

Reservoirs of Rabies in Thailand

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PART I. Survey of Wild Rodents for Rabies Virus Infection.

OBJECTIVE: To determine the prevalence of rabies virus infection in wild rodents in the Cholburi-Rayong area. This area was selected because: 1) there was a high incidence of canine rabies, and 2) a high frequency of rabies virus infection was reported in bandicoots (*Bandicota indica*) in this area in 1966 (Smith, P. C. et al, *Nature* 217:954, 1968).

DESCRIPTION: A total of 704 wild rodents, 520 of which were bandicoots, were captured in the Cholburi-Rayong area during the period Sep 72 through Dec 72. The brains were removed, frozen, and stored for later examination for rabies virus using the fluorescent antibody technique.

PROGRESS: To date, 200 rodent brains have been examined using the fluorescent antibody technique and mouse inoculation and all were found to be negative for rabies. The remaining rodent brains will be examined for rabies virus infections during calendar year 1973.

SUMMARY: In a search for rabies virus infection among the wild rodents of the Cholburi-Rayong area, the results thus far have been negative.

PART II. Ancillary Studies in Wild Rodents.

OBJECTIVE: To study naturally occurring diseases in a selected group of captured wild rodents.

DESCRIPTION AND PROGRESS: Wild rodents captured in the rabies survey described in Part I were examined at necropsy, and each animal was examined for enteric and blood parasites. The results of the parasitologic examinations are reported elsewhere in this volume. Bacteriologic examinations of lung, liver, kidney, nasopharyngeal swabs, and feces were performed on 167 animals. In one *Rattus rattus*, a non-agglutinating *Vibrio* sp. was isolated. No other significant bacterial pathogens were isolated. Visceral organs from all animals were preserved in 10% neutral buffered formalin, and histopathologic studies are in progress.

PART III. Survey of Dogs for Rabies Virus Infection.

OBJECTIVE: To determine the frequency of rabies virus infections among asymptomatic stray dogs in selected areas of Thailand.

DESCRIPTION: A total of 385 canine brain specimens were obtained from the Bangkok Municipal Health Department dog pound and from cooperating U.S. Air Force Installations in Thailand. The U.S. Air Force specimens were obtained in collections of stray dogs on the bases. None of these dogs were yet manifesting clinical signs suggestive of rabies at the time of sacrifice. Each specimen was examined by the fluorescent antibody method. Positive cases were confirmed by mouse inoculation.

PROGRESS: The results of the fluorescent antibody examinations are shown in Table 1. The overall infection rate of 3.4% is within the 2–6% range reported in previous surveys during the past 5 years.

SUMMARY: The results of these surveys indicate that rabies continues to be a significant public health problem among the stray dogs in Thailand.

Table 1.
Isolation of Rabies Virus from Stray Dogs in Thailand.

| Source | No. Specimens Examined | No. of Rabiesvirus Isolations | Percent |
|--------------|------------------------|-------------------------------|-------------------|
| Korat | 89 | 4 | 4.7 |
| Udorn | 72 | 2 | 2.8 |
| Ubon | 50 | 0 | 0 |
| Nakorn Sawan | 38 | 1 | 2.6 |
| Nakorn Panom | 36 | 2 | 5.6 |
| Bangkok | <u>100</u> | <u>4</u> | <u>4.0</u> |
| Combined | <u><u>385</u></u> | <u><u>13</u></u> | <u><u>3.4</u></u> |