

part of the state may be expected to occur later when military personnel infected in the Pacific theater of war returned to this region.

On account of transportation difficulties and pressure of war work, it appears probable that the 1942 meeting of the California Mosquito Control Association will not be held.

ACTIVITIES IN MEMBER STATES

Malaria Control Anticipated for Maryland

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The U. S. Public Health Service has recognized that conditions in Maryland might result in an outbreak of malaria, and in consequence have extended their project under the "Control of Malaria in War Areas" to include Maryland. The administration of this project is under the State Department of Health, and the State Entomologist is responsible for the reconnaissance surveys and the supervision of the entomological work in checking up on the effectiveness of the work being done. All this work is done in the immediate environs of military and naval installations, defense plants, and defense housing projects. There are a large number of installations in Maryland and a number of the projects were begun during the late summer of 1942, and it is anticipated that all of the projects will be activated next spring.

Suffolk County Mosquito Extermination Commission Correlates the Weather and Mosquito Trap Catches.

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(Due to our system of publishing, the accompanying

chart had to be placed at the front of "Mosquito News".)

The record of the trap catch of mosquitoes shows the fluctuation of the number or prevalence of mosquitoes but it does not always clearly explain to the layman why these numbers go up or down and does not readily interpret the intervening larval span, or highlight the latter's importance in regard to control effort.

In many cases people who support various Commissions, praise or condemn the Commission for the amount of mosquito annoyance, rather than the efficiency of control exerted per dollar available in the budget.

These people are not apathetic to effort in the direction of mosquito control but do not realize that while the budget is a fixed amount, weather is not, and to a large extent determines the relative amount of control possible to obtain from a dollar. It really determines that the spread of the budget when fixed, may be generous one year and totally inadequate the next.

Therefore, an analysis of the season's trap catch was made. It traces a portion of the history of each brood of mosquitoes throughout the season. It shows not only the prevalence of mosquitoes but the most important conditions pertaining thereto. By taking into account the number of rains within each larval span, it often demonstrates the inability of the spray crews to cover a territory allotted on their ability in a normal year to cover the entire territory once during each larval period or between succeeding rains.

Supplementary Information
Analysis of Total Trap Catch

Mosquito Commissions should be judged by their efficiency of control in regard to money available rather than upon the prevalence of mosquitoes.

In any reference to conclusions drawn from the analysis of the trap catch it should be borne in mind that while the basic idea relative to the details shown on the chart has been forming over a period of five years, this is the first time any attempt has been made toward the correlation of it, and as time goes on and more information is available more definite results may or may not be shown, and the value of such a record more, or less, clearly indicated.

It is the inclination of the author of the analysis to believe that for any given uncontrolled locality, the prevalence of mosquitoes under forces exerted by nature, may be predetermined to a marked degree by examinations of that locality in regard to natural forces; namely; location, temperature, amount and distribution of precipitation, and the size of the preceding brood together with a potential egg crop. Other factors of course enter the picture, the most important in coastal areas being - humidity, wind, and periodic spring or neap tides. This effect could be determined, but to some extent levels out under a record based upon a number of preceding years.

In this same manner the prevalence of mosquitoes under a definite amount of control may be prognosticated for a given locality under given conditions. When records are compared with those of an uncontrolled area, a control ratio might be set up. In case the records were not available and the budget was a fixed yearly amount, the periodic comparison of the same area under groupings of similar natural conditions would allow the setting up of empirical formulas for the expected number of mosquitoes.

When the latter were compared with the actual number present, a relative efficiency of control could be demonstrated. This would be the yard stick for the season's performance and when compared with the budget should show the effective control obtained per dollar. Any discrepancy in the season's catch should be explainable, in the

light of the chart of the total trap catch analysis.

KEY

Sources of Information, U.S. Department of Commerce, Weather Bureau, Climatological Data.

Record of the Bi-Weekly Trap Catch of Mosquitoes in Suffolk County, N. Y. for the Month of June to September, Inclusive.

All temperatures are in degrees Fahrenheit. Maximum and minimum temperatures are averages of the maximum or minimum daily temperatures for the appropriate span.

In larval data this includes from the initial date of rain pertaining to a given brood until the date of maximum catch of the same brood.

In flight data it includes data for the dates of the "Peak of the Flight Period" inclusive.

The "Maximum or Minimum Daily Catch" is a weighted daily mean of the bi-weekly catch.

The "Group Summary" is divided on the basis of roughly similar groups, i.e. when the larval span is of approximately the same number of days, and when the flight is at similar conditions of temperature and precipitation.

The "Days in Larval Stage" or "Average Number of Days as Larvae" may be shorter than the number of days indicated. There is a time lag between the time mosquitoes start to fly and the time they are trapped. Further the period shown on the chart includes to the date of maximum and not initial catch. This fact should be borne in mind in assessing the difficulties of control or in predicating

territory to be covered within a given time by control laws.

The "Season" is the net result of all groups and although it will differ greatly from year to year should be explainable in the group summary, and from there can be traced back to an individual group and brood.

In the "Group Summary" the mean minimum temperature flights is used rather than the arithmetical mean of the maximum and minimum. The reason is that when there is a sharp drop in daily temperature there is also a sharp drop in the daily trap catch. On some occasions the maximum goes up on the same day and the mean of the two is not reliable for an index of the daily catch. This seems to be so in a temperature zone such as Long Island. However, in tropical climates the reverse picture might hold and the maximum temperature found more reliable. In any event it is a matter of convenience and common sense on the part of the person making the analysis.

DEVELOPMENTS IN MOSQUITO CONTROL
Even the Oyster Becomes Better and
Fatter After Mosquito Control Ditch-
ing is Installed.

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A generation ago there was a good market for salt hay and the conical brown stacks of dried marsh grass were a familiar sight on New Jersey marshes. Within recent years there has been a great reduction in the harvesting of salt hay, hence with the loss of much of this one crop obtainable from our salt marsh these areas are now considered as pretty much a liability. Studies made in 1921 and 1922 by Dr. G. W. Martin at the New Jersey Oyster Research Laboratory of the Agricultural Experiment Station showed for the