I- INTRODUCTION

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Mosquitoes are the most prominent of the numerous kindes of blood sucking arthropods that annoy man, other mammals, and birds .

They are known to transmit pathogens of bird malaria , heart worm of dogs, avain pox virus and are important vectors of encephalitis , ***Culex pipiens*** is the major developmental hosts and vectors of the human filarial worm ***Wuchereria bancrofti*** .

Great swarms may be produced from practically all sorts of still water, fresh and brackish , foul or clear; water in tin cans, car and airplane tires , hoof prints, tree holes, deposits in leaf cupe; the margins of streams rivers, lakes, and water impoundments .

Culex pipiens is increasing in Africa and Asia in response to favourable habitats accompanying urbanization, and open sewage drains and pit latrines in disregard of sanitary measures as a consequence of increased use of persistent insecticides; **Service, (1960) & Singh, (1967)** Sewage oxidation lagoons are particularly attractive for oviposition when coliform bacterial counts increase sufficiently example in **Stellman and Colmes , (1970) .**

For an attempt to control such vectors, pesticides have been widely used and extensively produced . The large scale use of toxicants

against several pests has led to the development of strains of insects resistant to many insecticides .

A trials to study the effect of using the surfactants in combination with the insecticides against a resistant strains of ***Culex pipiens*** larvae , was thought to be an essential contribution towards their effective control.

The present work aims to clarify the answer of the following question; Could the surfactants act as a synergist to the insecticide when used against ***Culex pipiens*** resistant strain larvae ? , and in what way the surfactants could exest their action ? .

To accomplish this answer; the larval response to either the insecticides alone or with in the surfactants additives was studied throught bioassays , biochemical , histochemical and histopathological investigations to trace the toxic action at the electron microscope level.

PLAN OF WORK

1- Screening of the synergistic effect of some surfactant additives to certain insecticides against resistant mosquitoes .

2- Histochemical and biochemical investigations to study the effects of surfactants on certain enzyme systems , especially ATPase and acid phosphatase.

3- Histopathological effect of the used additives on ultrastructures at the electron-microscope level.