

## ASSOCIATION NEWS

### ANNUAL MEETING OF THE AMERICAN MOSQUITO ASSOCIATION, HELD AT PHILADELPHIA, PA., ON APRIL 5, 1947

#### SUMMARY OF THE PROCEEDINGS

The meeting was opened at 9:45 A.M. by the President, Mr. H. H. Stage, Bureau of Entomology and Plant Quarantine, Washington, D. C.

The chairman of the Committee on Arrangements, Mr. Roland E. Dorer, State Director of Malaria Control, Norfolk, Va., was called upon to explain the general rules to be followed by each speaker. All discussion was extemporaneous.

The president called upon various members in turn to introduce themselves, briefly to describe their work, and then to answer questions relating to subjects of special interest. In order to conserve space, only the answers to the questions are printed, and most of them have been condensed or paraphrased.

DR. F. C. BISHOPP, in charge of research for the Bureau of Entomology and Plant Quarantine, gave a brief outline of his duties, and described the organization of the Bureau and the services performed by its several Divisions. He pointed out that while the Division of Insect Identification and the Insecticide Division are obviously of special interest to mosquito control workers, the Division of Foreign Parasite Introduction, which, among other duties, adapts research findings to special uses, and the divisions set up on the basis of crops, also contribute much information which can be used in the field of insects affecting man and animals.

MR. CHESTER ROBINSON, Manager of the East Side Mosquito Abatement District of California, stated that the principal mosquito problem in his district is *Aedes dorsalis* and *Anopheles quadrimaculatus* breeding in the irrigated orchards and the permanent pasture areas. In some irrigation districts drainage has already been provided; other districts only reserve the

right for ditches. The present districts of California have been doing quite a bit of drainage work, both deep-well pumping to lower the water table, and surface drainage pumping in reclaiming water for reuse.

Funds for the district come from two sources: 1. A special tax levied against all property within the district, which shall not exceed fifty cents on each \$100 of assessed valuation; and 2. a special grant from a State appropriation of \$600,000 made to the State Board of Health, to be used for the purpose of getting new pest abatement districts started. A bill now before the State Legislature is designed to repeat this appropriation for another year.

MR. W. E. BICKLEY, University of Richmond, teacher of entomology and zoology, mentioned that the several control districts in Virginia are all under the direction of Mr. Dorer as a representative of the State Department of Health. The State Department of Health partially finances the work and provides an amount of money in proportion to the amount provided by the locality or district. Each commission is made up of two or three citizens, and the State Commissioner of Health is ex-officio a member of each district commission.

DR. L. DAUTREBANDE, pharmacologist and entomologist, in charge of general organization for the District of Katanga in the Belgian Congo, stated that all of the natives are malarial, with *Anopheles gambiae* as a vector. Other mosquito-borne diseases in the territory are filariasis and sleeping sickness. With the tsetse fly, very good control was obtained with DDT in the straw huts, using DDT aerosols the droplet diameters of which ranged from one to five microns. Most

of the aerosols are of water suspensions, produced under high pressure and filtered through liquid. With a very large organization it might be possible to eradicate *Anopheles gambiae* from that part of the world with a DDT residual spray. The economic resources of this particular region are timber and minerals.

MR. LA DOW, of Gloucester County, New Jersey, stated that *Anopheles quadrimaculatus* is the most prevalent anopheline in his section. On the marshes, where ordinary measures were insufficient, DDT was tried as a barrier ground spray for *vexans*. Wettable DDT was applied at 35-pound pressure, both from pumps on trucks, and from the air, to create a barrier zone about 50 to 100 feet wide around the marshes, spraying both ground and vegetation. A 95 per cent control outside the marsh was obtained by applying one pound DDT per acre over the barrier zone. There was a fine demonstration of mosquito control in industrial plants which were completely surrounded by marshes. A 24-hour operating schedule required many employees to wear head nets and gloves during periods of peak mosquito activity. As many as 250 female mosquitoes per night were caught in a trap adjacent to those properties; but in a demonstration area around some warehouses, no mosquitoes were taken in a trap for three weeks. The fourth week there were three.

There was no evidence that DDT killed birds or drove them away.

DR. BISHOPP, in answer to a question, said that the Food and Drug Administration and the National Institute of Health are doing extensive research on chronic toxicity of DDT and a number of other insecticides, but they are not fully prepared to give an answer about the general toxicity of DDT. It appears that when DDT is used in accordance with directions set up for its use, there is very little hazard in connection with mosquito control operations.

MR. L. W. SMITH, Superintendent in Middlesex County, and in the absence of

Mr. Vanderworker, Acting Superintendent in Union County, New Jersey, described the Union County work. Union County is rather small in area, but has a considerable mosquito breeding area, and has a fairly large appropriation for this part of the country—\$80,000. Middlesex County has important industrial sections, a few seashore resorts, and extensive farming areas. The appropriations there are about \$26,000 to \$27,000. One problem is to get a good, light, ditch-cleaning machine, and to develop something to take care of the "peak load." The airplane was considered unsatisfactory with its present equipment. When the plane went over dense stands of foxtail (*Phragmites*), records from mosquitoes hung at different heights from the ground showed that control under those conditions did not occur. There are probably 20,000 to 30,000 acres of this foxtail in the metropolitan area, and it is a big problem. Aerosol fog machines were not used on Union marsh, as they were in Bergen and Hudson.

MR. PERRY W. RUTH of Norfolk, Va., congratulated the president and other officers of the Association on the quality of their leadership during the past year. He then mentioned the formation of the Virginia Mosquito Control Association, of which he is the first President, and of which Mr. R. E. Dorer is Secretary and Treasurer.

DR. BISHOPP, at Mr. Stage's request, brought up the matter of holding the next annual meeting of the Association in conjunction with the International Congress on Tropical Medicine. The dates are May 5 to 10, 1948, in Washington, D. C. One of the twelve sessions will be on malaria, one on veterinary medicine, one on entomology, one on protozoology; and one general session on public health which will deal with administration, etc., covering that whole interesting field in which all members of the Association are concerned. There will also be some excursions in which the delegates will be permitted to visit the National Institute of Health, the Navy Research Institute at Walter Reed Hospital, and Beltsville Agricultural Re-

search Center where we are doing some work. It is also hoped to have large exhibits of ways of combating mosquitoes and malaria, including the various devices involved and the procedure being followed in this country. Members of the American Mosquito Control Association might play an important part in putting over some of that educational work.

Regular members pay \$10.00, which involves not only the privileges of attending the meeting, but also a copy of the proceedings, which is quite a sizable volume. The associate membership is \$5.00. It is hoped that a good representation of engineers, doctors, entomologists, and members of other related groups may become active members and participate in voting and the general conduct of the Congress. Sustaining membership will involve a good fee on the part of industry and will permit members to have exhibits.

It was moved, seconded, and passed that the American Mosquito Control Association shall become one of the sponsors of the Congress, and that the chairman shall appoint a committee to cooperate with the general program committee of that group. Mr. Stage appointed the following committee: Dr. F. C. Bishopp, chairman; Harold Gray from California, R. E. Dorer from Virginia, W. V. King from Orlando, Fla., and Don M. Rees from Utah.

The Resolutions Committee, through Mr. Vannote, its secretary, presented a resolution to the effect that the Association, which represents Mosquito Abatement Districts or commissions in 37 States or Territories, urge the War Assets Administration to take steps to release immediately surplus materials and equipment for purchase by mosquito control and mosquito abatement agencies and public health agencies.

The resolution was accepted.

MR. STAGE showed a series of Kodachrome slides illustrating his trip to South America. Among the mosquito control observations that he mentioned in his accompanying remarks was the fact that oil solutions of DDT applied to adobe

walls are practically worthless, but that with an emulsion, only one treatment a year was needed. He thought, further, that the water suspension was even more effective. In Maracaibo, the Rockefeller Foundation is testing several hundred kinds of DDT formulations on several dozen different kinds of surfaces, using boxes lined with these surfaces.

MR. H. F. GRAY, of California, spoke briefly to call attention to a paper by Ted Raley describing what he called a "plumber's nightmare," an aerosol generator made of pipe fittings, which can be attached to the exhaust of trucks and jeeps.

(Editor's note: The paper mentioned was published in the June, 1947, number of MOSQUITO NEWS.)

MR. H. D. PETERS, Director of Sanitation, City Health Department, Jacksonville, Fla., stated that his mosquito control group is financed through a budgetary item, entirely by the City of Jacksonville. Recently the State Budget Committee recommended a bi-ennial fund for use by the State Board of Health to promote the establishment of additional mosquito control districts. The law states that it is permissible for any area to vote a district and to levy taxes; but none of this recommended special fund is to be spent until a survey is made, and the district approved by the State Board of Health. Prior to the appropriation of such a fund, the State Board had no facilities or finances to make such a survey. One district was established almost a year before they could do any work.

MR. A. CARL HAAG, MR. W. D. HENDERSON, and others spoke of the mosquito problems in Ocean County, New Jersey. The principal problem is 35,000 acres, mostly salt marsh, of mosquito breeding area. Ocean County has reduced breeding by 90 per cent. There are some cases in Ocean County where ditching won't take care of "peak loads." The water seeps or trickles through the grass in these low areas, and the fish can't get in to do the job. It seems to be a problem of larvicid-

ing, and a high concentration larvicide is needed.

DR. B. V. TRAVIS, U. S. Bureau of Entomology and Plant Quarantine, mentioned that while mosquito ovicides appeared, in general, not too effective, preflooding and prehatching treatments show very great promise. How generally applicable they will be where acreage runs into thousands, remains to be seen, but preliminary results seem encouraging. It would seem that the prehatching treatment, if it proves to be feasible, offers more promise of controlling mosquitoes regardless of weather conditions than does the attempt to control the adults directly, although weather conditions may prevent control through larvicides also. Applications from the ground are probably not affected by weather conditions as much as applications from the air, either for adult, or for larva control; but in a breeding area aggregating hundreds of thousands of acres, ground treatment in terms of temporary control is not practicable. There are many places where permanent control measures are not feasible or possible. For one area, prehatching treatment may completely solve the problem; for another area, it may have to be a larvicide or an adult control.

MR. WHITE, supervisor of the East Volusia County (Florida) Mosquito District, commented very favorably on prehatching treatments. With ten pounds of

10 per cent DDT to the acre, excellent results were obtained.

MR. H. A. CRANDALL, Superintendent of the Toledo Area Sanitary District, Toledo, Ohio, stated that the district includes an area of a little more than 150 square miles in and around Toledo. It lies at the western tip of Lake Erie at the junction of the lake with the Maumee River. The region is very flat and thus drainage is extremely poor. Principal mosquito problems are the woodland breeders and the flood water breeders in the spring and during the summer. Probably the most difficult mosquito problem is *Mansonia* breeding in the district's extensive cattail marshes, of which there are over 700 acres. This coming year will be the district's first year of control operations. Funds for the district are obtained by a special tax assessment for the property within the district.

MR. STAGE (Bureau of Entomology and Plant Quarantine) described the research done in the several laboratories which are working on insects affecting man and animals. In one of the projects, in collaboration with the Army at Fort Sam Houston, it is hoped to test the efficacy of DDT in control of ticks over an area of about 2,000 acres.

After Mr. Stage's remarks, a vote of thanks was extended to Mr. Dorer for his work in planning the meeting, and adjournment followed.

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## LETTER TO THE EDITOR

Editor, Mosquito News:

At the recent Executive Committee Meeting of the Association, President Duke Peters presented me with a bound volume containing letters sent me by members from all over the United States, from France, from South America, and from Mexico. This fine tribute of your cordial good wishes is sincerely appreciated. I trust that I may continue to serve the Association for many years to come. It is a real pleasure for me to do so. Thank you all.

HARRY H. STAGE