

## ASSOCIATION NEWS

### A HISTORY OF THE AMERICAN MOSQUITO CONTROL ASSOCIATION \*

#### FOREWORD

The American Mosquito Control Association, like many other technical and professional organizations, was founded because of the need for an association of all the various types of workers engaged in a particular specialized field. The major societies of physicians, engineers, and entomologists, for example, with their broad interests, are unable to represent adequately all areas of interest within their respective fields. In some fields of professional endeavor, several types of special skills have to be related for adequate performance. This has proved to be particularly true in the field of mosquito control, where the techniques of the physician, the entomologist, the engineer, the administrator and the legal counsel, plus the work of the public citizens who serve on the policy making boards, must be blended for successful operations.

The actual formation of such associations usually occurs some little time after the need is first felt. In some instances, action results from a crusading spirit; in others, as a means of defense against adverse conditions or pressures. All these influences seem to have been present in the formation of the American Mosquito Control Association. Its purposes and ideals are well expressed in the following statement, which appears on the back cover of its official publication, "Mosquito News":

"An association of mosquito workers,

entomologists, medical personnel, engineers, public health officials, military officers and personnel, and laymen who are charged with, or interested in mosquito control and related work.

"A non-profit, technical, scientific and educational association, the purpose of which is to promote closer cooperation among those directly or indirectly concerned with, or interested in mosquito control and related work; to work for the highest standards of efficiency in such work; to encourage further research; to disseminate information about mosquitoes and their control; to work for understanding, recognition and cooperation from public officials and from the public; to encourage the enactment of legislation providing for a sound, well balanced program of mosquito control work suited to local conditions wherever needed; to meet fairly and understandingly, and thus disarm opposition to mosquito control work from any source; to protect wildlife in every possible way from avoidable harm, and to encourage the use of control measures calculated to bring about the best practicable degree of adjustment where diverse interests are involved; to work for the highest degree of understanding cooperation with related organizations, to the end that the best interests of all may be most fully served; and to publish *Mosquito News* as a journal of mosquito control work, in the furtherance of these objectives."

#### FORMATION OF THE ASSOCIATION

The American Mosquito Control Association and its predecessor society, the

\* Prepared by the Historical Committee: R. D. Glasgow, T. G. Raley, Robert L. Vannote, Thomas D. Mulhern, Harold Farnsworth Gray, Chairman.

Eastern Association of Mosquito Control Workers, resulted from a need which was not met, and apparently could not be met, by then existing associations.

There were at that time a number of national professional and technical societies which were concerned with certain aspects of mosquito control. Among them were the entomological societies, such as the American Association of Economic Entomologists; the several medical groups, such as the National Malaria Society and the American Society of Tropical Medicine; and the American Society of Civil Engineers. But none of these were in a position to coordinate and lead all interested groups. There were also such governmental groups as the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture, and the United States Public Health Service. But neither of these organizations met the over-all problems. None included all the various types of personnel involved: entomologists, engineers, chemists, toxicologists, biologists, and the administrative and legal personnel.

There were also certain state associations of mosquito control workers, such as those in New Jersey, California, and Florida, which did excellent work in their own areas, but were not set up to fill a nationwide need.

The New Jersey Mosquito Extermination Association, organized in 1913, was the first effective local association of mosquito control workers. Its membership was limited to New Jersey agencies although guests attended its meetings from other areas. In 1922, Florida formed its own association and California formally organized in 1930. Other regions which have since organized associations are Utah, Virginia, Illinois, Texas, the Northeastern States, Northwestern States, Oregon, and Louisiana.

A premature attempt to form a national organization had been made in 1903. (1957. *Mosquito News* 17(1):52). On December 16 of that year at New York there was formed the "National Mosquito Extermination Society." The roster con-

tained such well known names as L. O. Howard, E. P. Felt, John B. Smith, W. E. Britton, Vernon L. Kellogg, Herbert Osborn, D. W. Coquillet and H. C. Dyar. The Society held one other meeting at New York and Brooklyn on December 15 and 16, 1904, but there is no record that any further meetings were held.

The next attempt to form an organization of mosquito control workers which was more than intrastate in scope did not take place until the spring of 1935. At monthly meetings of the "Associated Executives of Mosquito Control Work in New Jersey" there were discussions of the need for an organization of mosquito control workers in the Middle Atlantic states. It appeared to be necessary to seek a compromise approach to the seemingly opposed interests of wildlife conservation and mosquito control. The problem had become acute, for charges of wholesale destruction of wildlife were being leveled at mosquito control agencies by some poorly informed individuals. Claims were being made that mosquito control operations were responsible for a pronounced decrease in migratory game bird life on the Atlantic Coast salt marshes, and that mosquito control operations should be curtailed or modified in ways which would have made them ineffective. It was imperative that this unjustified criticism be met fairly and scientifically.

Partly in order to do this, the Eastern Association of Mosquito Control Workers was organized at Trenton, New Jersey on June 26, 1935. Its membership at first was composed of executives of mosquito control projects from Massachusetts to Virginia, and various scientists, with some representation from Federal government bureaus. As time went on, persons from other areas joined this group until it had representation in a number of states, even as far west as California.

A second important influence in the formation of a regional association was the realization by the founders that advances in the knowledge of mosquito control were being made so rapidly that

some vehicle was necessary to promote the more rapid exchange of scientific knowledge. There was also an obvious need for frequent conferences and visits to progressive projects to study the advances being demonstrated.

The Eastern Association in due course began publication of a small journal named "Mosquito News." Through it, facts and opinion in relation to mosquito control could be published and accurate information about the ecology of coastal marshes and the relationship of mosquito control to aquatic wildlife could be put before the public. "Mosquito News" was established as a quarterly journal, the first issue appearing in March 1941. From 1935 until 1941 the members had been kept posted on matters of interest by mimeographed sheets distributed as occasion required.

The Eastern Association held a General Meeting annually, except in 1943 when wartime restrictions on travel were in effect. It also held business meetings when and as required, and upon occasion conducted extensive field trips (Appendix "B") for observation of mosquito control operations and for exchange of ideas on equipment and materials. In addition to the often perplexing and difficult problems arising from the actions of sometimes over-enthusiastic groups within the conservation movements, there were difficult control problems arising in the 30's due to the depression, by 1940 from the preparedness program, and after 1941 from war requirements. Relatively little attention was given during this period to the problems of organization and administration.

During the war the membership of the Eastern Association increased, with new members widely scattered through the various states. A spontaneous demand arose for reorganization as a national group, and finally after much discussion and planning, on March 16, 1944, the American Mosquito Control Association was organized by dissolving the Eastern Association and transferring to the "American Mosquito Control Association" all of its assets including "Mosquito News."

For the first few years after the organiza-

tion of the American Association, the annual meetings were held with the annual meetings of the New Jersey Mosquito Extermination Association at the same times and places. Many of the members of the American Association regularly attended the New Jersey Association meetings, and the advantages of an established group, meeting place, and procedure were obvious. The first meeting away from New Jersey was in 1947 at Philadelphia. The next year (1948) the American Association met jointly with the Florida Anti-Mosquito Association at Fort Pierce, Florida. A policy decision was reached that annual meetings were to be held in geographic rotation, with such state associations as were able to set up and carry out the necessary local arrangements.

In 1949, the Association held a joint meeting with the California Association. This and other meetings followed what has become a typical pattern: after the discussion sessions there was a trip to various points of interest to mosquito abatement workers. In this instance, the formal meeting was held at the University of California in Berkeley, followed by a caravan of over 600 miles through the Central Valley, with visits to numerous mosquito abatement districts, and with scenic side-trips to Yosemite Valley and Sequoia National Park, enlivened by a snow storm in "sunny" California; a second meeting at Los Angeles, with Hollywood entertainment, and finally, visits to districts in Southern California.

In 1950 the annual meeting was held at Virginia Beach with the Virginia Mosquito Control Association. It was preceded by the assembly of many members at Washington, D. C., with trips to the Naval Medical Research Center and the National Institutes of Health and a trip by car to Mount Vernon and other points of interest in Virginia. The meeting was followed by an inspection trip through parts of Virginia, Maryland, Delaware and New Jersey. Many of the delegates attended the immediately subsequent annual meeting of the New Jersey Association at Atlantic City.

In 1951 the American Association met at Chicago jointly with the then recently formed Illinois Association, and a short field trip was made to the Desplaines Valley and North Shore Mosquito Abatement Districts.

In 1952 the Association met jointly with the Utah Association at Salt Lake City, with several interesting field trips during and after the meeting, including a visit to the famous open pit copper mine at Bingham Canyon.

The 1953 annual meeting was held at Daytona Beach, Florida, with interesting trips before and after the meeting.

The Association returned to Atlantic City in 1954 for a joint meeting with the New Jersey group, but without an organized field trip.

In 1955 the American Association met again with the California Association at Los Angeles. This meeting was dedicated to Harold F. Gray upon his retirement from active service. In place of a field trip, there was substituted a fairly extensive demonstration of equipment.

In 1956 the annual meeting was held at Beaumont, Texas, with a trip to Galveston. To some extent, this meeting was held to stimulate interest in mosquito control in Texas, which is large not only in area but also large in mosquito problems.

The 1957 annual meeting was held at Miami Beach, Florida. The 1958 annual meeting was held at Washington, D. C., the 1959 annual meeting at Salt Lake City, Utah, and the 1960 annual meeting in Boston, Massachusetts.

Although the primary purpose of the annual meetings of the Association has been to give serious attention to the technical and administrative phases of mosquito control, they have also afforded an opportunity, often the only opportunity, for the members to become acquainted with each other, with public officials and with members of other societies and professions who have been our guests. These informal gatherings have been both pleasant and profitable for all concerned.

## CONSTITUTION AND BYLAWS

The following is quoted from "Mosquito News" (1945-5(2):55): "The suitability of the original constitution (of the Eastern Association) was questioned at the organization meeting in 1944, and the Constitution Committee, composed of Dr. E. N. Cory, Mr. R. E. Dorer and Mr. R. L. Vannote, was directed to review it. After study of the particular needs of the association, as revealed during the first year of its existence as a national association the Constitution Committee prepared an entirely new document, which has been approved by the Executive Committee, and subsequently adopted by the general membership." The new constitution allowed for affiliation of sectional mosquito control groups and related organizations with the American Association. It appears in full, together with the ByLaws, in "Mosquito News" (1945. 5(2):56-58).

As originally organized in 1944 the American Mosquito Control Association had a relatively simple constitution and bylaws. As the business of the Association increased, and with it its revenues and the cost of publishing both "Mosquito News" and the special bulletins, a need appeared for a more stable and permanent type of organization with limited financial responsibility for the officers. Incorporation as a non-profit corporation was the logical solution and Dr. R. D. Glasgow, then Editor of "Mosquito News," suggested that a committee be appointed to consider the problem and propose a solution.

A committee on incorporation of the Association was appointed by President H. H. Stage in April 1947, the members being Dr. Glasgow, Chairman, Bailey B. Pepper, Harold F. Gray, Don M. Rees, and John A. Mulrennan. At the Ft. Pierce meeting in March, 1948, this committee recommended that the Executive Committee of the Association proceed to incorporate the association under the laws of the State of New Jersey, subject to approval by the general membership by letter ballot. On November 30, 1948, the American Mosquito Control Association

was incorporated as a non-profit corporation under the laws of New Jersey. The late M. M. Stallman of New Jersey gave valuable legal advice and assistance in the preparation and processing of the articles of incorporation and in the development of various portions of the several drafts of the bylaws. The articles of incorporation were published in "Mosquito News" (1948. 8(4):190-192). The original incorporators were R. E. Dorer, R. D. Glasgow, H. F. Gray, W. V. King, T. D. Mulhern, T. E. McNeel, H. D. Peters, D. M. Rees and L. W. Smith. This group then became the national officers of the corporation as an Interim Board pending the adoption of bylaws. The Articles of Incorporation now took the place of a Constitution. Upon receipt of the Articles of Incorporation the Executive Committee of the old Association acted to transfer all of its assets and liabilities to the new corporation. Following incorporation, Dr. Glasgow presented in an editorial a proposed program for the corporation, which outlined its purposes and aspirations, and has been a useful guide ever since. (1948. "Mosquito News" 8(4):193-196).

The Interim Board was required to prepare a set of bylaws for the corporation. This task was placed in the hands of a committee appointed on April 11, 1949, consisting of Dr. Glasgow, Chairman, B. B. Pepper, D. M. Rees, J. A. Mulrennan, E. E. Lynch and L. W. Smith.

This committee eventually reported its recommendations and the suggested bylaws were duly published (1950. "Mosquito News" 10(4):220-227.) There was considerable difference of opinion as to what should be the content of the bylaws. One original draft was quite lengthy and elaborate—another was quite brief and with little detail. Eventually the divergent views of the committee members were reconciled, and reasonable agreement was obtained.

The bylaws were unanimously adopted by vote of the membership of the Association at the Chicago meeting on March 8, 1951. On May 1, 1957 the bylaws were completely revised to their present state.

## MEMBERSHIP AND PUBLICATIONS

*Mosquito News*

Since its beginning, the American Association has grown greatly in stature and usefulness, and the number of members and subscribers to the official journal, *Mosquito News*, has increased from less than 100 in 1944 to over 1600 in 1960. It has attracted members from 110 countries of the world, so that it is actually international in its scope and range of interest. The quality of the papers and discussions at its meetings, and of those published in "Mosquito News" has steadily improved and the range of interest has widened.

A particularly valuable feature of "Mosquito News" which is appreciated by mosquito control workers throughout the world, is the bibliography. This is compiled by Miss Helen Sollers of the Agricultural Research Service of the U. S. Department of Agriculture, formerly the Bureau of Entomology and Plant Quarantine. The references are world-wide in scope, and are grouped by categories for facility in use. Another useful feature is the section of "Reviews & Abstracts" of important articles and reports, arranged for or prepared by Mrs. Helen Louise Durkee.

An interesting and valuable activity of the Association has been the "Good Neighbor Club," initiated and for a long time conducted by Harry H. Stage, more recently by Dr. Ernestine Thurman. The plan was to help people in foreign countries who were interested in mosquito control but were handicapped by post-war difficulties and the distortion of monetary relationships. Persons and also organizations such as libraries in this category, were sent subscriptions to "Mosquito News." These subscriptions have been supported by voluntary contributions from American members and have not only helped our foreign co-workers and contributed to international good will, but have increased the world-wide recognition of the Association, and have helped defray in part the production cost of "Mosquito News."

*Special Bulletins*

An important project of the American Association has been the preparation and publication of special bulletins dealing with procedures and techniques in mosquito control. Three bulletins have been published and a fourth is in preparation. The first, published in 1948, was entitled "The Use of Aircraft in the Control of Mosquitoes." It included 68 pages and was well illustrated. The background of this bulletin was interesting. In October, 1947, President Harry H. Stage requested the membership to meet at Ashville, North Carolina to write the first draft of the proposed bulletin. About 50 persons responded and accomplished the task in three days, subcommittees writing the various chapters. The sections were then submitted to Dr. Paul F. Russell of the Rockefeller Foundation for assembling and coordination, and the final report was then edited by Dr. R. D. Glasgow and Dr. D. L. Collins, Editor and Associate Editor, respectively, of "Mosquito News." The Association is greatly indebted to H. W. Van Hovenberg, who assisted by allocating a small reserve left from a malaria control fund, originally donated by Edwin Gould, Chairman of the Board of Directors of the St. Louis Southwestern Railroad. From this fund, Mr. Van Hovenberg loaned \$400 to assist in financing the printing of the bulletin, and when the loan was repaid, made a grant of \$500 to assist in publishing future bulletins. (1948. *Mosquito News* 8(3):122). Mr. Van Hovenberg later made substantial contributions to the "Good Neighbor" Club from the Gould Fund, in the amount of \$170. Harry H. Stage and Ralph W. Van Derwerker guaranteed to underwrite the balance of the costs from their own personal funds, but the bulletin sold well and ultimately repaid its entire cost.

The second special bulletin, published in March, 1952, was entitled "Ground Equipment and Insecticides for Mosquito Control." It contained 118 pages. Like the first, it was well illustrated with photographs and contained many tables of useful data.

The members of the committee which produced this bulletin were: Robert L. Vannote, Chairman; William E. Bickley, H. D. Peters, R. L. Armstrong, J. L. Clarke, T. G. Raley, L. W. Smith, H. H. Stage and R. E. Dorer. Dr. E. F. Knipling served as Editor. This bulletin also sold well, and both Bulletins No. 1 and No. 2 eventually produced a small profit for the Association.

The third bulletin was entitled "Mosquito Culture Techniques" and was written by Mrs. Helen Louise Trembley Durkee, to whom the American Association is greatly indebted for a long period of devoted service in several capacities. It contains 73 pages and was published in 1955. It, also, has been highly acclaimed. The production problems were solved by Commander John M. Hirst, MSC, USN. The editor was Dr. Donald L. Collins, and the fly leaf of the bulletin contains a full page of credits to others who assisted in its preparation. It has sold fairly well, and in spite of its somewhat limited application, it has entirely paid for the cost of production. It is felt that from time to time there will be bulletins which the Association should publish, but on which it may not be possible to recover the entire cost through sales.

A special publication, somewhat different in composition from the regular bulletin series, but nevertheless an important contribution to the literature on mosquito control, was published under the title, "The Use of Fogs and Mists for Adult Mosquito Control. Proceedings and Papers of the Toledo Seminar of the American Mosquito Control Association." The title is self-explanatory, and the publication was printed following the seminar held at Toledo, Ohio, on September 29 through October 1, 1954. The proceedings were recorded and edited by the Toledo Area Sanitary District, and the 65 page booklet was published through the courtesy of Willys Motors, Inc.

At the present time there is in preparation a fourth bulletin dealing with the organization and functions of mosquito control agencies. A large committee headed

by CDR John M. Hirst has assembled the material for this bulletin, which is to be edited for publication by Harold F. Gray.

### *Publication of Proceedings*

Prior to 1949 the more important items of the annual business meetings were reported in "Mosquito News" and some of the papers and committee reports presented were published therein.

For the 1949 meeting, held jointly with the annual meeting of the California Mosquito Control Association, the entire proceedings of both associations were published by the California Association. The Proceedings of the 1950 meeting, which was held at Virginia Beach, were reproduced in a limited special edition, financed by contributions from the Virginia Association and individual members of AMCA.

There has been no "official" policy as to the publication of the papers and proceedings presented at the annual meetings. In general, where the local association regularly publishes its own proceedings in printed form (New Jersey and California) the proceedings and papers are included therein, and enough extra copies are printed for distribution to the members of the American Association. With other meetings, the practice has been to publish in "Mosquito News" with the assistance of a financial contribution from the local or host association. Thus far, beginning in 1951, host associations which have contributed sums up to \$1,500.00 each have been the Associations or groups in Illinois, Utah, Florida, Texas; the Southeastern Region, and the Northeastern Association.

### PERSONALITIES

Dr. Thomas J. Headlee, Professor of Entomology and State Entomologist of New Jersey, a leader in early mosquito control activities and organization, in the years preceding the formation of the AMCA took every possible opportunity

to foster exchange of information, cooperation, and association of mosquito workers. His advice guided the founders of the Eastern Association of Mosquito Control Workers and he gave valued counsel when the question of establishing a publication (he called it a "house organ") arose. When the proposal to nationalize the Eastern Association was made, his sage advice to its officers was to make it such a good organization that mosquito workers everywhere would want to become members and then nationalization would result from outside demands! And that did come to pass. He was responsible for the training of many mosquito workers, and was a constant source of inspiration to them.

Also from the beginning of the predecessor association, the Eastern, and all through the history of the American Association, Dr. Robert D. Glasgow has been a source of guidance and inspiration. Ever willing to labor indefatigably on any frustrating organizational problem, ever ready to consult with great patience in seeking a democratic solution of policy problems amid a welter of strongly contrasting ideas and opinions among the membership, and contributing always of his unexcelled editorial talents to make "Mosquito News" a journal unsurpassed in its field, his contributions to the association have been great indeed.

Another figure of world-wide influence in Medical Entomology, who has contributed much "over and above the call of duty" to the Association has been Dr. F. C. Bishopp.

Many other Association members have achieved national and international prominence, not only in mosquito work, but in other fields as well. Their names include Harold F. Gray; W. B. Herms and Robert Matheson, authors of standard texts on mosquitoes and their control; H. H. Stage, E. N. Cory, W. H. W. Komp, Louis A. Stearns, Paul Russell, H. W. Van Hovenberg, L. O. Howard, L. L. Williams, J. A. LePrince, Col. Stanley J. Carpenter, C. C. Adams, W. V. King, Fred L. Soper, and others.

Among contemporary active mosquito control workers the list of those who have aided the growth and development of the Association is just too great to attempt to list the individuals by name. But to all who have contributed, the entire association is indebted.

Through the years the Association has elected to Honorary Membership the following men who have been outstanding in the field of mosquito control:

Thomas J. Headlee,\* New Brunswick, New Jersey, 1944; William B. Herms,\* Berkeley, California, 1944; J. A. LePrince,\* Memphis Tennessee, 1944; L. L. Williams, Jr., Washington, D. C., 1944; Willard V. King, Fort Lauderdale, Florida, 1948; Robert D. Glasgow, Albany, New York, 1948; Lewis W. Hackett, Berkeley, California, 1951; Robert Matheson,\* Ithaca, New York, 1951; Harold F. Gray, Oroville, California, 1955; Louis A. Stearns,\* Newark, Delaware, 1958.

Previously, the Eastern Association, in 1937 and 1940, had elected to Honorary Membership L. O. Howard\* and C. C. Adams.\*

#### CONCLUSION AND RECAPITULATION

It is now 60 years since the first serious attempts at mosquito control were begun (Watson in Malaya, Gorgas and LePrince in Havana). At first the work was regarded by many people with scorn, amusement, contempt, and even hostility. Gradually the value of this work, first in the prevention of disease, then for human comfort, and finally for community economic benefit, has become recognized. Today scientists and professional men who formerly would have disdained to be associated with the work have become enthusiastic and devoted supporters of and contributors to the program, and the general public has accepted it to the extent not only of substantial tax support but also of strong community approval.

Not only have various professional societies contributed much to the work

through scientific research and publication, but organizations of the practical field workers have been established to improve operations. At first these were local (for example, the New Jersey association). Ultimately the need for a national association was realized, and was effected through the organization of the American Mosquito Control Association, which has drawn to itself not only the administrators and field personnel, but also the scientific and professional groups who are an integral part of successful control measures. Now the American Association has in fact become international in scope and in membership. It has become acknowledged as an organization of real merit, which serves the public interest on a high level of technical and professional excellence, with sincere dedication to the welfare of mankind. Its past record is commendable and worthy of respect. Its future is bright with promise.

#### Historical Committee

Robert D. Glasgow, T. G. Raley, Robert L. Vannote, Thomas D. Mulhern, Harold Farnsworth Gray, Chairman.

#### APPENDIX A

1. Principal Meetings and Officers of The Eastern Association of Mosquito Control Workers (1935-1943).

*First Meeting*, June 26, 1935, Trenton, N. J.

\*\*P, T. J. Headlee; VP, R. D. Glasgow; ST, T. D. Mulhern.

*Second Meeting*, October 26, 1936, Newark, Del. P, T. J. Headlee; VP, R. D. Glasgow; ST, T. D. Mulhern.

*Third Meeting*, August 11, 1937, Providence, R. I. P, T. J. Headlee; VP, W. S. Corkran; ST, T. D. Mulhern.

*Fourth Meeting*, October 20-21, 1938, New Brunswick, N. J. P, T. J. Headlee; VP, W. S. Corkran; ST, T. D. Mulhern.

*Fifth Meeting*, August 25, 1939, Bayshore, N. Y. P, T. J. Headlee; VP, W. S. Corkran; ST, T. D. Mulhern.

*Sixth Meeting*, November 6, 1940, New Brunswick, N. J. P, L. A. Stearns; VP, R. C. Botsford; 2VP, R. L. Vannote; ST, T. D. Mulhern.

\*\* P—President.

VP—Vice President.

2VP—Second Vice President.

ST—Secretary-Treasurer.



*Seventh Meeting*, November 19, 1941, New Brunswick, N. J. P, L. A. Stearns; VP, R. C. Botsford; 2VP, R. L. Vannote; ST, T. D. Mulhern.

*Eighth Meeting*, November 6, 1942, New Brunswick, N. J. P, R. C. Botsford; VP, R. L. Vannote; 2VP, R. D. Glasgow; ST, T. D. Mulhern.

1943. No General Meeting held because of travel limitations due to war. 1942 officers continued through 1943.

*Ninth Meeting*, March 16, 1944, Atlantic City, N. J. At this meeting the Eastern Association was dissolved and became the American Association, with the following officers: P, R. L. Vannote; VP, R. D. Glasgow; 2VP, P. W. Ruth; ST, T. D. Mulhern.

## 2. Principal Meetings and Officers of the American Mosquito Control Association (1944-1960)

*First Meeting*, March 29, 1945, Atlantic City, N. J. P, P. W. Ruth; VP, R. D. Glasgow; 2VP, H. H. Stage; ST, T. D. Mulhern. Executive Committee: Above named and R. L. Vannote, H. L. Fellton, L. A. Stearns.

*Second Meeting*, April 4, 1946, Atlantic City, N. J. P, H. H. Stage; VP, R. D. Glasgow; 2VP, H. D. Peters; ST, T. D. Mulhern. Executive Committee: Above named and P. W. Ruth, L. A. Stearns, G. S. Comstock.

*Third Meeting*, April 5, 1947, Philadelphia, Pa. P, H. D. Peters; VP, H. F. Gray; 2 VP, W. V. King; ST, T. D. Mulhern. Executive Committee: Above named and H. H. Stage, R. D. Glasgow, T. E. McNeel, D. M. Rees.

*Fourth Meeting*, March 28-31, 1948, Ft. Pierce, Florida. Interim Board: Chair, H. D. Peters; ST, T. D. Mulhern; R. E. Dorer, R. D. Glasgow, W. V. King, T. E. McNeel, H. F. Gray, D. M. Rees, L. W. Smith, H. H. Stage.

*Fifth Meeting*, February 7-9, 1949, Berkeley, California. Interim Board: Chair., H. F. Gray; ST, T. D. Mulhern; R. E. Dorer, R. D. Glasgow, W. V. King, T. E. McNeel, H. D. Peters, D. M. Rees, L. W. Smith, H. H. Stage.

*Sixth Meeting*, February 23-24, 1950, Virginia Beach, Virginia. Interim Board: Chair., L. W. Smith, D. M. Rees, T. D. Mulhern, R. E. Dorer, H. F. Gray, H. D. Peters, R. D. Glasgow, W. V. King, T. E. McNeel, H. H. Stage.

*Seventh Meeting*, March 6-8, 1951, Chicago, Illinois. Board of Directors and Officers. P, D. M. Rees; VP, C. R. Twinn; ExS, T. D. Mulhern\*; T, R. E. Dorer; L. W. Smith.

*Eighth Meeting*, March 24-27, 1952, Salt Lake City, Utah. Board of Directors and Officers. P, C. R. Twinn; VP, F. C. Bishopp; ExS, T. G. Raley; T, R. E. Dorer; D. M. Rees, L. W. Smith.

*Ninth Meeting*, April 12-17, 1953, Daytona Beach, Florida. Board of Directors and Officers. P, F. C. Bishopp; VP, R. E. Dorer; ExS, T. G. Raley; T, L. W. Smith; C. R. Twinn, D. M. Rees.

*Tenth Meeting*, March 8, 1954, Atlantic City, N. J. Board of Directors and Officers. P, R. E. Dorer; PE, R. F. Peters\*; VP, F. H. Stutz; ExS, T. G. Raley; T, L. W. Smith; F. C. Bishopp.

*Eleventh Meeting*, January 23-27, 1955, Los Angeles, California. Board of Directors and Officers. P, R. F. Peters; PE, F. H. Stutz; VP, A. W. Lindquist; ExS, T. G. Raley; T, L. W. Smith; R. E. Dorer, F. C. Bishopp.

*Twelfth Meeting*, February 5-7, 1956, Beaumont, Texas. Board of Directors and Officers. P, F. H. Stutz; PE, A. W. Lindquist; VP, J. M. Hirst; ExS, T. G. Raley; T, L. W. Smith; R. F. Peters, R. E. Dorer.

*Thirteenth Meeting*, April 28-May 2, 1957, Miami Beach, Florida. Board of Directors and Officers. P, A. W. Lindquist; P.E., J. M. Hirst; VP, A. D. Hess; ExS, T. G. Raley; T, L. W. Smith; F. H. Stutz, R. F. Peters.

*Fourteenth Meeting*, Feb. 23-26, 1958, Washington, D. C. Board of Directors and Officers. P, J. M. Hirst; P.E., A. D. Hess; VP, D. M. Jobbins; ExS, T. G. Raley; T, L. W. Smith; A. W. Lindquist, F. H. Stutz, A. F. Geib.

*Fifteenth Meeting*, April 12-15, 1959, Salt Lake City, Utah. Board of Directors and Officers. P, A. D. Hess; P.E., D. M. Jobbins; VP, W. E. Bickley; ExS, T. G. Raley; T, L. W. Smith; J. M. Hirst, A. W. Lindquist,\* RS, A. F. Geib.

*Sixteenth Meeting*, March 27-30, 1960, Boston, Mass. Board of Directors and Officers. P, D. M. Jobbins; PE, W. E. Bickley; VP, A. F. Geib; A. H. Hess; John M. Hirst; ExS, T. G. Raley; T, L. W. Smith,\* RS, E. Thurman.

## 3. Regional Directors.

1951, 1952. D. MacCreary, D. M. Jobbins, F. H. Stutz, J. L. Clarke, A. F. Geib, A. W. Lindquist, H. W. VanHovenberg, O. W. Young, A. Gabaldon, A. S. West, H. H. Stage, N.A.\*

1953. G. E. Washburn replaced A. F. Geib, and A. W. A. Brown replaced A. S. West.

1954. Changes as follows: S. Minnich for F. H. Stutz; O. McFeely for \*\*J. L. Clarke; C. M.

\* ExS—Executive Secretary.

T—Treasurer.

PE—President Elect.

RS—Recording Secretary.

N. A.—National Advisor

\*\* Mr. Clarke died shortly after election, and most his entire term was served by Franklin

- Gjullin for A. W. Lindquist; C. A. Nau for H. W. VanHovenberg; D. M. Rees for O. W. Young; L. Vargas for A. Gabaldon; R. L. Vannote for H. H. Stage, N.A.
1955. Changes as follows: C. F. Scheel for O. McFeely.
1956. Changes as follows: D. W. Micks for C. A. Nau; A. D. Hess for D. M. Rees; B. Hocking for A. W. A. Brown; H. P. S. Gillette for L. Vargas.
1957. Changes as follows: W. E. Bickley for D. MacCreary; C. D. Grant for G. E. Washburn.
1958. Changes as follows: V. Conant for D. M. Jobbins; J. A. Mulrennan for V. S. Minnich; L. S. Miller for C. M. Gjullin; J. E. Graham for D. M. Rees; L. Vargas for H. P. S. Gillette.
1959. Changes as follows: R. W. Bunn for W. E. Bickley; O. P. Breland for D. W. Micks.
1960. Changes as follows: C. M. Gjullin for L. S. Miller.

#### 1. Staffs, Boards and Committees of *Mosquito News*

A volume of *Mosquito News* comprises 4 issues, namely, March, June, September and December, numbered 1, 2, 3 and 4 of each volume. The personnel listed here were those listed in their respective capacities in the No. 4 issue of each volume, since the No. 1 issues were sometimes prepared before the changes resulting from an annual meeting could be included.

- Vol. 1. (1940) L. W. Smith, Ed.; R. L. Vannote; R. J. VanDerwerker.
- Vol. 2. R. J. VanDerwerker, Ed.; J. T. Hart, Jr.; C. T. Williamson.
- Vol. 3. J. T. Hart, Jr., Ed.; C. T. Williamson; H. H. Stage; R. J. VanDerwerker.
- Vol. 4. Editorial Board: R. D. Glasgow, Ed.; C. T. Williamson, Bus. Mgr.; T. D. Mulhern, Sec.-Treas. of Association.
- Vol. 5. Editorial Board: same as for Vol. 4. Publications Committee: Edit. Board as above, with R. L. Vannote, R. Matheson and H. L. Felton.
- Vol. 6. Editorial Board: R. D. Glasgow, Editor; D. L. Collins, Helen Louise Trembley and H. H. Stage, Associate Editors; C. T. Williamson, Bus. Mgr.; T. D. Mulhern. Publications Committee: R. D. Glasgow; C. T. Williamson; T. D. Mulhern; H. H. Stage; R. Matheson; J. T. Hart, Jr.
- Vol. 7. Same as Vol. 6.
- Vol. 8. Same as Vol. 7 except for replacement of Stage, Matheson and Hart by H. D. Peters, A. D. Hess and B. V. Travis, on Publications Committee.
- Vol. 9. D. L. Collins, Editor; R. D. Glasgow, Consulting Editor; Margaret G. Slater, Editorial Assistant; H. H. Stage, Helen

- Louise Trembley and R. F. Peters, Associate Editors; R. L. Vannote, Advertising Manager; C. T. Williamson, Business Manager; T. D. Mulhern, Secy.-Treas. of Association. Publications Committee same as for Vol. 8.
- Vol. 10. Same as Vol. 9, with W. E. Bickley, Associate Editor.
- Vol. 11. Editorial Staff, same as Vol. 10. R. L. Vannote, Advertising Manager; T. D. Mulhern, Exec. Secy.; R. Dorer, Treas. Publications Committee: H. F. Gray, B. I. Gerry, W. B. Owen, F. C. Bishopp, B. B. Pepper.
- Vol. 12. Staff and Committee substantially same as for Vol. 11, but with addition of E. J. Hansens and B. V. Travis as Associate Editors and with T. G. Raley, Executive Secretary and R. E. Dorer, Treasurer.
- Vol. 13. Associate Editors as follows: Helen Sollers, Helen Louise Trembley, A. W. Morrill and B. V. Travis. Other changes: W. E. Bickley, Advertising Manager; L. W. Smith, Treasurer; R. F. Peters, Chairman of Publications Committee.
- Vol. 14. Same as for Vol. 13
- Vol. 15. Editorial Staff same as for Vol. 14. C. R. Twinn, Chairman of Publications Committee; F. P. Creadon, Advertising Manager; William H. Thom, Assistant Treasurer.
- Vol. 16. Same as for Vol. 15.
- Vol. 17. Same as for Vol. 16, with addition of W. C. McDuffie as Associate Editor.
- Vol. 18. Same as for Vol. 17.
- Vol. 19. Same as for Vol. 18.
- Vol. 20. Same as for Vol. 19.

#### APPENDIX B

Inspection Tours Held Under the Auspices of the Eastern Association of Mosquito Control Workers, 1935 to 1943, and the American Mosquito Control Association, 1944 and after.

(Some of the tours are reported in greater detail in other publications, and reference is made to these reports, using the following code: NJMEA Proc.—New Jersey Mosquito Extermination Association Proceedings. MN—Mosquito News. Each tour included many items in addition to those referred to).

- 1936, Oct. 20—21. Coastal areas of Delaware, and Delaware Co., Penna. Salt marsh mosquito problems and work of CCC Camps in Delaware, and diked marshes and industrial mosquito problems in Penna. (1938—NJMEA—25 Proc:58).
- 1937, Aug. 10—12. Massachusetts, Rhode Island, Connecticut. Salt marsh mosquito control problems, *Mansonia perturbans* and other fresh water mosquito problems, and community mosquito control. (1938—NJMEA—25 Proc:58).
- 1938, Jan. 22—Feb. 15. Canal Zone, Republic of Panama, and Cuba. Malaria and yellow

fever control programs in Panama, research of the Gorgas Memorial Laboratory in jungle villages, and brief visit to the malaria control program near Havana, including the work of the Rockefeller Foundation. (1938-NJMEA-25 Proc:38-61).

4. ———. Oct. 20-21. New Jersey. Open and diked salt marsh and fresh water mosquito problems, equipment, and methods, in northern, central, and southern portions of the State. (1939-NJMEA-26 Proc:117).
5. 1939, Jan. 16-27. Georgia and Florida. Brief visit to Henry Rose Carter Laboratory (USPHS) at Savannah. Extensive tour of mosquito control projects about Jacksonville, Daytona, Ft. Pierce, Dade and Broward Counties, other east coast locations, the Florida Keys, Sarasota, Ft. Myers, Tampa, and St. Petersburg. USDA Research projects at Orlando and New Smyrna. (1939-NJMEA-26 Proc:118).
6. ———. Aug. 15-16, New York. Observe salt marsh mosquito control operations in Nassau and Suffolk Counties, also equipment, facilities, and some fresh water operations. Study plans for mosquito control at the New York World's Fair, at Flushing. (1940-NJMEA-27 Proc: 95).
7. ———. Oct. 26-27, New Jersey. Hudson, Bergen, Essex, Passaic, Morris, Middlesex, and Union Counties. A wide range of activities and problems, including open and diked salt marshes, industrial and residential areas, flood water areas, also equipment and operational facilities. (1940-NJMEA-27 Proc:97).
8. 1940, Feb. 15-21. Virginia, North Carolina. Study salt marsh and fresh water swamp mosquito problems, including those of the Dismal Swamp. Observe control operations of local agencies, and federal work relief agencies. (1940-NJMEA-27 Proc:98).
9. ———. June 26-27. Connecticut. Observe federal work relief projects in coastal areas, including a massive tide gate structure of new and permanent design. (1941-NJMEA-28 Proc:156).
10. ———. July 24-25. Delaware. Inspect work of CCC camps on salt marsh mosquito control. Visit research projects of the University of Delaware. (1941-NJMEA-28 Proc:156).
11. ———. Aug. 28, New York. Observe mosquito control techniques being practiced at the New York World's Fair, at Flushing. (1941-NJMEA-28 Proc:156).
12. 1941, July 29. New Jersey. Study the performance of hydraulic dredge in improving the channel of the Passaic River.
13. ———. Aug. 28. Delaware. Study problems of *An. quadrimaculatus* control in swamps near Fort Dupont, and observe concentration of adults in subterranean vaults at historic Fort Delaware on Pea Patch Island.
14. ———. Sept. 22-26. Alabama, Tennessee, Mississippi. Observe new techniques of malaria control on impounded waters, developed by the TVA. Visit USPHS office in Memphis, and the historic malaria control projects about that city. Attend meeting of the Howard-Krauss Society at South Side High School, Memphis, which was organized for malaria study by Mr. J. A. LePrince. (1942-NJMEA-29 Proc:113).
15. 1942, June 19. Virginia. Observe mosquito control operations about the U. S. Naval Air Station at Norfolk, and work on the City-County control program.
16. ———. Nov. 6. New Jersey. Observe the operation of dikes, tide gates, pumps, and excavation machines in the northeastern counties of the State.
17. 1944, Oct. 31-Nov. 1. Pennsylvania, New Jersey. Review accomplishments in Delaware County, Penn. and in Gloucester, Cape May, and Atlantic Counties in New Jersey. (1944-MN-4(4):120).
18. 1945, Mar. 29. New Jersey. Inspect circulatory ditching system and special salt marsh ditch cleaning machines in Atlantic County. (1945-MN-5(2):55).
19. ———. Nov. 20-21. Washington, D. C. area. Field visits to mosquito control projects in the District, and visits to the offices and laboratories of the USDA in Washington and Beltsville, and to the National Institutes of Health, the National Naval Medical Center, and the Army Medical Center. (1946-MN-6(1):34).
20. 1947, May 8-9. Illinois. Desplaines Valley Mosquito Abatement District, record keeping procedures, drainage equipment, 5 special off-the-road motorized spray and fog units, biological control in wildlife "oasis," and control of flies by DDT. (1947-MN-7(1):35) (1947-Desplaines Valley M.A.D.-Ann. Rept.: 14).
21. 1948, March 29, April 7. Florida. Visits to coastal area projects before and after Annual Meeting at Ft. Pierce. (1948-MN-8(2):77).
22. 1949, Feb. 10-15. California. Motorcade through San Francisco Bay Area, Sacramento Valley, San Joaquin Valley, Yosemite and Sequoia National Parks, Los Angeles and Southern California areas. Visits to various mosquito control agencies. (1948-MN-8(4): 175).
23. 1950, Feb. 21. Washington, D. C. area. Visits to USDA Offices and Laboratories, National Institutes of Health, and National Naval Medical Center. (1949-MN-9(4):181).
24. ———. Feb. 25-27. Virginia, Maryland, Delaware, New Jersey. Motorcades by individual autos, over various routes. Hampton Roads, Williamsburg, Va., through Maryland and Delaware, Cape May and Atlantic Counties in New Jersey, with some delegates visiting northern New Jersey and New York, following N. J. Mosquito Extermination Association Meetings, at Atlantic City. (1949-MN-9(3):120. 9(4):181) (1950-MN-10(2):99).
25. ———. July 11-15. Massachusetts, Rhode Island, Connecticut, Vermont. Inspect salt

- marsh and fresh water mosquito control projects of various local programs. (1950-MN-10(3):155).
26. 1951, March 7. Illinois. Inspections of mosquito control operations of The Desplaines Valley, North Shore, Lake Forest, and Highland Park Mosquito Abatement Districts. See equipment and headquarters facilities. (1950-MN-10(4):217).
27. 1952, March 26. Utah. Tour of mosquito abatement problems and operations of several local agencies about Great Salt Lake. (1951-MN-11(4):224).
28. ———. July 30-31. Canada. Visit the Science Service, Canada Department of Agriculture, and the Ottawa Federal District Commission. See research program at the Dominion Experimental Farm, and observe demonstrations of fogging and spraying. Observe flood water mosquito producing areas. See new developments in protective clothing for wear in mosquito infested areas. (1952-MN-12(3):217).
29. 1953, April 12-18. Georgia and Florida. Inspections of various mosquito problem areas and control programs before and after Annual Meeting at Daytona Beach. Visit Silver Springs, Bok Tower, Lake Okechobee, USDA Laboratory at Orlando, and USPHS Laboratory at Savannah, Ga. (1952-MN-12(3):219) (1952-MN-12(4):259).
30. 1954, March 13-14. New Jersey. See research facilities and program of the Department of Entomology, Rutgers University, and visit mosquito extermination commissions in north-eastern part of State. (1954-MN-14(2):89).
31. 1954, Sept. 29-30. Ohio. Seminar on fogs and units for mosquito control. Host, Toledo Area Sanitary District. (1954-MN-14(2):111).
32. 1955, Jan. 28-30. California. Visit Mosquito Abatement Districts about Los Angeles. Individual motor trips to Mojave Desert, The San Joaquin Valley, Sacramento Valley, and through the coastal area to the San Francisco Bay area. (1954-MN-14(4):219) (1955-MN-15(1):49).
33. 1956, Feb. 8, Texas. Field inspection of salt marsh mosquito problems, Beaumont to Galveston. (1955-MN-15(4):237).
34. 1957, Apr. 26-28 and May 2-4. Florida. Before and after annual meeting at Miami Beach. Auto trips to Entomological Center, Florida State Board of Health at Vero Beach, and USDA Laboratory at Orlando. Visits to various local mosquito abatement programs and to Florida Keys. Witness equipment demonstration. (1956-MN-16(4):309) (1957-MN-17(1):50).
35. 1958, Feb. 27-28. Washington, D. C. area. Tour of scientific institutions, including the U. S. National Museum, the USDA Laboratories and offices at Beltsville, the Army Medical Center, and the National Institutes of Health. (1957-MN-17(4):319).
36. 1959, April 1-2. Washington, D. C. Symposium on Mosquito Control and Fish and Wildlife Management.
37. 1959, April 14-15. Utah. Witness demonstration of field equipment. Aerial flights over Great Salt Lake and vicinity. (1958-MN-18(3):259).