020 A

BREEDING CHARACTERISTICS OF ANOPHELINES IN KATARAGAMA: A TYPICAL MALARIA ENDEMIC AREA IN SRI LANKA

A study on anopheline breeding in Kataragama, a typical malaria endemic area in Sri Lanka was carried out during a period of 17 months from August 2000 to December 2001. Weekly larval surveys were done to characterize the breeding habitats of anophelines and to study their seasonal abundance with respect to the rainfall. Out of a total number of 20,923 immature anopheline (larvae & pupae) collected, An. varuna contributed the maximum (37%) An. culicifacies (27%), An. subpictus (17%) An. vagus (9%), An. tessellatus (0.5%) and An. annularis (0.1%). Remaining anopheline

fauna i.e. An. hyrcanus group, An. barbirostris, An. pallidus and An. jamseii contributed 5%, 2%, 1% and 0.5% respectively. Sixty three percent of An. varuna was collected from river margins, 15% from river bed pools and 14% from streams & stream bed pools indicating that they were the main breeding sites. An. culicifacies the known, proven principle malaria vector in the country was found extensively breeding in river margins (26%,) river bed pools (26%) and in rock pools (23%). During dry period, their prevalence was high in river bed pools (38%), river margins (36%) and rock pools (22%) and during wet season they preferred to breed in rock pools (25%), mud pools (22%) and streams (20%). An. subpictus and An. vagus preferred to breed in temporary mud pools (50% & 47% respectively) and in rock pools (8% & 15% respectively) which are mainly found during wet season and also in river bed pools (11% & 8% respectively) during dry period. In this study we found that small water collections formed in paddy fields during wet seasons provided suitable breeding ground for An. hyrcanus group. Stream bed pools that occurred during dry period in this locality was the main breeding habitat for An barbirostris. Three species of secondary vectors of human malaria in Sri Lanka viz.; An. annularis, An. jamseii, and An. pallidus were found to breed in small numbers and they were mainly recorded from irrigation tank margins during wet season.

This study shows that river and stream system and also temporary water collections in this locality are important for breeding of anopheline vectors of malaria and that rainfall influence their seasonal prevalence. Such information would be important for the implementation of suitable vector control measures at appropriate time.