شبكة المعلومات الجامعية

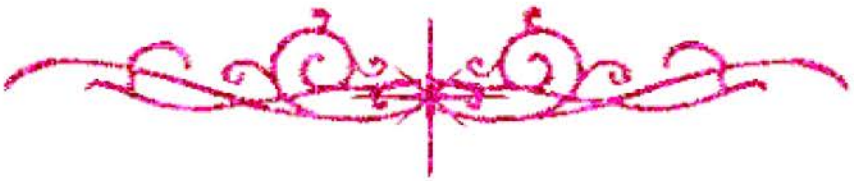
بسم الله الرحمن الرحيم

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

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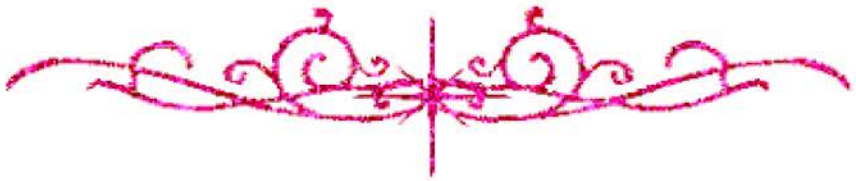
بعض الوثائق الأصلية تالفة



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بالرسالة صفحات

لم ترد بالأصل

HOSSAM MAGHRABY

FAUNAL SUCCESSION ON RABBIT CARRIONS KILLED BY DIFFERENT METHODS

A Thesis

Submitted to the Zoology Department

Faculty of Science

Alexandria University

In Partial Fulfilment of the Requirement for

the Degree of M.Sc.

By

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Prof. of Entomology

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1993

TO THE SOUL
OF MY MOTHER

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CHAPTER I

INTRODUCTION

Introduction

Forensic science is the application of science to criminal investigation, in order to provide evidence that can be used in the solution of criminal cases. The evidence of the entomologist in forensic medicine is mainly concerned with establishing the time of death; i.e. the postmortem interval. The insects and other invertebrates feeding on carrion, form a distinct faunal succession associated with the various stages of decay. Recognition of the species involved in their different immature stages in the succession, coupled with a knowledge of their rates of development, can thus give an indication of the age of the corpse.

The principle of forensic entomology is based on the fact that sarcosaprophagous insects are highly adapted to the detection of corpses and a strong ecological drive to go to their food resource or oviposition site. The stage of development and the species composition of sarcosaprophagous insects give evidence about the time of death (Nuorteva, 1988).

The true pioneer work in the field of forensic entomology was performed by Megnin (1894). In this time, the knowledge of the details of the life histories of sarcosaprophages was still deficient in many respects. The poor understanding of the life history details was the main

impediment to the development of forensic entomology during six decades following Megnin time. The idea, however, was alive and some workers, especially Glaister and Brash (1937); Easton (1944); Nuorteva et al., (1967); Nuorteva (1974); Nuorteva et al., (1974); Greenberg (1985), and Goff and Odom (1987), developed this branch by publishing additional case reports and by refining the methodology with detailed consideration of the prevailing meteorological conditions. The development got new power when Utsumi (1958) and Utsumi et al., (1959) performed extensive studies on arthropod succession to animal carcasses in order to get better basis for the estimations of postmortem intervals. In addition, several studies which deal wholly or partly with the biology, ecology, and methodology used in forensic entomology on a worldwide basis, were published (see Meek et al. , 1983, and Vincent et al., 1985).

The actual rapid development in forensic entomology began a little more than 15 years ago. This period was not, however, begun by works performed in the field itself. The increase in the knowledge of the life histories of various flies as reported in the works of fly biologists (Kamal, 1958; Nuorteva, 1971; Greenberg and Szyska, 1984; Liu and Greenberg, 1989 and Greenberg, 1991), provided a large assortment of possibilities and a good framework to develop the field of forensic entomology.