سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

سامية محمد مصطفى

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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سامية محمد مصطفى

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

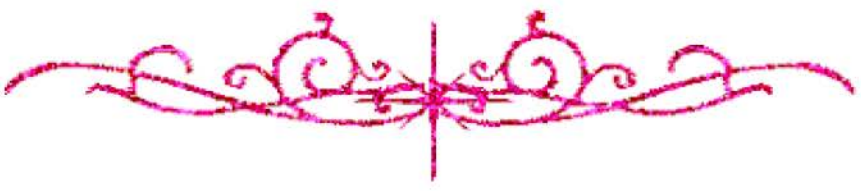
يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

سامية محمد مصطفى

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة



سامية محمد مصطفى

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بالرسالة صفحات لم ترد بالأصل

Zagazig University
Benha Branch
Faculty of Science
Zoology Department

DEVELOPMENTAL STUDIES ON THE SKULL OF THE TELEOST FISH "*CTENOPHARYNGODON IDELLA*"

A Thesis

Submitted in Partial Fulfillment of the Requirement for the Degree of Master of Science in Zoology

Presented by

NEVINE MOHAMMED ANWER MAHMOUD HUSSIEN
(B. Sc. Zoology)

Supervised by

PROF. DR. GAMAL A. MADKOUR
Professor of Comparative Anatomy and Embryology, Faculty of Science
Tanta University

PROF. DR. SABRY S. EL-SERAFY
Professor of Fish Biology and Dean of Faculty of Science
Zagazig University
Benha Branch

DR. RAGAA M. EL-BALSHY
Assistant Professor of Comparative Anatomy and Embryology, Faculty of Science
Zagazig University, Benha Branch

Faculty of Science
Zagazig University
Benha Branch

2002

﴿وقل رب زدنی علماً﴾

صدق الله العظیم

DEDICATION

To my parents, my brother, my husband
and my daughters;
(MENNAT ALLAH and HEBAT ALLAH)

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ACKNOWLEDGMENT

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INTRODUCTION AND HISTORICAL REVIEW

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The study of the development of the skull in bony fishes is bound up with the recognition of two materials: cartilage and bone, of which the skull is mainly composed, and with the theories concerning the relations of these tissues to one another both anatomically and developmentally.

The chondrocranium is composed primarily of a trough of cartilage, the cavity of which is occupied by the brain, and is more or less open at its dorsal surface. There are three pairs of centers of chondrification which transform into cartilaginous material, from posterior to anterior are:

a. A pair of parachordal cartilages, that laying on either side of the notochord.
b. A pair of polar cartilages: which are small rounded centers above the notochord.
c. A pair of trabeculae cranii, that are elongated centers in front of the polar cartilages.

The floor of the cranium begins by an accumulation of mesenchium cells which are derived from the mesoderm in the neighbour hood of the notochord, both on either side of it and anterior to its level. Somewhat about the middle of the floor of the chondrocranium there is a recess in which the infundibulum rests. The part of the floor of the chondrocranium behind this recess is characterized by having the anterior part of the notochord embedded in it. Thus the distinction is made