

high mortality occurred, since some birds were visually observed killing and occasionally eating the mosquitoes. Five of the bird species which actively seek out their food in nature, had a highly developed anti-mosquito behavior, whereas the two species that showed little anti-mosquito behavior also wait for their food in a motionless stance. Neither the color, size, nor weight of the host affected the feeding success of *Cx. nigripalpus* (Edman & Kale 1971). Olfactory attractiveness did not seem to be a factor either, since they fed equally well on different species of restrained birds. Age may play a role, however, since nestling birds can readily serve as hosts (Kale et al. 1972).

Multiple blood-feeding. — Multiple blood-feeding, defined as blood meal comprised of two or more feedings, the last being taken before the protein from the first meal is completely digested, has been reported in several species of mosquitoes in the field (Boreham & Garrett-Jones 1973, Tempelis 1975). However, multiple blood-feeding in the field has not been reported in *Cx. nigripalpus*. In the laboratory, Edman et al. (1975) observed that virgin F₁ *Cx. nigripalpus* females that were less than half full of blood, usually attempted to refeed when a second blood meal was offered to them within 6 hours, but few refeed 12 or 24 hours later. When they were offered the second blood meal after 6 hours, the proportion that refeed declined as the volume of the interrupted meal increased. This decline appeared to be related to the initiation of egg development. Those females that were three-quarters full of blood usually failed to refeed.

In a mark-release-recapture experiment at Tiger Hammock during 1976, ³²P-marked, sugar-fed *Cx. nigripalpus* females confined to holding cages were allowed to feed ad lib. on restrained chicks prior to being released into the field. Approximately 60% fed, but most of them only partially. During the first week of collection, 6.2%, 15.4%, 23.9%, and 10.8% of females that were recovered seeking blood at 78, 102, 126, and 150 hours, respectively, comprised a total of 56.3%. Between 20% and 40% of those recovered during these four days were partially blood-fed and possibly were attempting to complete the blood meal. This, therefore, might be considered as a case of multiple blood-feeding by *Cx. nigripalpus* in the field before the completion of the first gonotrophic cycle even though the first blood-feeding occurred before release. The second peak of blood-seeking occurred between 222 and 270 hours (6 to 8 days into the experiment) after release, with 18.7% of the total females recovered. In other mark-release experiments, only 0.6% to 0.9% of the blood-seeking females had a small amount of blood in their midguts at the time of their capture.

OVARIAN DEVELOPMENT

There is no indication that *Cx. nigripalpus* undergoes diapause during the winter months in central and south Florida when the population is at its lowest level, since blood-seeking females are easily collected in bait can traps during this time. From October 1976 through August 1977, blood-seeking *Cx. nigripalpus* were collected in Tiger Hammock at 3- to 5-week intervals using modi-