S Y N O P S I S

Breeding habits of three species of blowflies, viz., Lucilia illustris (Meigen, 1826), Chrysomya megacephala (Fabricius, 1794) and Hemipyrellia ligurriens (Wiedemann, 1830) were experimentally studied using a number of living vertebrates (Clarius batrachus, Bufo melanostictus, Rana tigrina, Hemidactylus flaviviridis, Columba livia, Suncus murinus) and invertebrates (Pheretima posthuma, Periplaneta americana, Achatina fulica) under normal conditions of room temperature and relative humidity. It was observed that the flies which are saprophagous in nature and which normally oviposit in carcasses may turn parasitic in the absence of dead bodies, ultimately killing their experimental hosts. Flies fed on living tissue showed shorter developmental period than those fed on dead animals and the period of development was shortest when the host was a living mammal. It was also found that the larvae in all cases showed preference to brain tissue than to other soft tissues of the host's body.

In the course of the survey of the study area it was seen that the myiasis in animals and poultry was widely prevalent involving Chrysomya bezziana, C. megacephala, Calliphora erythrocephala, Sarcophaga misera, S. ruficornis, and S. macroauriculata, and that C. bezziana was the most dangerous

producer of myiasis, while *S. macroauriculata* was involved only in occasional cases of "intestinal myiasis".

Studies on the various aspects of the occurrence of these flies revealed that the population of flies in general showed a bimodal peak in May and September. *Chrysomya megacephala* was the most dominant fly amongst the species investigated followed by *Musca domestica* and *Sarcophaga misera*. The other flies which appeared noxious in the study region were *Sarcophaga ruficornis* and *S. peregrina*.

Incidence of flies in relation to the density of human settlements when tested showed *Chrysomya megacephala*, *Musca domestica* and *M. sorbens* as the most important synanthropic flies while *M. ventrosa*, *Sarcophaga orientaloides*, *S. brevicornis*, *S. calcifera* and *Anthomyia illocata* as highly asynanthropic in the study region. In uninhabited shady forest the males of *Chrysomya megacephala*, *Sarcophaga orientaloides* and *Anthomyia illocata* outnumbered the females of the corresponding species.

Statistical analysis of the data on Seasonal occurrence and Synanthropy of flies revealed that (1) the sex-ratio varied from season to season in *Chrysomya megacephala*, *C. rufifacies*, *Sarcophaga ruficornis* and *S. brevicornis*; (2) the sex-ratio of flies varied from family to family as in Muscidae,

Calliphoridae and Sarcophagidae; (3) the sex-ratio also varied amongst the three dominant species of the region, *viz*, *C. megacephala*, *M. domestica* and *S. misera*; (4) the sex-ratio varied from species to species within families - Muscidae and Calliphoridae and (5) the proportion of males in *C. megacephala* was higher in forest biotope.