

MOSQUITO CONTROL WORK IN LOUISIANA

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Since the eradication of malaria as a disease of public health importance in Louisiana, the function of the State Health Department, so far as insect control work is concerned, has been entirely promotional and advisory. Three members of the staff of the Section of Insect Vector Control travel the State almost continuously, consulting with municipal officials and local health department personnel regarding insect problems. Local programs are organized in the winter and early spring. In the case of a community which has not previously carried on a mosquito control program, a survey is made and the local officials advised of what will be needed in the way of personnel and materials. Later, when it is time to begin work, another visit is made and the local personnel instructed in the methods to be used. Follow up visits to evaluate and advise are made at intervals throughout the breeding season.

In 1955, 92 communities with a total population of 803,000 carried on successful mosquito control programs.

Fifty-one species of mosquitoes are found in Louisiana. Some of these are quite common, while a few are very rare. Distribution and density records are broken down into four general classifications according to the numbers and range of the various species. A species is placed in group Number 1 when it is abundant and widespread over a long season. A species abundant only over a short season or found only in certain parts of the State is classified as Number 2. The Number 3 species are widespread but are found only in small numbers. Those in the Number 4 group are rarely found.

There are 21 species in Louisiana in the Number 1 group. These are as follows: *Anopheles crucians*, *A. punctipennis*, *A. quadrimaculatus*, *Aedes aegypti*, *A. atlanticus*, *A. infirmatus*, *A. triseriatus*, *A. vex-*

ans, *Culex apicalis*, *C. erraticus*, *C. quinquefasciatus*, *C. restuans*, *C. salinarius*, *Psorophora ciliata*, *P. confinnis*, *P. cyaneoscens*, *P. discolor*, *P. ferox*, *Culiseta inornata*, *Uranotaenia lowii*, *Uranotaenia sapphirina*.

Fifteen fall in the Number 2 group and 15 in the Number 4 group. There are none in the Number 3 group.

As examples of the 15 species in group 2, *Aedes canadensis*, *Culex peccator*, and *Anopheles barberi* might be named.

Examples of the species in group 4 are *Anopheles atropos*, *Aedes tormentor* and *Orthopodomyia alba*. *O. alba* has been found in only one parish in the State.

The vectors of yellow fever, dengue and malaria (*Aedes aegypti* and *Anopheles quadrimaculatus*) have ratings of 1, which would make them extremely important from the public health view point if there were yellow fever or if malaria were indigenous in the State. In the absence of these diseases, the Health Department is more concerned, because of public pressure, with the so-called pest mosquitoes.

Of the nuisance mosquitoes, the nine species of *Psorophora* are by far the most troublesome in the northern part of the State, while *Aedes sollicitans*, the salt marsh mosquito, is of the greatest importance in the coastal region. There is occasional trouble with *sollicitans* in the oil-producing areas remote from the coastal marshes when salt water is pumped from the oil wells. *Culex quinquefasciatus* is troublesome throughout the State.

The *Psorophora* mosquitoes have been controlled to a certain degree, where they are most prevalent, through the use of fog and mist machines. Little or no success has been met with in attempts to cope with the *sollicitans* problem, which is apparently increasing in severity from year to year. Some idea of the magnitude of this problem may be grasped from knowl-

edge of the fact that of the approximately 5,600,000 acres of salt marshes in the South Atlantic and Gulf Coast states, from Virginia to Texas, more than half of them, or 3,381,500 acres, are located in Louisiana.

In 1955, the first *sollicitans* invasion of the year occurred on April 15, a date considerably earlier than that of the first invasion of previous years.

It was notable that following an inch or so of rain which ended on February 25, there was no further rainfall until April 8-13, in which period about six inches of rain fell. The weather had not been particularly cool. There seems to be little doubt that the very severe invasion was a result of the long, dry, comparatively warm spell followed by the heavy rains.

There was no rain from April 13 until May 15 when 6 inches of rain fell in a period of two days. On about May 22 the second severe invasion occurred. Again there was little rain until near the end of June when the almost daily seasonal rains began which brought the third and last invasion of the year. Fortunately, the breeding habits of this species are such that frequent rains tend to reduce the rate of propagation.

So far, Louisiana has been able to do very little but talk about this problem. Those most familiar with it are convinced that a solution is impossible with the resources now available. It is a situation which seems to cry for study and research.