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Research Note

FOOD SOURCES OF CRABHOLE MOSQUITOES COLLECTED IN GUAJAIBON FOREST, HAVANA PROVINCE, CUBA

MAYDA CASTEX; OMAR FUENTES & ISRAEL GARCIA AVILA

Departamento Control de Vectores, Instituto de Medicina Tropical "Pedro Kourí", Ave. 15 y calle 200, Siboney, Marianao 13, Ciudad de La Habana, Cuba

The Guajaibon forest is located to the North coast of the Havana Province. During 1975-1978 this area was studied to detect virus activity in mosquito and bird populations. Eastern Equine Encephalomyelitis virus (EEE) were found in seven bird families and in *Psorophora* and *Aedes* mosquitoes (M. A. Fernandez et al., 1981. *Rev. Cub. Med. Trop., 33:* 58-63). The possibility for arbovirus being endemic to this area was pointed out.

Fuentes et al. (1989, *Rev. Cub. Med. Trop., 41:* 379-384) suggested the existence of arbovirus circulation transmitted by *A. taeniorhynchus* or *A. scapularis* and supposedly mantained in the natural focus by secundary vectors as *Deinoceritis cancer* and *Culex (Melanoconium) sp.* during interepizootic periods.

This report provides the data on the host-feeding patterns of crabhole mosquitoes, that were collected in Guajaibon forest from February 1987 to May 1988.

Adult mosquitoes were obtained by placing a midge net over the mouth of a crabhole and flowing smoke into the hole, thus forcing the mosquitoes to fly into the net. Mosquitoes were transferred from the midge net to ice cream pints and brought to the laboratory where mosquitoes were immediately sorted according to species and sex. The blooded females were squashed in a filter paper and then stored in the refrigerator until testing.

The double diffusion technique used to identify the source of bloodmeals followed that described by M. Castex et al. (1990, *Mem. Inst. Oswaldo Cruz, 85:* 241-242). Bloodmeals were extracted in 0.5 ml of saline solution 0.85%.

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Bloodmeal extracts were screened with broadly reacting anti-bird and anti-mammal sera. If precipitation occurred with anti-mammal serum, the extracts were then reacted with anti-human, anti-cow, anti-rat/mouse, anti-horse, anti-pig, anti-dog and anti-cat sera. All the antisera were obtained in laboratory (see previous reference) but the anti-rat/mouse serum was provided by Welcome Foundation. Troughout the testing process, both positive and negative controls were routinely included for each screening. Anti-reptilia and anti-amphibia sera were not available.

Of the 2384 mosquitoes collected, only 27% of them were freshly and late fed. A total of 647 bloodmeal extracts from seven species of mosquitoes were identified. The results are summarized in Table. The predominant species were *De. cancer* (54.1%) and *C. janitor* (38.6%) which were fed mainly on avian hosts although some mammal hosts were identified. Feeding on cat and pig were not observed. Significant number of hosts (22.5%) remained unidentified.

At the present we can not be sure about the identification of *C. (M.) sp. A, C. (M.) sp. B* and *C. (Culex) sp. C.* Further studies are necessary to clarify.

In relation of *De. cancer* our data are in accordance with the results of C. H. Tempelis & P. Galindo (1970, *J. Med. Entomol., 7:* 175-179) in Panama and J. D. Edman (1974, *J. Med. Entomol., 11:* 105-107) in Florida. The bloodmeals had been taken from both birds and mammals, indicating that *De. cancer* has a broad host range.

On the other hand, there was no data available about food sources of *C. janitor,* a specie restricted to Jamaica, Haiti, Puerto Rico and more recently found in Cuba (unpublished report).

TABLE

Food sources of crabhole mosquitoes in Guajaibon forest, Havana Province, Cuba from 1987 to 1988

Species	Food sources								
	Mammal[a]	Bird	Human	Dog	Horse	Rat/ mouse	Cow	Negative	Total
Deinoceritis cancer	4 (1.1)	228 (65.1)	10 (2.8)		10 (2.8)	2 (0.5)	22 (6.2)	74 (21.1)	350 (54.1)
Culex janitor	5 (2.0)	126 (50.4)	22 (8.8)	2 (0.8)			30 (12.0)	65 (26.0)	250 (38.6)
Culex (Melanoconium) sp. A			3 (75.0)	1 (25.0)					4 (0.6)
Culex (Melanoconium) sp. B		3 (18.7)					10 (62.5)	3 (18.7)	16 (2.4)
Culex (Culex) sp. C		13 (61.9)					4 (19.0)	4 (19.0)	29 (3.2)
Aedes taeniorhynchus							3 (100)		3 (0.4)
Aedes scapularis							2 (100)		2 (0.3)
Aedes sp.		1 (100)							1 (0.1)
Total	9 (1.3)	371 (57.3)	35 (5.4)	3 (0.4)	10 (1.5)	2 (0.3)	72 (10.9)	146 (22.5)	647

a: without specific reactions. ( ) Percent.