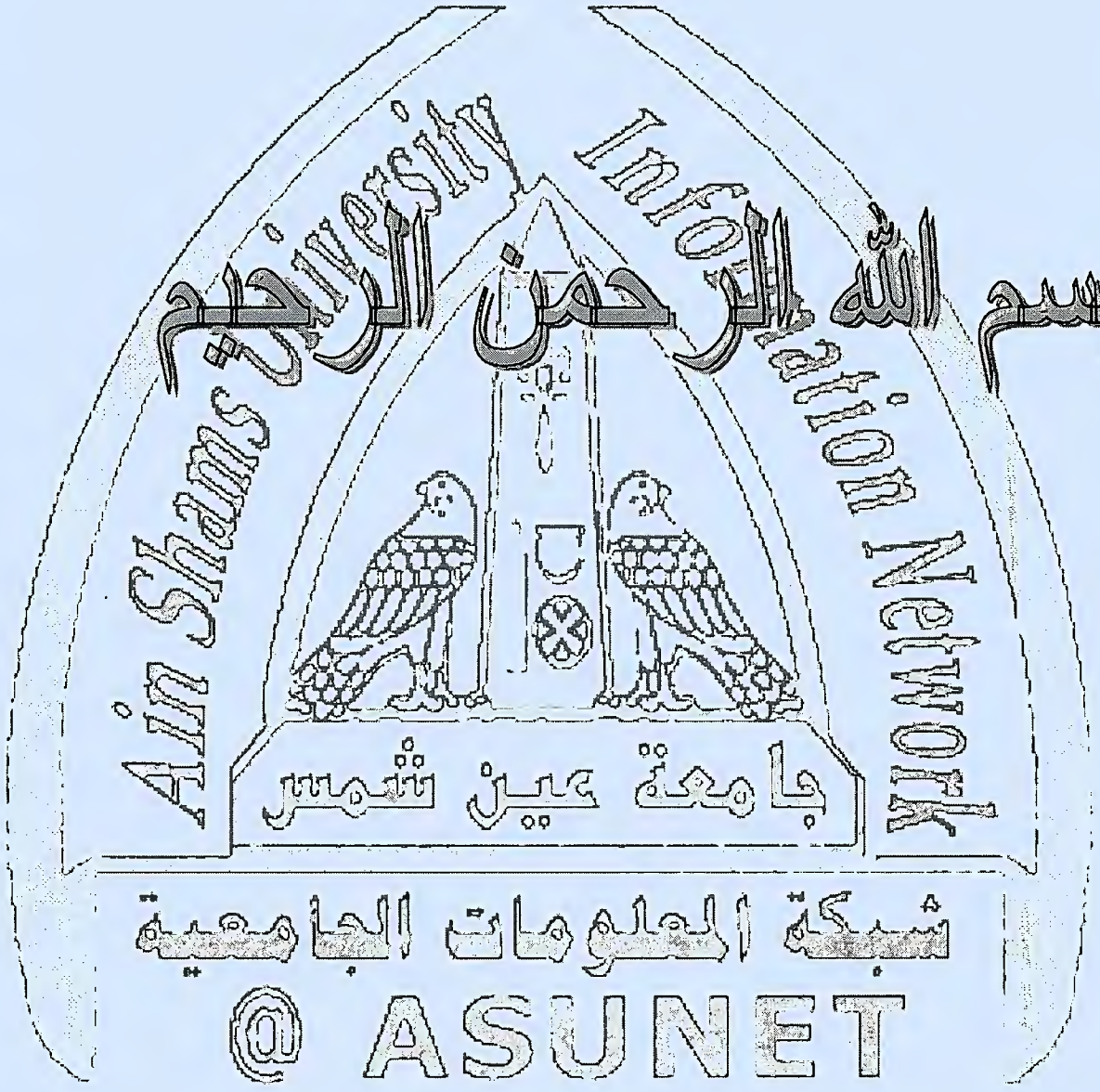
شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار
في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

بعض الوثائق الاصلية تالفة

BEHAVIOURAL AND BIOCHEMICAL STUDIES ON THE FLESHFLY *Wohlfahrtia nuba* (WIEDEMANN) IN UPPER EGYPT.

A THESIS

PRESENTED FOR THE DEGREE OF DOCTOR OF

PHILOSOPHY OF SCIENCE

(ENTOMOLOGY)

To

FACULTY OF SCIENCE (SOHAG)

ASSIUT UNIVERSITY

BY

AZZA MOHAMED HESSIEN KHEDRE

DEPARTMENT OF ZOOLOGY

SOHAG FACULTY OF SCIENCE

ASSIUT UNIVERSITY

SUPERVISED BY

PROF. DR. FATMA K. ADHAM

PROFESSOR OF MEDICAL ENTOMOLOGY

FACULTY OF SCIENCE

CAIRO UNIVERSITY

PROF. DR. FAWAZY A. BORAEY

PROFESSOR OF FISH BIOLOGY

AND HEAD OF ZOOLOGY DEPARTMENT

SOHAG FACULTY OF SCIENCE

ASSIUT UNIVERSITY

DR. HOSNY ABOUL-DAHAB

LECTURER OF ZOOLOGY

SOHAG FACULTY OF SCIENCE

ASSIUT UNIVERSITY

1994

DEDICATION
TO
my husband and our daughters
" Heba and Radwa "

ACKNOWLEDGEMENT

ACKNOWLEDGMENTS

This work has been carried out in Department of Zoology, Faculty of Science ,Sohag, Assiut University under the supervision of Professor **FATMA KAMEL ADHAM**, professor of Medical Entomology, Entomology Department, Faculty of Science, Cairo University, to whom the author wishes to express her thanks, deep gratitude and appreciation for her valuable supervision, helpful suggestion, valuable advices, enlightening discussion, reading and criticizing the manuscript.

Special thanks and appreciation are due to Professor **FAWAZY AHMED BORAEY**, Head of Zoology Department, Faculty of Science Sohag, Assiut University for his Keen interest, sincere and valuable help, kind encouragement during the progress of this work, and for reviewing the manuscript

Sincere appreciation is due to Dr. **HOSNY ABOUL-DAHAB**, Lecturer in Zoology Department, Faculty of Science ,Sohag, Assiut University for his valuable help, encouragement, continues guidance through out the progress of the work and for reviewing the manuscript.

The candidate's thanks should also be expressed to Dr. **HOSNIA SABER**, Lecturer in Chemistry Department, Faculty of Science , Sohag, Assiut University for her help in chemical analysis.

Deep thanks and gratitude to Professor **AHMED KAMAL EL-SHAFAI**, Dean of Sohag Faculty of Science, Assiut University for his kindness and extensive facilities that he provided to me.

Thanks are also expressed to the members of Zoology and Botany Departments, Faculty of Science ,Sohag, Assiut University for offering work facilities.

AZZA M. Khedre

CONTENTS

CONTENTS

INTRODUCTION

INTRODUCTION

In recent years, a wide spread interest has developed in insect attractant and other pheromone. Much of this interest has been stimulated recently by the successful characterization of the sex attractants of several species of insects. This interest has also been stimulated by the emphasis now, being given to research on insect pheromone. Because manipulation of an insect's sexual behaviour presents a considerable potential for biological control, a sexual pheromones could be used as a tool in population surveys and in the suppression of many dipteran pest species in order to protect the environment from pollution resulting from the intensive use of chemicals.

Although the sex pheromones of Diptera have been researched extensively, no informations on the existence and role of sex pheromones in sexual behaviour of the flesh flies *Wohlfahrtia nuba* (Wiedemann) were recorded.

W. nuba flies are considered as external parasites attacking and causing myiasis in wild fur animals and are very strongly attracted by certain odours. The chief occupation of the females are to deposit larvae and most of their activities were connected with this function. The fact that, *W. nuba* flies mated successfully in the darkness (Khedre, 1991) suggesting that an olfactory stimulus may be involved.

As flesh flies depend on their smell for survival, mating and larviposition, the purpose of this research is to give some informations:-

1- On whether a sex pheromone is present in the female or male *W. nuba*, and, if present, to evaluate its role in courtship behaviour.

2- On the elements of courtship displayed by sexually stimulated males.

3- On the possible relationship between protein feeding and activity of males and receptivity of females *W. nuba*,

and also,

4- To investigate the phenomenon of female mating refusal.

5- To examine the effect of sex, mating and age on pheromone mediated copulatory responses.

6- To undertake a biochemical studies, in an attempt, to collect and separate the biological active components in female or male flies and to evaluate their activities.

7- To give an evidence on the presence of chemoreceptors, and to locate the sites involved in the perception of olfactory stimuli.