

## STUDY REPORTS

### 2. Title: The prevalence of sylvatic rabies in Thailand.

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Objective: The objective of this study is to determine the prevalence of sylvatic rabies in a number of potential reservoir hosts.

Description: Rodents, bats and other small mammals were randomly trapped and speciated by a field team from the Department of Parasitology, SMRL. The heads, frozen in dry ice, were shipped to the laboratory. Fluorescent antibody tests were conducted on the brains and positive results were confirmed by intracranial inoculation of weanling white mice. Dog heads were picked up at the Stray Dog Apprehension Center in Bangkok, and their brains and salivary glands examined for evidence of rabies virus by the previously described method.

Progress: The results of surveys are given in table I. Attempts are being made to determine if the rodents involved in the survey are harboring inapparent infections or if they exhibit classical symptoms. Ten immature Bandicoot rats were inoculated intramuscularly in the quadriceps region and subcutaneously in the neck region with 0.3 ml. per site of a 20% mouse brain suspension. The suspension represented a composite of all the bandicoot isolates. Pertinent data from this experiment is shown in table II.

Seventy-nine dog-faced fruit bats, *Cynopterus brachyotis*, were trapped in Kanchanaburi, Thailand. These were examined by the fluorescent antibody technique and two were shown to be positive for rabies. The results were confirmed by mouse inoculation and serum neutralization. The isolate had the peculiar properties of a long incubation period (18 days) and unusual clinical symptoms. The clinical syndrome was characterized by a creeping paralysis of 4-5 days duration. The study is continuing in other areas and in different species.

A survey of the Bangkok stray dog population was begun in an attempt to confirm previous findings. Progress so far in the examination of 50 specimen taken from the municipal impounding facilities has revealed 1 active case of rabies.

Pilot studies on therapeutic regimen of infected mice and follow-up of definite exposures in Thai nationals are planned in conjunction with the departments of Neuropsychiatry and Epidemiology.

Summary: Rodents, bats, and stray dogs in Thailand have been shown to be infected with rabies. These animal populations are harboring active infections and must be considered as reservoir host in any eradication campaign to be undertaken by the government. The possibility of rodents harboring inapparent infections cannot be eliminated. The surveys are continuing.

Table I

Rodent and Small Mammal Survey for Prevalence of Rabies

Species	# Examined	# Positive	% Positive
<u>B.*bengalensis</u>	375	7	1.87
<u>R.*norwegicus</u>	192	9	4.69
<u>R. berdmorei</u>	2	0	0.0
<u>R. exulans</u>	236	6	2.54
<u>R. rajah</u>	16	1	6.25
<u>R. rattus</u>	58	2	3.45
<u>Mongoose</u>	2	0	0.0
<u>S.*murinus</u>	30	2	6.67
<u>B. indicus</u>	126	10	7.94
<u>C. brachyotis**</u>	79	2	2.5
Totals	1,037	37	3.53

\* R.-Bandicoota, R.-Rattus, S.-Suncus (Insectivore-common househrew)

\*\* Cynopterus Brachyotis (Dog-faced fruit bat).

Table II

Rabies in the Immature Bandicoot Rat

Rat #	Symptoms	Death/Days P.I.	Duration of Illness/Days	FAT Results	MI Results
1	Lethargy, Paralysis	14	2	Positive	Positive
2	Lethargy, Paralysis	16	5	Positive	Positive
3	None noted	19	0	Positive	Positive
4	Lethargy, Paralysis	21	2	Positive	Positive
5	Ruffled hair, Lethargy, Paralysis	33	3	Positive	Positive
6	None noted	(79)*	0*	Positive	Positive
7	None noted	(113)*	0*	Negative	Negative
8	None noted	—	—	—	—
9	None noted	—	—	—	—
10	None noted	—	—	—	—

\* Animal sacrificed.