بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

Aswan Faculty of Science

Stratigraphical and Paleoecological Studies on some Paleocene-Eocene Successions in Egypt

A Thesis
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For
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" Geology"
To
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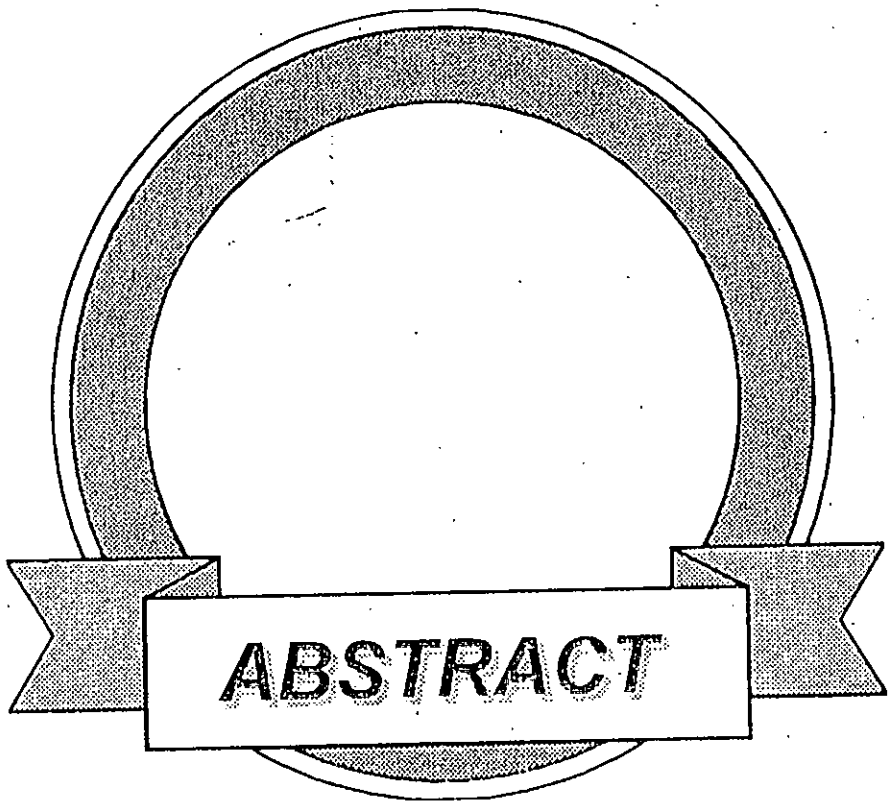
ABSTRACT

Stratigraphical and Paleoecological Studies on some Paleocene-Eocene Successions in Egypt.

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Abstract

Six Egyptian Paleocene- Early Eocene sections have been analysed for stratigraphic completeness and faunal/floral turnover across the Cretaceous/Paleogene, Danian/Selandian, Selandian/Thanetian and Paleocene/Eocene (P/E) boundaries. All the sections straddle the P/E boundary while five also contain the Maastrichtian/Danian boundary. They are located along the southern Nile Valley (G. Owaina), the mid Nile Valley (G. Abu Had), the Quseir region (G. Duwi), the Western Desert (G. Um Elghanayem, Kharga Oasis, and Bir Abu Nusf, Farafra Oasis) and the northern Eastern Desert (Wadi Tarfa, north of Wadi Qena).

The three best expanded Paleocene sections of G. Owaina, G.Duwi and G. Abu Had were critically analysed at high resolution, for carbon and oxygen isotope composition in order to recognize some of the prominent and global, geochemical events which characterize the K/P and P/E boundaries. The study of different kinds of marker events including planktonic foraminifera, calcareous nannofossils, calcareous benthic foraminifera and stable isotopes allow for precision correlation and dating of rocks. Correlation with comparable events in other Paleocene-Eocene land sections and deep-sea sequences permit for the establishment of a unified and precise definition for the boundary levels between different stages.

The results show that the section at G. Abu Had is biostratigraphically complete across the K/P boundary, with the earliest Tertiary Zone Pα present. The Gabal Duwi section, however, has a minor hiatus at the K/P boundary where the lower part of Zone Pα is missing. In the other sections, a major hiatus of longer duration exists across this boundary level and is usually marked by a conglomeratic bed. The presence of Cretaceous survivors together with dwarfed heterohelicids and Globigerinelloids in the basal Danian strata belonging to the *P. eugubina* Zone supports the hypothesis concerning the gradual disappearance of the declining Cretaceous taxa into the early Danian rather than the sudden mass killing theory of the Cretaceous fauna at the K/P boundary.

The Gabal Owaina and G. Duwi sections, on the other hand, provide the best representation of the P-E transition so as to locate precisely the most critical paleontologic and carbon isotopic evidence for the location of the P/E boundary. Both sections contain complete bio- and chemostratigraphic records for the P/E boundary and can be considered as a potential section for a Global Stratotype Section and Point (GSSP) for the P/E boundary.

This boundary is marked by a sharp negative shift in the carbon isotope composition, associated with a major, sudden turnover in the calcareous benthic and planktic foraminifera as well as the calcareous nannofossils. The biotic turnovers involve the first appearance (FA) of *G. luxorensis* (P5a/P5b zonal boundary as defined here) at a level which is immediately below the FA of *T. bramlettei* (NP 9/NP10 zonal boundary).

Although the G. Abu Had section is not optimal as potential stratotype for the P/E boundary because of the presence of a hiatus immediately below the P/E boundary, it is quite expanded along the Danian/Selandian boundary and shows good biological and isotopic signals which are considered as valuable marker events for the recognition of the D/S boundary. The latter boundary lies within the lower part of NP4, at the contact between zones P2 and P3a.

The text encloses 3 Tables, 44 Figures and 27 Plates.

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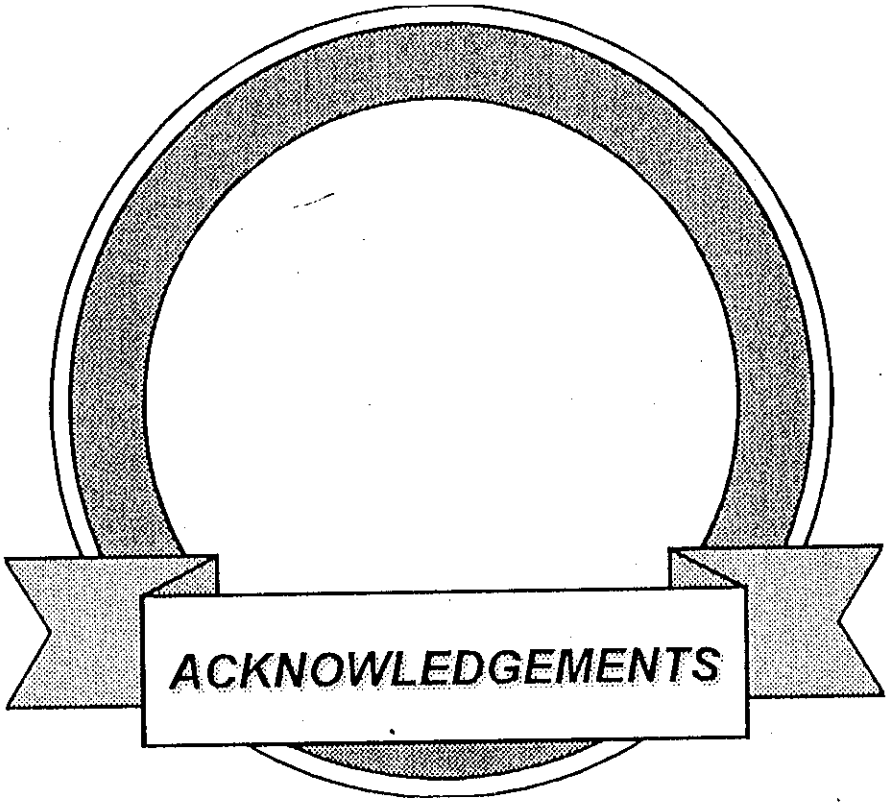
Key Words

Egypt, Cretaceous/Paleogene boundary, Paleocene/Eocene boundary, Danian/Selandian boundary, Planktonic foraminifera, benthic foraminifera, calcareous nannofossils, stable isotope.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