

THE EFFECT OF ASPERGILLUS FLAVUS LINK EXTRACT ON THE
LARVAE OF CULEX SITIENS WIEDEMANN

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APPROVAL SHEET

This thesis entitled THE EFFECT OF ASPERGILLUS FLAVUS LINK EXTRACT ON THE LARVAE OF CULEX SITIENS WIEDEMANN, prepared and submitted by Miss Nenita Bacongco in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE IN BIOLOGY has been examined and is recommended for acceptance and approval for ORAL EXAMINATION.

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ABSTRACT

Aspergillus flavus Link collected from infested peanuts was isolated and cultured in the laboratory. The pure culture was grown and maintained alive in Potato Dextrose Agar. Czapek Dox Broth, a liquid culture medium, was used in preparation for antibiotic extraction. Sulfuric ether was the extracting solvent. A. flavus extract was used as a larvicidal agent on the 3rd or 4th instar larvae of Culex sitiens Wiedemann. The extract was diluted with sterile water and was prepared in six different concentrations: 40%, 50%, 60%, 70%, 80%, and 90%.

This preliminary investigation indicates that extract derived from a 10-day old A. flavus Link culture has toxic effects on the larvae of C. sitiens. Physiological effects of the extract are exhibited as changes in body pigmentation and body deformation. The extract slowed down and prolonged larval development. The impaired physiological activities brought about a 93%-100% mortality. Some surviving larvae emerged into adults. They were physically weak and their flight activities were slowly executed. They did not feed and their life span was shortened.

Of the six concentrations studied, 70% was found the most effective. It killed 50% of the larval population at the shortest period of exposure, 21 hr, 20 min.

Preliminary findings showed the good potential of A. flavus extract as a larvicidal agent. Perhaps further studies may include experiments on other insects.

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