

MOSQUITO CONTROL IN NEW YORK STATE IN 1956

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It is very difficult to prepare a report concerning the mosquito control activities in the State of New York without being repetitious. At the 11th annual meeting of the American Mosquito Control Association, held in California in January of 1955, Dr. Donald L. Collins, State Entomologist of New York, reported fully and in detail on New York State activities. His report, of course, appears in those proceedings. Insofar as the information that I have been able to gather outside of Long Island, the contents remain virtually the

same as reported by Dr. Collins. Therefore, to avoid a complete repetition of this part of his report, I shall confine my comments to the Long Island area.

We find on Long Island a peculiar set of circumstances. We have mosquito control work in part of the largest city in the world, New York City, two of the largest mosquito control organizations, and perhaps the smallest mosquito control organization in existence, with no state organization heading up their activities. Each must act as an independent unit and carry

on the work of solving their local problems, without the valuable assistance that a state organization supplies.

I would like to deal first with New York City. A great deal of salt marsh lies within the city limits, not only in those counties that are part of Long Island, namely Brooklyn and Queens, but also Staten Island, Manhattan and the Bronx. Organized mosquito control in the City of New York has not been carried on for some years, but there has been work done under the jurisdiction of various city departments, namely the Health Department and Sanitation Department. As a result of lack of coordination it has been rather incomplete. Recent agitation has brought this problem to the attention of the city fathers, and it is my understanding that in 1957 work will be organized on a broad scale under the jurisdiction of the Health Department to bring much needed relief to the residents of the affected areas.

As an indication, it is interesting to note a comment that appeared in one of the New York City papers last summer, in which they complained of the mosquito annoyance to the passengers of the subway trains that cross the Jamaica Bay marshes. This was a new stretch of track and the trains were running at a slow speed. Mosquitoes emerging from the surrounding marshes were hitching rides on the subway trains to such an extent that the passengers suffered serious discomfort. The article went on to state that the Transit Commission was being requested to speed up the trains to outrun the mosquitoes.

A report to date on the work in the City of New York has not been available to me. However, I do know that some casual spraying was done through the aid of the police department helicopter. In 1956 one or two mist blowers and fog machines were pressed into service in the more seriously affected sections of the City.

NASSAU COUNTY. Nassau County has had countywide mosquito control since 1916 and is currently operated as a countywide organization under the Department of Public Works, administered by Mr.

LeRoy Kinsey, Deputy Commissioner for the division. My summary of Mr. Kinsey's report is as follows:

"Nassau County is bounded on the north by the Long Island Sound. Here the terrain is high and hilly, tapering off toward the south shore, where it becomes flat and is bounded by the Atlantic Ocean. Within the bays on the south shore are some 145 salt marsh islands, ranging in size from an acre to fifty or more acres. On these islands an extensive ditching program has proven most effective. Adjacent to the upland there are approximately 10,000 acres of salt marsh marginal land on which almost 800 miles of drainage ditches are maintained. There are also approximately 250 miles of upland streams and ditches to maintain for mosquito and flood control.

"Over 39,000 street catch basins are sprayed during the breeding season and some 2,500 other permanent breeding areas listed—such as ponds, swamps, pools, wet areas, etc., that are inspected and treated by chemical methods.

"In 1956 a total of more than 250 miles of ditches on the salt marsh and over 370 miles of fresh water streams were reconditioned. The maintenance of county open storm water drains required the clearance of 177 miles. The maintenance of the open storm water drains is under our jurisdiction and requires the services of approximately 40 percent of our personnel and equipment."

SUFFOLK COUNTY. Suffolk County is the only county in New York State that operates under a mosquito control commission on a countywide basis, and has been operating in this manner since 1934. The authority for this commission is established under a section of the New York State Public Health Law, which is in many respects similar to the laws establishing commissions in California, New Jersey and other states of the Union. This law has been amended from time to time to bring the operation of the commission up to date. The last amendment made to this law was enacted in 1956, and this removed the limit on appropriations that could be made to the mosquito commis-

sion. Appropriations formerly were limited to $\frac{3}{8}$ mill per dollar of assessed valuation. The law, as it now reads, allows the local governing body, the County Board of Supervisors, the power to decide the amount of funds that will be provided to the commission.

Suffolk County is a large county. It is over a hundred miles from its west border to its eastern extremities. Much of the area is indented by bays and inlets, all of which have substantial salt marsh on their fringes. Seventy thousand acres of salt marsh border these bays and inlets. This marsh has been ditched and drained, and is maintained on a schedule of complete recleaning every two years. In the upland there are an estimated thirty thousand acres of fresh water swamps.

Long Island has experienced perhaps one of the most rapid population increases that has occurred in the country to date, and Suffolk County, of course, has had its fair share of this growth, doubling in size in the past six years. This has brought a tremendous increase in the work load of the Suffolk County Mosquito Control Commission, involving thousands of new catch basins in developments, the interruption of normal upland drainage, and the filling and interruption of drainage of the salt marsh areas.

The county was serviced by 25 pieces of mobile equipment; 3 boats and 6 fog machines were used on the adulticiding program. During the peak load periods in August, these machines were operated on a 16-hour per day schedule. Drainage on 35,000 acres of salt marsh was reconditioned and approximately 300 miles of upland streams and ditches were cleaned and re-channeled. Larviciding materials used were:

187,000 gallons #2 fuel oil
114,500 spray gallons—DDT emulsion
7 tons technical DDT.

A research program, jointly operated by the Suffolk County Mosquito Control Commission and the New York State Science Service, continued its studies of nuisance insects other than mosquitoes.

Experimental applications of 2½ percent dieldrin impregnated granules were made for the control of greenhead flies. This work will be expanded into areas for residual control of *Aedes sollicitans* in 1957.

Orient Point Mosquito District is probably the smallest mosquito control district in the northeastern part of the country. This district is located at the easterly end of the north fork of the Island and incidentally is wholly within Suffolk County. It is a small strip eight miles long and averaging one mile wide. This district was organized under Chapter 246 of the laws of 1916, and at that time it was provided with an annual appropriation of \$800. This law was amended by Chapter 13 of the laws of 1926, which increased the appropriation to \$1,500. A second amendment enacted by Chapter 70 of the laws of 1944 increased the annual appropriation to \$2,000. The district has been operating under this annual appropriation since that time. Among the unique features of this law is the one which prescribes the method of organization. The law stipulates that the taxpayers of the district shall meet each September and elect a committee to conduct the affairs of the district. This committee shall not have more than seven members, no mention is made of the minimum number of this committee, and for some time it has been operating with a single member. They have expressed the desire to remain as an independent unit, and appear to be relatively satisfied with the degree of control that is being exercised there. This is entirely a farming community and their principal problem is the *Aedes sollicitans* emerging from the salt marshes bordering on Gardiners Bay.

Insofar as the upstate New York areas are concerned, I am going to refrain from reporting here other than to refer you to Dr. Collins' report in the proceedings of the 11th annual meeting of the American Mosquito Control Association in 1955. That is a matter of record and is most complete.