

## THE COMMITTEE ON VECTOR CONTROL OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

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Public health has been one of the principal beneficiaries of the phenomenal advances in the control of insects resulting from the use of the marvelous new materials and methods developed during World War II. It follows quite naturally, therefore, that the American Public Health Association should show a considerable interest in this field. In 1952, this interest was reflected in the appointment of a formal committee within the Engineering Section of the Association whose purpose it is "to study the status of vector control activities in the United States; to analyze administrative and technical problems and practices in this field, and to prepare reports and recommendations on these subjects. Because of the diversity of vector control activities and the inherent interdependence with other health activities, it would seem that in future years joint studies and reports with other committees of the Association might be indicated."

The members of the Committee represent a broad range of interests and activities. They are:

W. E. Gilbertson—Chairman of the Committee, Chief, Division of Civilian Health Requirements, U. S. Public Health Service, Washington, D. C.

G. H. Bradley—Chief Entomologic Consultant, Bureau of State Services, U. S. Public Health Service, Atlanta, Georgia.

H. L. Felton—Consulting Sanitary Engineer, Atlanta, Georgia.

F. E. Gartrell—Chief, Malaria Control Branch, Division of Health and Safety, Tennessee Valley Authority, Chattanooga, Tennessee.

J. M. Henderson—Sanitary Engineer Consultant, U. S. Public Health Service, Savannah, Georgia.

J. A. Mulrennan—Director, Division of Entomology, Bureau of Sanitary Engineer-

ing, Florida State Board of Health, Jacksonville, Florida.

T. A. Olson—Associate Professor of Sanitary Engineering and Public Health, University of Minnesota, St. Paul, Minnesota.

R. F. Peters—Chief, Bureau of Vector Control, California State Department of Public Health, Berkeley, California.

F. H. Stutz—Director, Dade County Anti-Mosquito District, Miami Florida.

Six of these committeemen also are members of the American Mosquito Control Association, a circumstance which should foster close working relationships between the two Associations.

For its initial activity and to provide a basis for further study and planning, the Committee gathered readily available data and prepared a report on "Vector Control Activities in the United States." This report was presented at the Meetings of the Association in Cleveland, Ohio, last October. It is not my purpose to discuss the report in detail; since it will be published in the Year Book of the American Public Health Association in May of this year and thus will be readily available to those who are interested. A few extracts from the report, however, which include references to mosquito activities, might be appropriate at this time.

The foreword to the report points out that during the past twenty-five years the growth of interest in vector control on the part of state and local health agencies has been steady, if not spectacular; that this growth has been shared by a diversity of other public agencies as well as by pest control operators; and that health agencies should recognize the need for a broader base of operations and should assume a greater degree of leadership if they would avoid excessive splitting up of responsibility in the vector control field. Broad

programs for the prevention of the viral encephalitides, Rocky Mountain spotted fever, gnat-borne conjunctivitis, and enteric infections transmitted by flies, as well as prevention of high densities of pest mosquitoes and other biting flies, are suggested as the modern counterparts of the former disease-specific type of approach on malaria, yellow fever, typhus, and plague control programs. It also is pointed out that enabling legislation is important to further growth in the field of vector control and that adequate and generally applicable principles should be developed to provide a satisfactory basis for further action by all states and affected communities. Furthermore, licensing laws for commercial pest control operators need wider application.

In the body of the report a brief historical background is presented which is followed by discussions of the legislative and administrative status of vector control programs and the scope of current activities. Of special interest to this group, perhaps, are data from Public Health Bulletin No. 184, published in 1950, entitled "Distribution of Health Services in the Structure of State Government," which show the department of state government which is responsible for various types of health services including mosquito and other insect control. It appears that among the forty-eight states, the District of Columbia, Alaska, Hawaii, Puerto Rico, and the Virgin Islands, the health department has responsibility for mosquito control activities in thirty-three instances, the department of agriculture is responsible in eight, State Universities are responsible in ten, and other agencies (conservation, highway, special boards, etc.) are responsible in nine. In twenty of these jurisdictions, however, responsibility for the work is divided among two or more of the agencies. Only five states reported no designated State agency with responsibility for mosquito and/or other insect control (Minnesota, Montana, New Hampshire, New York, and West Virginia).

By polling State health departments, other data were obtained which refer to

the extent to which vector control programs actually are carried out by these state agencies. Replies to the poll were received from thirty-three states which reported on a total of 2,268 vector control projects. Of these, 734 were for mosquito control, 682 for fly control, 512 for rodent control, and 340 for general insect control. Many in this last category were concerned predominantly with mosquito and fly control. By number, municipal projects comprised 87 percent of the total. The larger and more significant projects tended to be district-wide or county-wide. The commonest type of municipal project involved the use of fogging machines or aerial sprays for killing adult mosquitoes and/or flies. Data regarding annual expenditures for vector control were particularly incomplete. This information as reported for less than one-third of the projects totalled \$9,500,000, and of this total over \$8,000,000 (84 percent) were being spent for mosquito control. Pennsylvania reported the largest number of projects (300), but expenditures were greatest in California, over \$2,800,000.

The report concludes with the following paragraphs:

"It seems evident from the foregoing, that vector problems in the United States have many facets. Some of these environmental problems lend themselves to solution through efforts of individual householders with or without assistance from commercial agencies. Some are well integrated into municipal sanitation practices, while still others are handled as categorical programs dealing with the control of a disease entity or community-wide insect or rodent control. Only a beginning has been made in this report toward analyzing the entire situation. From our study, the conclusion has been drawn that the complex and important activity in this field of public health demands that it be given increasing attention by public health workers.

"They should study local needs and facilities and assist in promoting, organizing, and coordinating efforts to eliminate

vectors as menaces to the good health and comfort of the public. The problems of pest control are many. Research is constantly solving some of them, but new ones constantly develop. Nevertheless, progress is being made both in procedures

and organization. It is recommended that succeeding vector control committees of the American Public Health Association work toward determining how health workers best can participate in and advance this work."

## INSECT CONTROL IN MODERN MILITARY PREVENTIVE MEDICINE

JOHN M. HIRST

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"Sir: In my letter of June 19 (1864) I stated . . . that indications had forced me to the conviction that we were to have a season of yellow fever in this port (Key West, Florida). . . . It was evident that the first precaution to be taken was to get the vessels away from Key West, the center of the disease, as quickly as possible. . . . The vessels that have been detained here perforce have suffered severely. The steamer NITA was under repairs that rendered it impossible for her to get away. Every person on board but two officers has been taken ill of the fever and so far some ten or more have died. . . . I, myself, had the disease in a severe form. . . . The mortality on the island I am told has reached as high as 12 to 15 in a day. I concluded early in the program of the disease that it would be best for me to remain at this station. It is the only one from which the movements of the squadron can be properly directed or communication kept up with the North." This was written by Acting Rear-Admiral Theodoros Bailey, U. S. Navy, 27 July 1864.

A few years later, 1867, at Fort Jefferson on Dry Tortugas, our Military Preventive

Medicine was sorely tried. "On September 2, the hospital at the fort contained 26 patients of whom 7 died. Major Stone, Commander of the fort, placed Dr. Mudd in charge of the hospital on September 6 and had him released from chains. . . . On September 13 every officer was ill except Major Stone. On September 15 Dr. Smith's son, 3 years old, became ill and died on September 18. . . . Major Stone, after this death, sailed for Key West with his two year old son to save him from the yellow fever. While enroute Major Stone became ill and died one day after reaching Key West. . . . The total number of cases was 270 with 38 deaths." This abstract is taken from the historical research material at Fort Jefferson.

At this time in American history the 39th parallel had taken on new significance and had been named the Mason-Dixon line. Less than a century later we are concerned over the bloody 38th parallel, only about 70 miles south of the Mason-Dixon line though several thousand miles west in Korea. North-south distribution is believed to be of minor importance in the distribution of insect life and it might be of relatively little importance politically as evidenced here. We must always be vigilant, however, and discontinuous distribution should ever be suspected. Many barriers and limitations which we thought impregnable have failed. Certain environ-

\* The opinions or assertions contained herein are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval service at large.