The theme of the campaign was "Fight Those Bites!" and consisted of a fact sheet on Eastern equine encephalitis in Lexington and a three brochure series providing generic "do-it-yourself" mosquito control practices and detailed information on Eastern equine encephalitis. A fourth brochure was developed on EEE for use in other towns in the East Middlesex Project and on Hanscom Air Force Base located partially in Lexington.

The fact sheet and brochure provided factual information, practical advice on the problem. The brochures incorporated graphics and bright colors to get the message across. They were distributed to the public through the public/private school systems, made available through day care and summer camp recreational programs, displayed at all of the swimming/bathing facilities in Lexington and were available at town offices, libraries, etc. We chose extremely bright colors to make them both attractive and hard to lose. The color choice generated much positive publicity for our effort.

In addition to the human aspect of the program we made an active effort to involve horse owners. We advised them of the problem and provided them with recommendations and information on the availability of a vaccine. We also prepared a brochure specific to the problems of the horse environment.

Lastly our education effort, which we will continue through 1986, included information updated weekly and made available via the local weekly newspaper, cable TV on the public access channel and an EEE/Mosquito information "Hot Line" was utilized to provide even more frequent updates as needed.

Eastern equine encephalitis is a serious disease, particularly as it impacts on infants, children and the elderly. In Massachusetts it is theorized as to be of cyclical duration lasting through three-year periods. Concern exists however, that these cycles appear to be growing closer together and much about the disease and its mosquito vector remains a mystery. At each outbreak it becomes evident that much more needs to be learned. Considering all of these factors, the Lexington Board of Health took the most appropriate action available under the circumstances.

We would like to take this opportunity to make copies of our brochures and fact sheets available to any Mosquito Control or Health Agency that might find them informative and/or useful. Interested parties can request copies by sending a large #10 envelope, self addressed, with 39 cents postage to the author of this note.

CULEX TARSALIS IN RHODE ISLAND

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In late summer of 1983, several equine cases and a suspect human case of eastern equine encephalitis (EEE) occurred in southern counties of the state. The Rhode Island Department of Environmental Management requested assistance from the Division of Vector-Borne Viral Diseases (DVBVD), Centers for Disease Control (CDC), Ft. Collins, CO, in assessing the risk of disease to humans. Although EEE is endemic in several northeastern states, no virus activity has been reported in Rhode Island since 1973, when three suspect equine cases and one positive pheasant case were recorded (Dr. R. Keenleyside, personal communication).

A team from the DVBVD conducted a rapid survey to evaluate mosquito populations and EEE virus infection rates in known and potential vectors. Surveillance, primarily using CDC light traps supplemented with dry ice (CO_2), centered at sites in Washington and Newport counties near populations of equines and in areas considered suitable for breeding of *Culiseta melanura* (Coquillett), the known enzootic vector. Collections began on August 20 and continued until September 7, when cool weather prompted cessation of activities. The survey confirmed widespread enzootic EEE virus activity throughout the area, which will be reported separately.

A collection at the Department of Environmental Management log cabin site in the Great Swamp (Washington County) on September 1, 1983, yielded a single female *Culex tarsalis* Coquillett, a new state record. No report of *Cx. tarsalis* is known from the neighboring states of Massachusetts and Connecticut, but it has been found in the nearby states of New Jersey (Lesser et al. 1977, Crans et al. 1979) and Pennsylvania (Briet 1970). The specimen has been deposited in the collection of the Department of Zoology, University of Rhode Island, Kingston, Rhode Island., LeBrun et al. (1983) list only *pipiens, restuans, salinarius* and *territans* as the *Culex* species occurring in the state.

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The single *Cx. tarsalis* collected in the Great Swamp does not, in itself, represent a health hazard, but the species is known to be a major vector of both western equine encephalitis and St. Louis encephalitis (SLE). Although SLE in the eastern states appears to be restricted to an urban-suburban cycle, the establishment of *Cx. tarsalis* in the area could lead to its involvement in a rural transmission cycle of the disease in a manner similar to its role in the western states. The finding of *Cx. tarsalis* points to the need for further surveillance to document its continued presence and monitor its spread and potential as a vector species in the area.

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USE OF AN EXTERIOR CURTAIN-NET TO EVALUATE INSECTICIDE/MOSQUITO BEHAVIOR IN HOUSES

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In the Americas, vector control is largely being attempted through the use of chemical pesticides (World Health Organization 1983). The concept that malaria transmission can be interrupted by the use of residual insecticides has long been the basis for malaria eradication programs. However, insecticides may also influence mosquito behavior (Pampana 1966). When considering other aspects, including the repellent effect and long-term use of insecticides especially in DDT/malaria programs, mosquito behavior may change (Martinez-Palacios and de Zulueta, 1964).

In addition, variability in human behavior, traditions, migration patterns, types of housing, etc., may significantly contribute to the persistence of malaria in many areas. For example, in the state of Oaxaca, houses that were located on the periphery of the community and those that lacked or had discontinuous walls were found to be in the areas of highest malaria transmission (de Zulueta and Garrett-Jones 1963).

In the highlands of Mexico houses are usually constructed of adobe (solid walls) and tile or corrugated metal roofs. In contrast, the rural houses of the tropical coastlands are predominately small multi-roomed dwellings constructed of loosely fitting split bamboo or palm vein walls and palm thatch roofs. This type of construction is economical in terms of availability of materials and practical in areas of high humidity and rainfall, where natural ventilation is important. The evaluation of insecticides or vector behavior in coastal areas presents unique problems. Traditional entry/exit traps are not practical because of the many openings in the walls. One method of solving this problem is to surround the house with a curtain with the objective of creating an artificial wall. The curtain net or "Colombian Curtain" was first used by Elliott (1972) in Colombia. The procedure involved encircling the exterior of a house from the ground to roof with a cotton polyester mosquito net.

Elliott's method of using the curtain or drop net was to raise it for 30 minutes of each 2-hr period and then lower it. Resting mosquitoes were counted on the interior of the curtain and inside the house. Difficulties were, however, encountered with this technique. Even though mosquitoes were eliminated from the house at sunset and dawn, the number of mosquitoes intercepted leaving was 2–3 times greater than the number captured while entering. He concluded that by using the curtain in this way, it was a more efficient exit than entrance trap. Another difficulty was that when the curtain was up, it was not possible to evaluate mosquito movements as they were able to enter and exit freely.

A modification of the technique that is presently being used is one in which the curtain remains stationary in order to allow a more complete observation of mosquito migration in and out of the house, the feeding behavior, the duration of time in the house and the mortality. The curtains consist of several pieces of mos-

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