

fied chick-bait-can traps without CO<sub>2</sub>. Females from each collection were examined for ovarian development and parity, and those with ovaries in a quiescent early stage II were characterized into three categories (Fig. 8; Nayar & Knight 1981). The first category were nulliparous females in which the follicles were small ovoid spheres containing a few coarse yolk granules surrounding the oocyte nucleus. The second category were parous females in which the follicular sheath was either sac-like or shrunken to form a small distinct dilatation which was separated from the next resting follicle by a connecting stalk. The third category were females with resorbed follicles, in which the tunica of the follicle showed signs of distention posterior to the resting follicle but with no connecting stalk separating them, and sometimes several distentions being contiguous to each other, and clearly distinguishable from two or more parous follicles. These resorbed follicles did not resemble the degenerating follicles of *Cx. nigripalpus*, which had distinct dilatation like the parous follicles and contained follicular relics. The latter resembled those observed in diapausing *Culex* species from temperate climates (Eldridge et al. 1972, Oda & Kuhlow 1976).

The simultaneous occurrence of all three types of females in the population indicated that both newly emerged and older females were present throughout the year (Fig. 9, Nayar & Knight 1981). Few newly emerged nulliparous females were collected from October through March with the exception of the December collection. Females with parous follicles were also less abundant during October and November, and again from February through June. Females with resorbed follicles were generally present when the nulliparous females were fewer in number. The presence of a large number of nulliparous females in the collections indicated the emergence of a new brood, while more parous females indicated the survival of an older brood seeking a second or even a third blood meal.

Correlating the abundance of these three types of females with the mean temperature and total rainfall during the 2 weeks prior to each collection revealed that females with resorbed follicles were more abundant during the cool and/or dry months of October to March and less abundant during the warm, wet months of April through August (Fig. 9); with corresponding larger number of nulliparous females collected in bait cans when rainfall increased during the previous month (Nayar & Knight 1981).

In the laboratory, when newly-emerged *Cx. nigripalpus* were maintained on 10% sucrose at temperatures of 18°C, 24°C, and 30°C, ovarian development progressed at varying rates (Nayar & Knight 1981). Ovarian development was retarded at 18°C; the follicles in most of the females were still in stages N<sub>0</sub>-N<sub>120</sub> hours after emergence and a few had started to degenerate. By 144 hours, these ovarian follicles had progressed to stage II and between 16.7% and 36.7% of the females had some resorbed follicles. Follicular development proceeded at an accelerated rate when the females were maintained at 24°C and 30°C, reaching stage II at 72 hours and 24 hours, respectively. At the same time, a large percentage of the ovaries contained resorbed follicles and by 168 hours