

Feeding Habits and Preferences of Adult Mosquitoes—Aedes albopictus.

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OBJECTIVE: Both Aedes aegypti and Aedes albopictus are vectors of dengue viruses in Thailand, but much epidemiologic data suggests that the former species is the vector of primary importance. Previous studies on Koh Samui indicated that perhaps one explanation for this is that A. aegypti feeds primarily upon humans while A. albopictus is frequently diverted to a variety of other blood meal sources in addition to man. The object of this study was to determine which hosts are preferred by A. albopictus.

DESCRIPTION: Four series of simultaneous biting collections were made from humans and from four species of animals common to Thailand. In these studies one man (X) collected mosquitoes attracted to himself, while a second collected mosquitoes attracted to a buffalo (A), a pig (B), a dog (C), a chicken (D) or a man (E). Individuals in each of the above categories were designated numerically (e. g., first buffalo as A₁). A single trial consisted of a ten minute initial collection period in which X and one of the animals were placed in locations 15 to 30 meters apart; this was followed by a second ten minute period during which the positions of the two hosts were reversed. In the first series of trials X₁ was compared with A₁, A₂, B₁, B₂, C₁, C₂, D₁, D₂, E₁ and E₂, in the second series a second man (X₂) was compared with the same hosts as X₁, in the third series X₃ was compared with A₃, A₄, B₃, B₄, C₃, C₄, D₃, D₄, E₃ and E₄. In the fourth series X₄ was compared with the same hosts as was X₃. The same person collected the mosquitoes attracted to hosts A through E in all of the trials. After each test the immediate collection site was not used again for a period of three hours. All collections were made in coconut plantations on the island of Koh Samui between 0700 and 1300 hours.

PROGRESS: The results of this study indicated that the host species used in the trials differ in attractiveness to A. albopictus. When the ratios of mosquito numbers collected from man and the other hosts were compared, the host-attractiveness was ranked as follows: 1) man, 2) pig, 3) and 4) buffalo and dog, and 5) chicken (Table 1). Total numbers of mosquitoes collected from the five host species were large enough to indicate all five are probably important natural hosts of A. albopictus.

Table 1. Results of host preference tests with Aedes albopictus on Koh Samui, 1969

Hosts <u>A-E</u>	Series												Sum of Ranks	
	1			2			3			4				
	No. Mosq coll'd from		Ratio $\frac{A-E}{X_1}$	No. Mosq coll'd from		Ratio $\frac{A-E}{X_2}$	No. Mosq coll'd from		Ratio $\frac{A-E}{X_3}$	No. Mosq coll'd from		Ratio $\frac{A-E}{X_4}$		
	Hosts <u>A-E</u>	Man <u>X₁</u>	Rank	Hosts <u>A-E</u>	Man <u>X₂</u>	Rank	Hosts <u>A-E</u>	Man <u>X₃</u>	Rank	Hosts <u>A-E</u>	Man <u>X₄</u>	Rank		
Man (<u>E</u>)	50	33	1.52	49	45	1.09	23	13	1.77	9	9	1.00	1	4
Pig (<u>B</u>)	60	100	.60	61	62	.98	9	23	.39	8	28	.29	3	9
Dog (<u>C</u>)	16	38	.42	21	56	.38	5	23	.22	2	14	.14	5	14
Buffalo (<u>A</u>)	25	65	.38	24	68	.35	4	21	.19	10	14	.71	2	14
Chicken (<u>D</u>)	15	47	.31	5	45	.11	10	97	.10	8	32	.25	4	19