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STUDY OF THE NEUROENDOCRINE SYSTEM OF THE
EGYPTIAN LOCUST ANACRIDUM AEGYPTIUM L.

A Thesis

Submitted in partial fulfilment of the
requirement for award of the degree of



Master of Science

By

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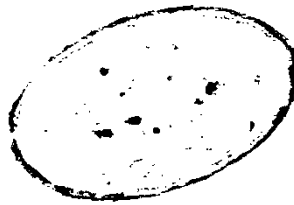
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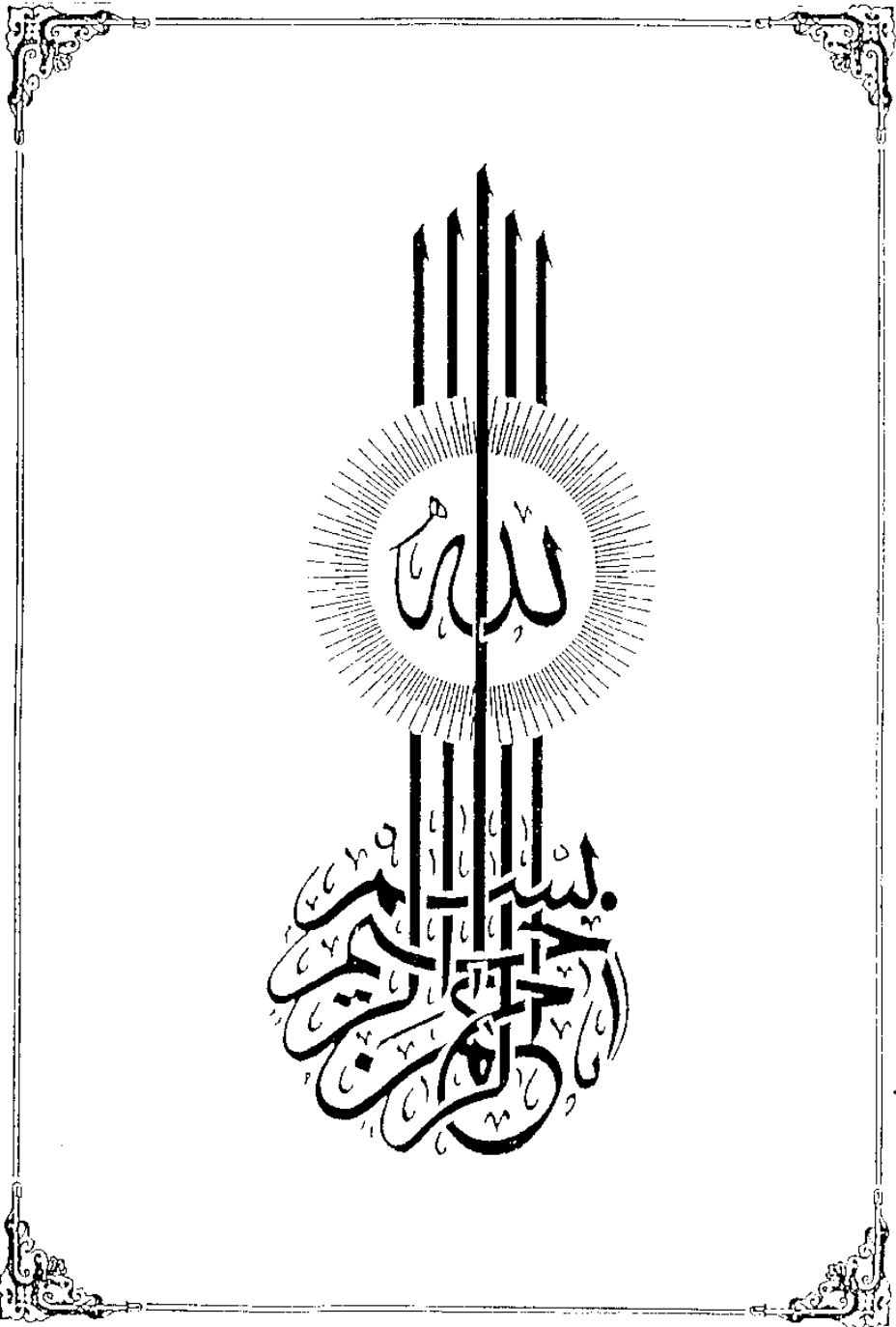
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ABBREVIATIONS

List of abbreviations used in the present investigation:

AB	:	alcian blue
AF	:	aldehyde fuchsin
AL	:	antennal lobe
AN	:	antennary nerve
Av.	:	average
CNS	:	central nervous system
CAHP	:	chrome alum haematoxylin phloxin
CHP	:	chrome haematoxylin phloxin
CON	:	circum oesophageal connectives
CCC	:	commissure corporis cardiaci
CE	:	compound eye
CA	:	corpora allata
CC	:	corpora cardiaca
2BR	:	deutocerebrum
diam.	:	diameter
LCC	:	dorsal lobe of the CC
FRC	:	frontal connective
FRG	:	frontal ganglion
HG	:	hypocerebral ganglion
LN	:	labral nerve
LFN	:	labro-frontal nerves
LO	:	lateral ocellus
MO	:	median ocellar pedicel
N	:	nerves

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NCS	: nervi cardiostomatogastricus
NCA I	: nervi corporis allati I
NCA II	: nervi corporis allati II
NC I	: nervi corporis cardiaci interni
NCC I	: nervi corporis cardiaci I
NCC II	: nervi corporis cardiaci II
NCC III	: nervi corporis cardiaci III.
NSC	: neurosecretory cell
NSM	: neurosecretory material
NSN	: non-secretory neurones
Os	: ocellar pedicel
OEN	: oesophageal nerves
OPL	: optic lobes
PF	: paraldehyde fuchsin
PT	: paraldehyde thionin
PI	: pars intercerebralis
PAVB	: performic acid victoria blue
ph	: phloxin
IBR	: protocerebrum
SN	: secretory neurones
SGNS	: stomatogastric nervous system
PCOM	: suboesophageal (post-oesophageal) commissure
SOG	: suboesophageal ganglion
3BR	: tritocerebrum
ScC	: unpaired section of the CC
VCC	: ventral lobe of the CC
VB	: victoria blue.

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I - INTRODUCTION

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I- INTRODUCTION

Anacridium aegyptium is a long-day insect. Females collected from Bahariya Oasis during March to May were found active and had terminal oocytes ranging between 3.5-6 mm. Females collected during September to January undergo a reproductive diapause. They began to oviposit in the next spring. This means that A. aegyptium produces only one generation per year in natural habitat .

This type of imaginal diapause is characterized by an accumulation of the median neurosecretion in the part intercerebralis - corpora cardiaca system, by small corpora allata and in the female, by a stop in oocyte development although the male's sexual activity is still not altered.

A photoperiodic induction and termination of adult diapause in Anacridium aegyptium has been demonstrated by Geldiay (1970) and Girardie and Granier (1973). From January, the increase of photoperiod causes a release of the median neurosecretion in both sexes, an increase of the volume of the corpora allata and breaks ovarian diapause.

Since diapause is related to secretions of the endocrine system, detailed morphological, histological