

TABLE 2.—Location of laboratories with anopheline colonies—(continued)

Symbol	Laboratory
SDL	Shell Development Laboratory, Modesto, California
SNEM-G	Servicio Nacional de Erradicacion de la Malaria, "A Avenida 0-61, Zona 10, Guatemala, Guatemala
SNEM-P	Servicio Nacional de Eradicacion de la Malaria, Apartado 3460, Panama, Panama
STI	Swiss Tropical Institute, Socinstrasse 57, Basle, Switzerland
TPRI	Tropical Pesticides Research Institute, P.O. Box 3024, Arusha, Tanganyika
TVA	Tennessee Valley Authority, Division of Health and Safety, Wilson Dam, Alabama
UIZ	University of Illinois, Department of Zoology, Urbana, Illinois
USDA-G	USDA, Agricultural Research Service, 1600 SW 23rd Dr., Gainesville, Florida
WARC	Woodstock Agricultural Research Center—Shell Research Ltd., Sitting Bourne, Kent, England
WHO-K	World Health Organization, Kihiki, Kenya
WRAIR	Walter Reed Army Institute of Research, Walter Reed Army Medical Center, Washington, D. C. 20012

NOTES ON THE FEEDING HABITS OF *Aedes sollicitans* IN THE CHINCOTEAGUE-ASSATEAGUE ISLAND AREA OF VIRGINIA

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During 1962, as part of a study of the ecology of equine encephalitis in the Assateague-Chincoteague Island area of Virginia, 93,874 mosquitoes were collected for virus isolation studies. Approximately 85 percent of the mosquitoes in these collections were *Aedes sollicitans* (Walker). As part of a study of the vector potential of this species, 243 freshly engorged *A. sollicitans*, collected from a variety of sites, were tested by means of the precipitin test to determine the sources of their blood meals.

The mosquitoes covered in this report were collected from light and CO₂ traps, by sweeping in salt marshes and by as-

piration from personnel wearing heavy clothing. These collections were made several times weekly between May and October. The gut contents of the engorged mosquitoes were expressed onto filter paper and each smear labeled as to species, date, location and method of collection. Several smears were made on each paper, and when full, the filter papers were stored in petri dishes and placed in a petri dish can until the end of the collecting season. A supply of silica gel was placed in the can in order to keep the smears dry.

Antisera against human, horse, deer, rodent (Norway rat) raccoon and bird (chicken) sera were prepared by the alum-precipitation method of Weitz (1952). Titers of the various antisera ranged from 8,000 to 512,000 when tested against

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homologous sera. The anti-deer serum reacted with both cow and deer bloods. For extraction, each smear was placed in a Wasserman tube with 1 ml. of physiological saline, and allowed to extract overnight at 4° C. Each day 60-80 smears were tested. With each test, 7 control smears, consisting of gut smears from mosquitoes which had fed on cattle, horse, chicken, guinea pig, rabbit, mouse and human blood, respectively, were tested. The antisera were diluted 1 to 5 with physiological saline and placed in disposable precipitin tubes in the amount of 0.05 ml. per tube. The saline-sera extracts were then laid over the antisera, also in the amount of 0.05 ml. per tube. The tubes were observed for the precipitin ring reaction after 30 minutes and again after 60 minutes.

Of the 243 smears from *A. sollicitans*, 18 were negative for the antisera tested. The remaining 225 smears (see table) reacted with one of the antisera tested. One smear reacted with both anti-human and anti-deer sera. None of the smears tested reacted with anti-rodent serum, although the anti-rodent sera did react with the control smears from mosquitoes fed on laboratory mice. The largest number of the *A. sollicitans* (149 or 66% of the positive reactions) reacted with the anti-horse sera. The second largest number of positive reactions (41 or 18%) were with the anti-deer serum. Of the remaining 35

TABLE 1.—Results of precipitin test with bloodmeals of *Aedes sollicitans* collected in the Chincoteague-Assateague Island, Virginia area during 1962.

Antiserum	Positive reactions	Percent positive
Anti-horse	149/225	66
Anti-deer	41/225	18
Anti-human	27/225	12
Anti-bird (chicken)	5/225	2
Anti-raccoon	3/225	1
Anti-rodent (rat)	0/225	0

smears tested, 27 (12%) reacted with anti-human serum, 5 (2%) with anti-bird serum, 3 (1%) with anti-raccoon serum.

On the basis of these tests, it would seem that in the Chincoteague-Assateague Island area of Virginia, *A. sollicitans* feeds most often on horses. Since there is a large population of wild ponies on Assateague, as well as several captive herds on Chincoteague, this animal is a readily available host. They apparently feed less frequently on deer and/or cattle, both of which are also present in large numbers in the study area. No evidence of *A. sollicitans* feeding on rodents was observed in these tests.

References Cited

WEITZ, BERNARD. 1952. The antigenicity of sera of man and animals in relationship to the preparation of specific precipitating antisera. *Journal of Hygiene (London)* 50:275-294.

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