

## INTRODUCTION

*Culex nigripalpus* Theobald belongs to the subgenus (*Culex*) of the genus *Culex*, the tribe Culicini of the subfamily Culicinae in the family Culicidae, and the dipteran suborder Nematocera. Formerly believed to be of little medical or veterinary importance, it was proven to be the primary vector of St. Louis encephalitis (SLE) during the 1961 and 1962 epidemic in the Tampa Bay area (Chamberlain et al. 1964, Dow et al. 1964, Lewis et al. 1964 and Sudia & Chamberlain 1964). This species is still considered the primary vector of SLE virus in Florida and has also been implicated in the transmission of veterinary and wildlife diseases — dog heartworm, *Dirofilaria immitis* (Nayar & Sauerman 1975d), turkey malaria, *Plasmodium hermani* (Forrester et al. 1980, Young et al. 1977), and Avian poxvirus (Akey et al. 1981). During the past 2 decades, extensive laboratory and field studies on the bionomics and physiology of *Cx. nigripalpus* have been conducted at the Florida Medical Entomology Laboratory (FMEL), Vero Beach, Florida, including an in-depth physio-ecological study conducted from 1975-1979 at the Tiger Hammock study area near FMEL (Nayar et al. 1980). In an early report, Provost (1963) suggested that the biology of *Cx. nigripalpus* should not be expected to differ markedly from that of any other closely related *Culex* species. However, the more we have studied this species, both in the laboratory and in the field, the more we have realized its differences from the other mosquitoes belonging to the genus *Culex*. Provost (1969), in an article entitled “The Natural History of *Culex nigripalpus*,” stated that an unusual biological trait of the female is that an increase in the relative humidity produced an increase in her general flight behavior and all associated physiological activities. Since *Cx. nigripalpus* has been successfully colonized in the laboratory (Haeger & O’Meara 1970), it has become the subject of much more research, and it now seems that there is a need to review previous research on this species. Therefore, this report is based on data and observations accumulated by my group and other staff members of FMEL over the last two decades of work with this species and other species of Florida mosquitoes, as well as related work reported by others elsewhere. It is the purpose of this report to provide an organized source of information on this mosquito for use by both Public Health Medical Entomologists and Mosquito Control personnel.