

Mosquito Fauna of Thailand

Principal Investigators:

Douglas J. Gould, Ph.D.
Bruce A. Harrison, CPT, MSC¹
Y.M. Huang, Ph.D.¹
E.L. Peyton¹
Rampa Rattanakul
John F. Reinert, MAJ, MSC¹
Sunthorn Sirivanakarn¹
R.N. Wilkinson, CPT, MSC

OBJECTIVE: To collect, identify, catalogue and redescribe the mosquito species of Thailand. Information is also being gathered on the distribution, larval habitats and other aspects of the bionomics of various species. The eventual goal is the production of monographs on the mosquitoes of the area, together with keys, handbooks and other identification aids, for use of workers in public health and associated fields.

DESCRIPTION: Mosquitoes are collected from many areas of Thailand in connection with various studies on malaria and other arthropod-borne diseases. Additional collections of a specialized nature are made to obtain a correlated series of larvae, pupae and adults for illustration and taxonomic studies. The majority of this material is shipped to the Smithsonian Institution for study by specialists in the Southeast Asia Mosquito Project (SEAMP).

PROGRESS: During this year 887 collections of mosquitoes were made in Lampang, Chiangmai and Kanchanaburi provinces. These collections resulted in 7,300 pinned adults, 6,190 slide mounts of larvae, larval and pupal skins and 20 slide mounts of terminalia. Progeny rearings of nine *Aedes (Finlaya) niveus* group mosquitoes from filariasis study sites in Kanchanaburi province yielded a total of 190 pinned adults, 182 slide mounts of larvae, larval and pupal skins.

Culex: An attempt to collect all species of the *Culex (Culex) vishnui* subgroup of Thailand is nearing completion. *Culex barraudi* and *Culex whitei*, rare species of this group, were collected from seepage pools, ground pools, wells and paddy fields in Chiangmai and Lampang provinces. Collections of all stages of *Culex alienus*, *C. annulus*, *C. perplexus*, *C. pseudovishnui* and *C. tritaeniorhynchus* were obtained during the previous period.

Aedes: Work on the important *niveus* complex of species in *Aedes (Finlaya)* has been concentrated mainly at Sangkhlaburi in Kanchanaburi province. *Aedes niveoides* seemed to be one of the most abundant species in this area. Another three unidentified species were obtained from bamboo cup collections.

Ten species of *Aedes (Stegomyia)* were collected during filariasis studies in Sangkhlaburi district. The immature stages of *A. albopictus* have been collected in association with those of *A. pseudalbopictus*.

Heizmannia: Approximately nine species of this genus were collected at Sangkhlaburi. *H. reidi*, *H. mattinglyi*, *H. covelli* females and an unidentified male were collected and reared from immature stages. *Heizmannia mattinglyi* which is known only from the adult female was collected in association with *H. covelli*. Associated larval and pupal skins of both these species are indistinguishable, but the male terminalia are typical of *H. covelli*.

¹ SEAMP, Smithsonian Institution, Washington, D.C.