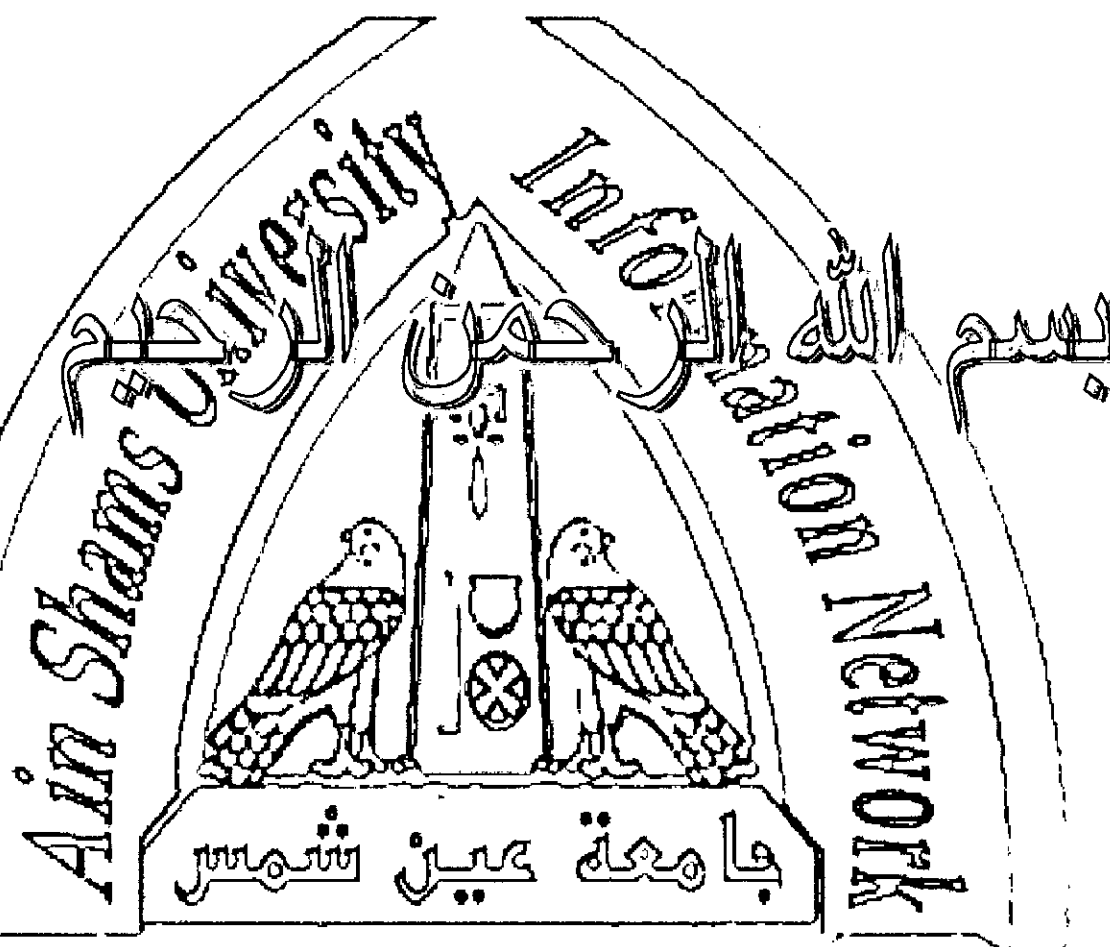




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***Comparative studies between the
characters of some races and hybrids of
honeybee in Assiut region, Upper Egypt***

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THESIS
Submitted in Partial Fulfillment to the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY
In
Economic Entomology
(Apiculture)

Department of Plant Protection
Faculty of Agriculture
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2004

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Date: 28 /8/2004

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَعَلَّمَكَ مَا لَمْ تَكُنْ
تَعْلَمُ وَكَانَ فَضْلُ اللَّهِ
عَلَيْكَ عَظِيمًا

صدق الله العظيم
آية (١١٢) سورة النساء

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ACKNOWLEDGEMENT

ACKNOWLEDGMENT

First of all, I thank GOD.

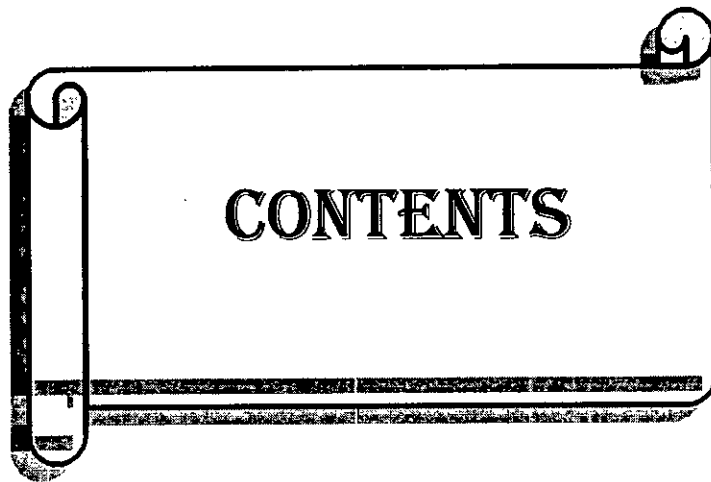
My deep thanks are due to ***Prof. Dr. Moustafa Hassan Hussein***, Professor of Economic Entomology and Apiculture, Plant Protection Department of Agriculture, Assiut University, for his keen supervision, planning the work programme, invaluable, generous and scientific advice, cooperation, kind and sincere help, constructive guidance and careful criticisms when revising the manuscript.

Deep thanks also offered to ***Prof. Dr. Mohammed O.M. Omar***, Professor of Economic Entomology and Apiculture, at the above Department, and ***Prof. Dr. Saad M. Abo-Lila***, Bee Research Department, Plant Protection Research Institute, Ministry of Agriculture, for their valuable advices, encouragement and help during the work.

I am grateful to all staff members in the Plant Protection Department, Faculty of Agriculture, Assiut University.

Thanks are also to all the staff members of the Bee Research Department, Plant Protection Institute, Ministry of Agriculture.

Sincere thanks are due to ***Mr. Salah H. Rateb, Mr. Youssif M.M. Omar and Mr. Mohamed A. El-Khershi***, Faculty of Agriculture, Assiut University, for helping me during this work.



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INTRODUCTION

INTRODUCTION

The domestic honeybee (*Apis mellifera* L.) has an original large area of distribution in Africa, Europe and in the Middle East. All the honeybee races from the different regions give fully fertile hybrids when crossed.

However, different types which develop, during evolution, in the different areas, separated from each other by geographical barriers, or by ecological conditions are the geographical races. For beekeepers, these races are very important, and their biological characters may be predicted to some extent. Generally, these races differ in their morphometrics, activities, behaviour and production.

The most known races are: the Carniolan race, *Apis mellifera carnica* Pollman, the Italian race, *Apis mellifera ligustica* Spinola, the Caucasian race, *Apis mellifera caucasica* Gorbachow. In addition, the Egyptian race, *Apis mellifera lamarckii* Cockerelle, is found in Egypt, especially in Assiut region.

The geographical races can be discriminated by morphological differences, and biometric-statistic methods can be used for an exact analysis of their characters. Races of honeybee and their hybrids, where evaluated in different countries. Also, in Egypt, evaluation of honeybee races and their hybrids was conducted in some regions. However, in Upper Egypt, this evaluation of the Egyptian race, and their hybrids with Carniolan, Italian and Caucasian races, as compared with, the Carniolan race, was not previously studied.

A new scoring method was used for evaluation of different characters of studied races and hybrids, using of all studied biometrical,