

TEMPORAL AND SPATIAL DISTRIBUTION, SEX RATIO AND FECUNDITY OF THE EYE FLY *SIPHUNCULINA FUNICOLA* (DIPTERA: CHLOROPIDAE) AT AGGREGATION SITES DURING DIURNAL AND NOCTURNAL PERIODS

Uruyakorn Chansang¹, Mir S Mulla² and Pathom Sawanpanyalert³

¹Taxonomy and Museum Reference Section, National Institute of Health, Department of Medical Sciences, Ministry of Public Health, Nonthaburi, Thailand; ²Department of Entomology, University of California, Riverside, California, USA; ³National Institute of Health, Department of Medical Sciences, Ministry of Public Health, Nonthaburi, Thailand

Abstract. The present study was aimed to determine the distribution and abundance of the eye fly *Siphunculina funicola* (de Meijere) in Thailand and to investigate the sex ratio and fecundity of eye flies from aggregation sites collected during the day-time and night-time. The flies were collected from several provinces in central Thailand and Phuket in the south. Observations were regarding the relative abundance of eye flies in different regions and seasons. During 2007 and 2008, large populations of eye flies were noted at resting sites in central Thailand with both day and night collections. Males flies outnumbered female flies. Smaller populations were seen in Chumphon and Surat Thani Provinces with increasing numbers in Krabi and Phuket Provinces in the south. The gravid rate was nil in the few females collected in Chomphon and Surat Thani but were 3.9% and 36.3% in Krabi and Phuket, respectively. The gravid rates were higher during the dry season or during dry spells than during wet and rainy periods, suggesting egg retention by the females when oviposition sites (presumably soil) were dry. Numerous day and night collections were made in Chon Buri Province. In most collections males predominated but there was no differences in the numbers of flies collected during the two time periods. There was a slightly greater percentage of females (still lower than males) during the night collections. During the dry and hot season, due to lack of optimum oviposition sites because of dryness, the eggs were retained in the females. A series of day time collections at the end of April 2008 and in February-March 2009 had higher numbers of gravid females. Day time collections in May 2008 (start of the rainy season) showed a moderate number of gravid females, but the gravid rates were low during the rainy season, indicating higher oviposition activity by females.

Keywords: *Siphunculina funicola*, aggregation, sex ratio, fecundity, Thailand

Correspondence: Dr Uruyakorn Chansang,
National Institute of Health, Department
Medical Sciences, Ministry of Public Health,
Nonthaburi 11000, Thailand.

Tel: 66 (0) 2951 0000 ext 99243; Fax: 66 (0) 2591
5449

E-mail: uruyakorn.c@dmsc.mail.go.th