

The sampling techniques may be divided into two major classes: those that assess resting adults during their inactive periods, and those that require the mosquitoes to be in voluntary flight to effect its capture.

Resting adults are rarely affected by meteorological conditions, whereas those in flight are affected not only by the current meteorological conditions but also by their physiological need for sugar, blood, and oviposition sites. Therefore, such influences can distort population estimates. The trapping methods used to collect mosquitoes in flight may be either non-attractant or attractant. Non-attractant traps presumably do not divert the mosquito from its normal flight path prior to capture. However, due to either shape or motion, these traps may unintentionally affect the mosquitoes' flight. Attractant traps rely upon a positive response from the mosquito to an attractant source, although the percentage of the flying population that responds is unknown.

Different sampling methods have been successfully used to collect resting and flying *Cx. nigripalpus*.

Resting mosquitoes

Vehicle mounted suction traps and portable battery-powered aspirators collected adults in different physiological stages from the leaf litter (Bidlingmayer & Hem 1973, Nayar 1978), including blood-engorged females (Bidlingmayer & Edman 1967).

Flying mosquitoes

- a) The non-attractant traps used for sampling *Cx. nigripalpus* were suction traps and truck traps (Bidlingmayer 1967). A comparison of the two types of traps shows that collections varied depending on meteorological conditions, such as temperature, humidity, wind velocity, and moonlight phases (cf. Flight Activity).
- b) The attractant traps used for sampling *Cx. nigripalpus* employed either a vertebrate host, or CO₂ (dry-ice), or both a vertebrate host and CO₂, or light as attractants. This study used three common attractant traps:
 - i) New Jersey traps, which are routinely used to collect night flying mosquitoes including *Cx. nigripalpus* (Bidlingmayer 1971, 1974).
 - ii) CDC light traps with or without dry-ice have been used extensively to collect *Cx. nigripalpus* in Florida (Boike 1963, Dow 1971, Provost 1969).
 - iii) Lard-can bait traps with or without additional attractants such as dry-ice, a bird, a bird and dry-ice, and other traps such as Lumsden, Trinidad, and Magoon, which are successfully used for collecting blood-seeking *Cx. nigripalpus* (Aitken et al. 1968, Nayar et al. 1980, Provost 1955, Vickery et al. 1966).
- c) Human bait was also used for collecting mosquitoes (Provost 1955).

In collecting *Cx. nigripalpus*, a comparison was made between lard-can traps with CO₂ as an attractant, and CDC light traps with and without CO₂ and light