

(two types, offset and flat, part of the hardware package) were attached at the panel top. By pairing panels with offset and flat hangers in each track, a pair of panels can be moved to a position side by side and present an 8 ft × 8 ft "wall" surface. This pair can be rolled to the left or right for storage and other pairs of panels moved into position for view. The total complement of 6 panels per 3 tracks can be moved aside for storage, leaving the original wall space for other use.

For mounting the maps to the panels, the borders of the geologic survey maps were carefully trimmed. Pairs of panels were laid on a flat dust-free horizontal surface and the maps were oriented correctly on each pair of panels. Any map situated on the centerline, where 2 panels met, was cut accordingly. When the maps were aligned and appropriately marked as to location, they were removed and rubber cement smoothed onto the panel surface with a spatula or paint scraper. Only 1 map was glued at a time and smoothed with a wallpaper roller. Each panel was allowed to dry horizontally 24 hr before hanging.

This mapping system (Fig. 1) has been in use for approximately 6 months and allows for immediate viewing of areas as large as 985 square

miles. Since the tracks we employ are 14 ft long, 2 panels can share the same channel, and an area of 1320 square miles on 3 panels can be moved into view. Additional panels can be added to serve as a bulletin board for aerial photographs, data and other information.

To protect the maps and yet allow temporary marking of areas, several clear coatings for the maps were tested. Liquid coatings such as urethane and liquid plastic darkened the maps, and marks from wax crayons and marking pens could not be completely removed by solvents. Therefore, we are employing clear acetate sheeting, which can be replaced as needed. In constructing the system, one should be selective in the quality of panels and avoid a panel with slight warping. However, if warping does occur, reinforcement with angled metal will minimize its effect. The mapping system as described cost \$140 including tracks, hardware, panels, but not the maps. While it was designed for the airspray program, its reputation for ease of use and fine geographic detail has spread, and the map-panel system now is referred to by specialists in surveillance, water management, and pest management of insect species other than mosquitoes.

A SURVEY OF MOSQUITOES IN WOOD COUNTY, OHIO

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Vernard and Mead (1953) published an annotated list of Ohio mosquitoes which included a brief history of the mosquito work done in Ohio prior to that time. Parsons, et al (1972) updated this list to include 52 species of mosquitoes known to be present in Ohio. A survey was conducted from April 8 to October 30, 1976 to determine which species of mosquitoes are present in Wood County, Ohio.

Twenty-one species of mosquitoes were collected utilizing a variety of traps. New Jersey light traps, using a 60 watt light bulb as an attractant and 20% alcohol as a killing agent in the collecting jar, were used every night throughout the survey. CDC miniature light

traps (Sudia and Chamberlain 1962) supplemented with dry ice (Newhouse et al. 1966) were used at least once a week. Their mobility enabled samples to be collected throughout the county. A modified version of the stable trap (Magoon 1935) also was used throughout the survey using a live rabbit as bait. All mosquitoes collected were brought back to the lab and identified to species. The numbers and species of mosquitoes collected in the various traps are presented in Table 1.

Four species constituted 89.8% of all mosquitoes collected. *Aedes vexans* was the most abundant, accounting for 55.5% of all mosquitoes collected. *Culex pipiens*, *Ae. stimulans* and

Table 1. Numbers and species of mosquitoes collected in the various types of traps, Wood County, Ohio, 1976

Species of Mosquito	New Jersey				CDC Traps		Magoon Traps		Combined Total	
	Light Traps									
	No.	% NJLT Total	No.	% CDC Total	No.	% Magoon Total	No.	% Combined Total		
<i>Anopheles punctipennis</i>	21F	0.52	60F	1.88				110	1.41	
	28M	0.70	1M	0.03						
<i>Anopheles quadrimaculatus</i>	2F	0.05	3F	0.09				9	0.12	
	4M	0.10	0M							
<i>Aedes canadensis</i>	3F	0.07	2F	0.06	14F	2.5		23	0.30	
	4M	0.10	0M		0M					
<i>Aedes sticticus</i>			1F	0.03				1	0.01	
			0M							
<i>Aedes stimulans</i> (Group)	108F	2.68	19F	0.60	300F	53.3		442	5.68	
	15M	0.37	0M		0M					
<i>Aedes triseriatus</i>	14F	0.35	32F	1.00	72F	12.8		121	1.56	
	3M	0.07	0M		8M					
<i>Aedes trivittatus</i>			9F	0.28	5F	0.9		14	0.18	
			0M		0M					
<i>Aedes vexans</i>	1767F	43.90	1412F	44.25	54F	9.6		4319	55.53	
	1068M	26.53	18M	0.56	0M					
<i>Culex erraticus</i>	15F	0.37	2F	0.06	1F	0.2		18	0.23	
	0M		0M		0M					
<i>Culex pipiens</i>	212F	5.27	1362F	42.68	3F	0.5		1902	24.45	
	305M	7.58	20M	0.63	0M					
<i>Culex restuans</i>	45F	1.12	38F	1.19				224	2.88	
	141M	3.50	0M							
<i>Culex salinarius</i>	3F	0.07	64F	2.01				67	0.86	
	0M		0M							

Table 1. Continued

Species of Mosquito	New Jersey Light Traps		CDC Traps		Magoon Traps		Combined Total	
	No.	% NJLT Total	No.	% CDC Total	No.	% Magoon Total	No.	% Combined Total
<i>Culex tarsalis</i>	0F 1M	0.02					1	0.01
<i>Culex territans</i>	67F 69M	1.66 1.71	0F 2M	0.06	2F 0M	0.4	140	1.80
<i>Culiseta melanura</i>			1F 0M	0.03			1	0.01
<i>Culiseta minnesotae</i>	11F 24M	0.27 0.60					35	0.45
<i>Coquilletidia perturbans</i>	78F 5M	1.94 0.12	133F 0M	4.17	111F 0M	19.7	327	4.20
<i>Psorophora ciliata</i>	1F 0M	0.02						
<i>Psorophora columbiae</i>			1F 0M	0.03			1	0.01
<i>Orthodomyia signifera</i>			0F 1M	0.03			1	0.01
<i>Uranotaenia sapphirina</i>	1F 0M	0.02					1	0.01
Unidentified	8F 2M	0.20 0.05	9F 2M	0.28 0.06			21	0.27
Others	2356F 1669F	58.5 41.5	3148F 43M	98.65 1.35	562F 0M	100.0	7778	100.00

Coquillettidia perturbans accounted for 24.4%, 5.7% and 4.2% respectively. Seven of the remaining 17 species were represented by a single specimen (Table 1).

Denbow (1971 unpublished data) reported collecting 6 additional species of mosquitoes including, *Ae. aurifer* (Coquillett) *Ae. cinereus* Meigen, *Ae. dorsalis* (Meigen), *Culiseta inornata*, (Williston), *Psorophora ferox*, (Humboldt), and *Ps. varipes*, (Coquillett). Mitchell (1975, unpublished data) also reported finding larvae and pupae of *Anopheles barberi*, Coquillett. Although these mosquitoes were collected in small number and are considered rare, they bring the reported number of mosquito species in Wood County, Ohio to twenty-eight.

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A BRIEF SURVEY OF MOSQUITO VECTORS OF BANCROFTIAN FILARIASIS IN BICOL REGION, THE PHILIPPINES

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A high incidence of bancroftian filariasis is known to exist in Bicol Region, southern Luzon of the Philippines, and *Aedes* (*Finlaya*) *poicilius* (Theobald) was incriminated as the principal vector in the area by Cabrera and Tubangui (1951). Larvae of this species, like other species in *Finlaya* group-A, breed in water contained in leaf axils of such plants as abaca, *Musa textiles*, and banana, *M. sapientum*. Since abaca is one of the main agricultural products in the area (Camacho 1969), the close association between the prevalence of the disease and abaca plantations is expected.

In the past, several attempts were made to incriminate *Culex quinquefasciatus* Say (= *fatigans* Wiedemann) as a vector of filariasis in the endemic area in the Philippines. Baisas (1957)

found specimens of this species naturally infected with the larval stages of *Wuchereria bancrofti*. However, more study is needed to understand how *Cx. quinquefasciatus* (= *fatigans*) can play an important role in natural transmission (Cabrera and Arambulo 1973). Meanwhile, a preliminary larval collection was made by the senior author in 1975 showing only a few occurrences of *Ae. poicilius* in abaca axils in the region but many of *Ae. (F.) ananae* Knight and Laffoon. In this connection, the present survey was carried out to study the mosquito fauna in the plant axils and the infection rate of various mosquitoes in the area during January 5-14, 1977, with the cooperation of Filariasis Control Services, Sorsogon (Chief: Dr. Francisco Valeza).

For the general survey of axil breeders, the