

## LOTUS BORER ECOLOGICALLY ANTAGONISTIC TOWARD MOSQUITOES

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Inside the city limits of Fort Smith, Arkansas, the surface of a pond approximately 600 square feet in area was almost completely covered with American lotus (*Nelumbo lutea* Willd.). Heavy breeding of *Anopheles* (especially *A. quadrimaculatus* Say) and *Culex* mosquitoes was found in this pond on August 5, 1943. However, it was noted that practically all of the lotus plants were dead. Upon closer examination, the leaves showed insect damage and the stems of the plants contained holes spaced one or two inches apart where the borers had entered. Inside the stem of each plant examined there were several borers. These borers were identified as *Pyrausta penitalis* (Grote).\* Most of the lotus plants had been completely killed, and the attack had been in progress only

about one week according to the entomological inspector assigned to the Fort Smith malaria mosquito control project. The pond was again visited on September 15, 1943, by the writer and the growth of lotus had been completely destroyed by the borer, thus eliminating the ideal mosquito breeding conditions formerly present.

The Fort Smith malaria control project supervisor applied oil to the pond immediately after the August 5 inspection and at regular intervals during the rest of the mosquito breeding season. Therefore, it was not possible to determine the degree of mosquito control obtained by the destruction of the lotus plants.

This insect should be of interest to entomologists and others engaged in mosquito control work, since it offers a natural method of aiding in the control of mosquito breeding in a lotus covered habitat.

\*Identified by Mr. Carl Heinrich of the U. S. D. A., Bureau of Entomology and Plant Quarantine, Division of Insect Identification.