

## Survey of Rickettsial Diseases in Thailand

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**OBJECTIVE:** To determine the distribution of rickettsial diseases in Thailand; identify arthropod vectors and mammal reservoirs and alternate hosts, and serve as required as consultative laboratory, and to determine the types and frequency of rickettsial infections of Thai soldiers serving in Vietnam.

**DESCRIPTION:** Search is being continued for evidence of infection of man and other animals by rickettsiae of scrub typhus, murine typhus, Q-fever and the spotted fever group in Thailand. Methods used are small animal trapping; collection, identification and pooling of their ectoparasites; inoculation of tissue specimens and ectoparasite pools in white mice or guinea pigs; and serologic testing of human and animal sera.

A new project was initiated this period to determine the frequency of rickettsial (and other) infections occurring in Royal Thai Army troops serving a one year tour in Vietnam. Blood is collected just before departing and on the day of return from Vietnam. Each soldier also fills out a questionnaire requesting information on past disease history as well as history of illness while in Vietnam.

**PROGRESS:** A field trip was made to Mae Sariang district, Mae Hongson province, in April 1969. Fifty (50) rodents were trapped—9 Rattus rattus from which 25 fleas and 27 mites were collected, 40 R. exulans infested with 51 fleas, and one Menetes berdmorei. The 8 pools of exulans and the berdmorei were negative while 1 of 2 rattus pools was positive for Rickettsia tsutsugamushi. The 8 pools of fleas (Xenopsylla cheopis) were negative for rickettsial agents. The human serologic data from Mae Sariang collected in June 1969 are reported elsewhere in this volume.

In September 1969 a field trip was made to Kaeng Koi district, Saraburi province. From the 15 R. rattus trapped 1,530 chiggers, 73 mites and 34 fleas were collected. Other animals trapped were 5 R. exulans, 1 M. berdmorei and 1 Bandicota indica. The 6 pools made from these animals were negative for rickettsiae. Trips to Phuket and Saton, on the Southern Thai peninsula, were made during November 1969 searching for the beach chigger, Leptothrombidium arenicola, using the black plate technique and animal trapping. None of these chiggers were recovered. Two strains of R. tsutsugamushi were isolated from R. rattus trapped at Phuket.

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Over 1,000 Thai soldiers were bled before leaving for Vietnam and 465 second specimens were so far collected on returnees. Complement fixation tests showed positive ( $\geq 4$ -fold) titer rises in 2 to Q-fever and in 6 to murine typhus antigens. Immunofluorescent testing for scrub typhus, as well as analysis of the questionnaires, are pending.