SURVEY AND TAXONOMIC STUDY OF FAMILY CALLIPHORIDAE (DIPTERA) IN A. R. EGYPT

THESIS

Submitted in Partial Fulfilment of the Requirements
For the Award of the Degree of
MASTER OF SCIENCE

By
SAMIRA AYAD MOHAMED
(B. Sc.)

Department of Entomology
Faculty of Science
Ain Shams University

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THESIS EXAMINATION COMMITTEE

Name	Title	Signature
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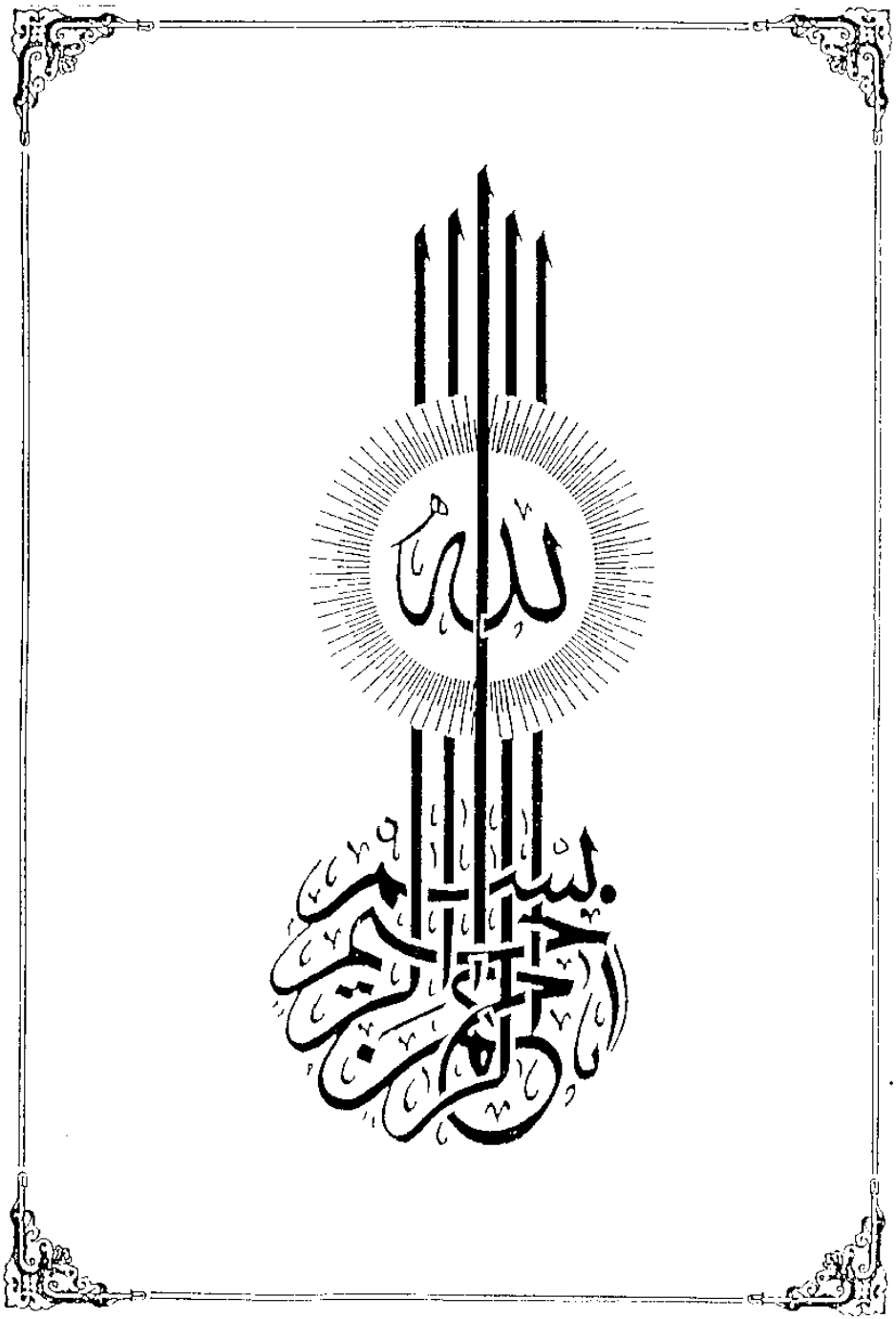

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Language: (Germany, M.Sc. Course)

Examination passed on: March, 1980.

Entomology Courses:

1. New Approaches to Insect Control.
2. Environmental Pollution.
3. Implication of Problems in Suppression and Control of Insects.
4. Insect Pathology.
5. Population Dynamics.
6. Research subjects.

Examination passed on: February, 1980.

- Statistics Course:

Biological statistics.

Examination passed on: February 1980.

Supervisors:

Prof. Dr. A.H.Kaschef. A. Kaschef

Prof. Dr.Nagat F. Shaumar. N.Shaumar

Dr. Salwa K. Mohamed. Salwa Kamal

Head of Department

Prof.Dr.H.A.Abdel Rahman.

BIOGRAPHY

Date and Place of birth	: 11.8.1954, Cairo, Egypt.
Date of graduation	: June, 1978.
Degree Awarded	: B.Sc. Entomology.
Grade	: Very Good.
Occupation	: Demonstrator of Entomology, Faculty of Science, Ain Shams University.
Date of Appointment	: 1979.
Date of Registration of the M.Sc. degree	: October, 1980.

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CONTENTS

INTRODUCTION

I. INTRODUCTION

Calliphorids are found practically everywhere, many species are of considerable economic importance. Blow flies are about the size of a house fly or a little larger, and many are metallic blue or green. Most of the family are scavengers, the larvae live in carrion, excrement, and similar materials. The most common species are those that breed in carrion. These species lay eggs on the decaying tissues of the animals.

It should be mentioned that these insects are performing a valuable service to man in helping to remove dead animals from the landscape. The larvae of some species that breed in carrion, when reared under aseptic conditions, have been used in the treatment of such diseases as osteomyelitis in man. On the other hand, many of these flies may act as mechanical vectors of various diseases. Some blow flies lay their eggs in open sores of animals or man, in some cases the larvae feed only on decaying or suppurating tissue, but in other cases they may attack living tissue, fly larvae become parasitic on man or animals the condition is spoken of as myiasis.

Aim of the present work:

The present work deals with the study of the following points:

1. Seasonal abundance and distribution of Calliphoridae in four different regions of A.R. Egypt.
2. The external morphology of the adult Chrysomyia albiceps (Wiedemann), as a family representative to cover the structural details of systematic importance throughout the family.
3. Systematic study of family Calliphoridae in Egypt to give a monograph of this family.

LITERATURE REVIEW

II- REVIEW OF LITERATURE

(1) Economic and medical importance:

Willcocks(1917) referred the infestation of animal wounds with fly larvae either to green bottle flies or to the family Sarcophagidae. This result was recorded in Egypt.

Patton and Evans (1929) classified the myiasis producing Diptera in man to three groups: group I, specific myiasis- producing Diptera containing those Diptera which only oviposit or larviposit, in or near, living tissues, and their larvae are therefore obligatory sarcobiots; group II, the semi-specific myiasis-producing Diptera or those Diptera in which the females though normally laying their eggs or depositing their larvae in decaying animal and vegetable matter, will lay their eggs or deposit their larvae, either on the unbroken skin, on mucous membranes, on broken skin, in diseased tissues or in wounds (facultative sarcobiots) and group III, the accidental myiasis-producing Diptera or those Diptera in which the females normally lay their eggs or deposit their larvae in excrement, in vegetable and organic matter, but will occasionally oviposit or

larviposit on human and animal food. The authors gave a list of the semi-specific myiasis producing Diptera whose larvae may be found in human tissues. This list included subfamily Calliphorinae of which the following species were recorded: Calliphora erythrocephala, Lucilia sericata, Lucilia cuprina and Chrysomyia albiceps.

Smith (1973) reported that some Calliphorids lay their eggs in open wounds of man and animals. This habit may be accidental or obligatory. Others may transmit pathogenic organisms such as Calliphora which also involved occasionally in wound myiasis. The author stated that Lucilia sericata Meigen was the commonest attacker of sheep.

Davis (1976) mentioned that eight larvae of Lucilia sericata Mg. (Phaenicia sericata) were found infesting the ear of an 80-years old man in Hamilton, Ontario. The ear had apparently been perfectly healthy before infestation.

Townsend et al.(1976) stated that a case of myiasis in a women admitted to hospital in Virginia in July (1975) in a diabitic coma was recorded. There were dipterous larvae in an ulcer on the thigh and in the lower vaginal canal, and 2 of these that were reared on ground beef gave rise to adults of Lucilia sericata Mg. (Phaenicia sericata).