

CONTENTS

	Page
I- INTRODUCTION	1
II- REVIEW OF LITERATURE	5
III- MATERIAL AND METHODS	26
IV- TAXONOMY	54
Key to the families of superfamily Cleroidea	54
The features characteristic to the family Malachiidae ---	56
Key to genera of family Malachiidae	58
Genus <i>Attalus</i> Erichson	65
Key to the species of genus <i>Attalus</i>	66
<i>Attalus aegyptiacus</i> Pic	67
<i>Attalus lutatus</i> Abeille	70
<i>Attalus mitlaensis</i> Wittmer	73
<i>Attalus mokattamensis</i> Pic	77
<i>Attalus mozabita</i> Chobaut	80
<i>Attalus schatzmayri</i> Wittmer	84
Genus <i>Attalusinus</i> Leng	85
<i>Attalusinus alfierii</i> (Pic)	86
Genus <i>Brachyattalus</i> Wittmer	89
<i>Brachyattalus anastasei</i> Pic	90
Genus <i>Callotroglops</i> Abeille	92
Key to the species of genus <i>Callotroglops</i>	92
<i>Callotroglops atrithorax</i> Pic	93
<i>Callotroglops convexicollis</i> Wittmer	96

	Page
Genus <i>Cephaloncus</i> Westwood	98
Key to the species of genus <i>Cephaloncus</i>	99
<i>Cephaloncus aegyptiacus</i> (Abeille)	99
<i>Cephaloncus bispinus</i> Wittmer	102
Genus <i>Clanoptilus</i> Motschulsky	103
Key to the species of genus <i>Clanoptilus</i>	104
<i>Clanoptilus abdominalis abdominalis</i> (Fabricius) -	104
<i>Clanoptilus aegyptiacus</i> Evers	108
<i>Clanoptilus insignis</i> (Buquet)	108
<i>Clanoptilus sexplagiatus</i> (Abeille)	109
Genus <i>Colotes</i> Erichson	114
Key to the species of genus <i>Colotes</i>	115
<i>Colotes cinctus cinctus</i> Motschulsky	117
<i>Colotes cinctus suturellus</i> Wittmer	121
<i>Colotes dollfusi</i> Pic	123
<i>Colotes javeti</i> Jacquelin du val	125
<i>Colotes longior</i> Pic	129
<i>Colotes ogieri</i> (Fairmaire)	131
<i>Colotes punctatus</i> (Erichson)	135
<i>Colotes scutellaris</i> Pic	138

	Page
Genus <i>Ebaeus</i> Erichson	140
<i>Ebaeus laterinodosus</i> (Wittmer)	141
Genus <i>Hypebaeina</i> Wittmer	142
<i>Hypebaeina torretassoi</i> (Wittmer)	143
Genus <i>Hypebaeus</i> Kiesenwetter	147
Key to the species of genus <i>Hypebaeus</i>	148
<i>Hypebaeus elongaticornis</i> Wittmer	148
<i>Hypebaeus nodipennis</i> (Krynicky)	149
<i>Hypebaeus peyerimhoffi</i> Abeille	152
Genus <i>Laius</i> Guér-Ménev	156
<i>Laius venustus</i> Erichson	157
Genus <i>Malachiomimus</i> Champion	162
<i>Malachiomimus sinaitus</i> (Pic)	162
Genus <i>Malachius</i> Fabricius	166
Key to the species of genus <i>Malachius</i>	167
<i>Malachius alfierii</i> Pic	167
<i>Malachius coccineus</i> Waltl	170
Genus <i>Nudopectinus</i> Evers	171
<i>Nudopectinus flabellicornis</i> (Erichson)	172
Genus <i>Protapalochrus</i> Evers	176
<i>Protapalochrus flavolimbatus</i> Mulsant & Rey	176

	Page
Genus <i>Psiloderes</i> Peyron	180
Key to the species of genus <i>Psiloderes</i>	181
<i>Psiloderes diabolicus</i> (Abeille)	182
<i>Psiloderes sinaiticus</i> Wittmer	183
<i>Psiloderes viridiceps</i> (Pic)	184
Genus <i>Troglops</i> Erichson	187
Key to the species of genus <i>Troglops</i>	188
<i>Troglops alfierianus</i> Wittmer	189
<i>Troglops apterus</i> Wittmer	191
<i>Troglops atriceps</i> Pic	194
<i>Troglops orientalis</i> Abeille	194
<i>Troglops rabinovitchi</i> Wittmer	195
V- DISCUSSION	198
VI- SUMMARY	207
VII- REFERENCES	210
VIII- ARABIC SUMMARY	

Summary

The present work is concerned with survey and classification of the available malachiid species in Egyptian fauna and determination of their recent taxonomic status, depending on malachiid specialists in Egypt and in the world, as well as the available recent taxonomic investigations and identification keys.

An extensive survey of the malachiid beetle was carried out during the course of the present study (٢٠٠٧-٢٠١٠). The survey covered various localities and ecological regions in Egypt (localities in ٦ governorates) Giza, Sinai, Alexandria, Cairo, Qalyubiya, Gharbiya and resulted in collecting sixteen species of malachiid beetles within nine genera of one subfamily (Malachiinae), these species are: *Attalus aegyptiacus* Pic, *Attalus mitlaensis* Wittmer, *Attalus mozabita* Chobaut, *Attalus latatus* Abeille, *Clanoptilus abdominalis* Fabricius, *Clanoptilus sexplagiatus* Abeille, *Colotes cinctus* Motschulsky, *Colotes javeti* Jacquelin du val, *Colotes ogieri* (Fairmaire), *Colotes scutellaris* Wittmer, *Hypebaeus peyerimhoffi* Abeille, *Laius venustus* Erichson, *Malachiomimus sinaitus* (Pic),

Malachius alfierii Pic, *Nudopectinus flabellicornis* (Erichson),
Protapalochrus flavolimbatus Mulsant & Rey.

The following species were most common, abundant and collected in relatively large number: *Laius venustus*, *Nudopectinus flabellicornis*, *Protapalochrus flavolimbatus* and *Attalus latatus*. Other species were less abundant or not common. The largest number of species was collected from Kerdasa, Mansouriyah and Nahia from (Giza); Wadi um Mitla and Wadi Gandali from (Sinai). Other localities showed a smaller number of species.

The revisionary detective survey started by reviewing old and recent literature concerned the family, simultaneously with examining the main reference insect collections for materials regarded as malachiid beetles. The survey indicated that forty-three species within seventeen genera related to the subfamily Malachiinae were recorded in Egypt and represent the fauna of the family Malachiidae of Egypt. Of these, twenty species were recorded in the literature, but not represented by specimens in any of the Egyptian collections. These twenty species have been introduced in the present work on the basis of their diagnostic features recorded in previous investigations or their original description. The gathered information

indicated that some of the malachiid species are pollinators of certain flowering plants, while others are beneficial as being predators of certain insect pests.

The present taxonomic study and classification are based mainly on the materials, represented by twenty-three species, whether kept in the main reference insect collections in Egypt and/or materials collected during the field survey that was carried out throughout the period of study. Diagnostic characters of the family and genera as well as descriptions of the species concerned were based on the external morphological characters of adults together with illustrations of all the represented species to clarify the most important characters used in descriptions. Identification keys are constructed wherever needed, i.e., for the families of superfamily Cleroidea, the two subfamilies of family Malachiidae, the genera of subfamily Malachiinae and keys to the species attributed to each genus.

In addition, synonyms of the genera and species, local and world distribution of each species are provided. Maps are submitted for the malachiid species concerned. Nomenclatorial changes and corrections of the names of categories are added, including ten changes in the genera, and also eight species were

recorded together with sub species, these species were corrected to appear without sub species and dropped as synonyms to the typical species. and updated checklist of the family Malachiidae of Egypt is also given.