

ABSTRACT

A one-year longitudinal entomological study was carried out at Kafr Fazara village, Sinnuris District, Faiyoum Governorate from January to December 1996. The results revealed that three species of anophelines were found. *A. sergenti* was the most prevalent species followed by *A. multicolor* and the least prevalent one was *A. pharoensis*. The influence of climatic conditions on anopheline abundance was also studied. The mean monthly temperature has a significant effect on larvae abundance, while no significant correlation was found concerning relative humidity or wind speed for both larvae and adult anophelines. The transmission season of *P. falciparum* in Faiyoum Governorate extended to more than eight months a year which could explain the persistence of malaria up there. The bionomics of the recorded vectors were discussed.

INTRODUCTION

Malaria as a disease has been identified in Egypt since ancient times (Madwar, 1936). Nowadays, it is localized as residual foci in two districts in Faiyoum Governorate, namely Sinnuris and Faiyoum as declared by Harb (1995).

Kenawy (1990) reported eleven indigenous anopheline mosquitoes in Egypt. Sinai is the richest area in the number of anopheline species present which comprises eight species. Faiyoum Governorate is the second in importance having four species; *A. pharoensis* Theobald, *A. sergenti* Theobald, *A. multicolor* Cambouliu and *A. tenebrosus (= costani)* Donitz. The first three species are the common mosquitoes in Faiyoum where *P. vivax* and *P. falciparum* are endemic. *A. pharoensis* and *A. sergenti* are proven malaria vectors but *A. multicolor* has never been found infected in nature (El Said et al., 1986).

As a contribution to knowledge in the field of malaria control, the present study was planned to investigate the bionomics of the anophelines in the endemic malarious area in Egypt under natural field conditions. The ultimate goal is to help in formulating an improved comprehensive malaria control program.

MATERIAL AND METHODS

Study site:

The work of the present study has been implemented in Kafr Fazara village, Sinnuris District, Faiyoum Governorate, since most of the reported malaria cases in that district are either originating from that village or from the surrounding areas. It contains 856 houses, most of them are located in the vicinity of water streams with a population around 7000 inhabitants mostly farmers. Due to the high level of subsoil water, many pools and swamps are formed and scattered around the houses.

Entomological survey: Monthly longitudinal larval and adult mosquito surveys were carried out all year round from January to December 1996.

Larval survey: Permanent water sources were identified and mapped. Some of these water sources have been selected by stratified random sampling method, in order to represent the three sectors of the village i.e. the central area, halfway to the periphery and at the periphery of the village. Sites having high larval density were chosen as fixed catching stations. In addition, spot-check stations were randomly selected monthly in 0.5-1.0 Km radius from the study village to gain additional information on vector distribution. Two methods for the collection of larvae were used according to WHO (1975) i.e. dipping and netting according to the type and size of the breeding places investigated. The collected larvae were identified according to the specified keys given by Boyd (1949), De Meillon (1951) and Gillies & De Meillon (1968).