 138 hours after emergence (Table 13). Marked gravid females were first collected at 114 hours, and all females recovered after age 138 hours were either gravid with eggs or parous that had recently oviposited. Marked gravid females matured an average of 187 ± 25.6 stage V oocytes per female with the range from 85 to 328 oocytes per female. Unmarked gravid females captured at the same time in this experiment averaged 235 ± 20.1 stage V oocytes per female with the range from 64 to 375 stage V oocytes per female.

Upon investigating the effect of different blood sources on the ovarian development of *Cx. nigripalpus*, no clear-cut relationship was found between the volume, weight, and caloric value of the ingested blood, and the number of eggs developed and laid (Table 14, Nayar & Sauerman 1975c, 1977, Nayar unpublished). Avian blood did not promote the development of more oocytes or the oviposition of more eggs than mammalian blood on a per μl or μg basis. However, differences were observed when chicken blood and human blood were compared on a per mg basis, since *Cx. nigripalpus* developed 19% more oocytes per mg of chicken blood than per mg of human blood. In general, human blood was inferior to all the other avian and mammalian blood sources in the development of oocytes. The near absence of DL-isoleucine in human blood, when compared to its titer present in other bloods, may be responsible for the development of fewer eggs on human blood.

OVIPOSITION

Judging from the great variety of larval habitats recorded in the literature (cf. Larval Focal Distribution), the female is relatively non-selective in her choice of oviposition sites.

During a study at Tiger Hammock from August to November 1978 and May through June 1979, eggs were collected in tubs containing a hay-infusion medium fortified with brewer's yeast, which was replenished daily. In each of six experiments, 18 tubs were monitored daily over an 11-day period for each experiment for newly laid eggs. Each day, the egg rafts were collected between 7^h00^m and 10^h00^m, brought to the laboratory, set up in individual vials, and identified as first instar larvae (cf. Identification of first instar larvae). A pattern in the oviposition was observed in a typical experiment, indicating that more eggs were laid in the tubs when the relative humidity was low (<80% RH) during the early part of the night (between 20^h00^m and 24^h00^m) and fewer were laid when the relative humidity was high (>90% RH) (Fig. 10). This phenomenon was more apparent when rainfall occurred prior to sunset, since very few eggs were laid that night or the following morning before collections were made (Fig. 10). High humidity increases the flight activity of adults (Dow & Gerrish 1970, Provost 1973) and may have allowed the gravid females to disperse from the wooded areas seeking more natural breeding waters rather than ovipositing in the tubs. Such an increase in flight activity has been documented by the capture of large numbers of *Cx. nigripalpus* during or immediately following a rainy