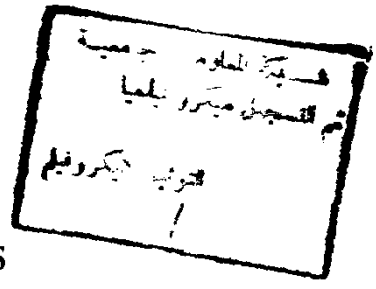
MIDDLE EOCENE NUMMULITIDAE OF FAYUM AREA (SOUTH AND SOUTH WEST OF BIRKET QARUN)



THESIS

Submitted in Partial Fulfillment of The Requirements For The Degree Of Master of Science

In

Geology

By

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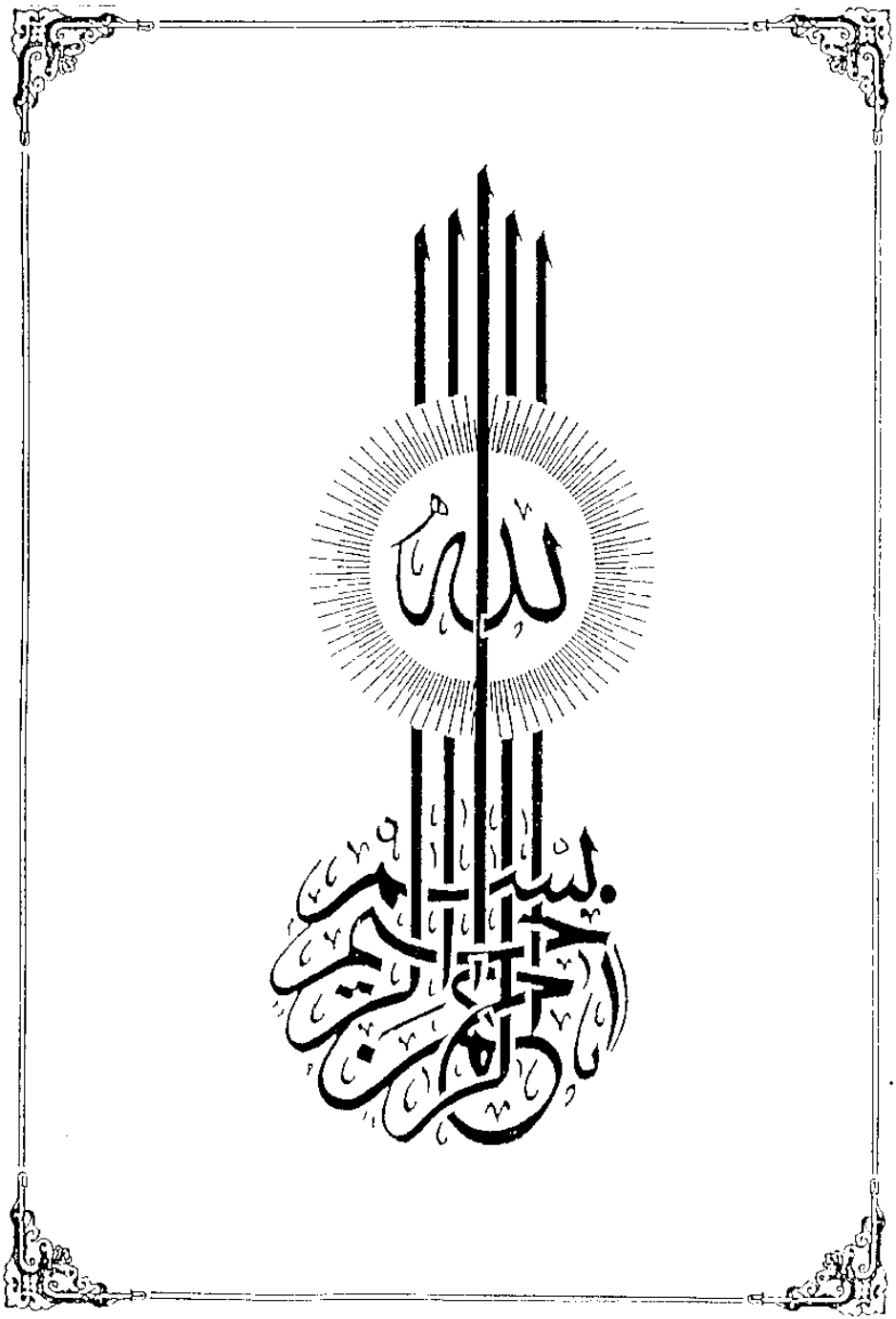

N O T E

The present thesis is submitted to the Faculty of Science, Ain Shams University in partial fulfillment for the requirements of Master of Science in Geology.

Besides the research work materialized in this thesis the author attended ten post graduate courses for one academic year in the following topics :

1- Field Geology and Geologic maps.
2- Statistical Geology and Computer.
3- Micropaleontology.
4- Paleoecology.
5- Lithostratigraphy.
6- Biostratigraphy.
7- Sedimentary Petrology.
8- Sedimentation.
9- Structural Geology.
10- Geotectonics.

He has successfully passed the final examination of these courses, besides an English Language Course.

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LIST OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

The present work is a stratigraphic , micropaleontologic and bio-stratigraphic study of the Middle Eocene succession exposed to the south and south west of Birket Qarun , Fayum area . The stratigraphic sections studied are Munqar Shinnara section (Lat. $28^{o}53^{\prime}N$, Long. $30^{o}40^{\prime}E$) ; Elw el-Berig section (Lat. $28^{o}59^{\prime}N$, Long. $30^{o}43^{\prime}E$) ; Qaret el-Rouayan section (Lat. $29^{o}09^{\prime}N$, Long. $30^{o}12^{\prime}E$) ; south of Qaret Gehannam section (Lat. $29^{o}18^{\prime}N$, Long. $30^{o}10^{\prime}E$) and WNW of Qaret el-Rouayan section (Lat. $29^{o}10^{\prime}N$, Long $30^{o}11^{\prime}E$). Supporting samples are also studied from Gebel Dia , Nile Valley .

The rock units composing the studied sections are from oldest to youngest , Midawara Formation , Sath el-Hadid Formation and El-Gharaq Formation . The *Nummulites* contained in these horizons have been studied , but a special emphasis has been placed on those species belonging to the *Nummulites.* gr. *gizehensis* and *Nummulites.* gr. *partschi* The historical context of the different species and lineages designated in this study is summarized . The systematics of the *Nummulites* covered by the present study are based on their morphologic characters and detailed measurements of large number of samples .

The taxonomic study resulted in the identification of fourteen *Nummulites* species of which the following four species are new : *Nummulites rushdisaidi* ; *Nummulites sathelhadidensis* ; *Nummulites rouayanensis* and *Nummulites abdelmaliki* . The relationship between this province and the Nile Valley is emphasized by the presence of *Nummulites abdelmaliki* and *Nummulites rushdisaidi* in both localities .

From the stratigraphic point of view four horizons are erected : *Nummulites* cf. *N. praegizehensis* - *N. cuvillieri* biozone ; *N. abdelmaliki* - *N. rushdisaidi* biozone ; *N. sathelhadidensis* - *N. rouayanensis* biozone and *Nummulites* aff.*N.lyelli* - *N. lyelli* ssp. - *N.champollioni* biozone . These biozones span the time from Middle Lutetian to Biarritzian , and can be correlated with Schaub 's (1981).