



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





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# شبكة المعلومات الجامعية

## التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
على هذه الأفلام قد اعدت دون أية 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 %



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# بعض الوثائق الأصلية تالفة



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بالرسالة صفحات  
لم ترد بالأصل

**ECOLOGICAL AND PHYTOCHEMICAL  
STUDIES ON *Cleome africana* Botsch.**

**BY**

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B.Sc. of Sci.(Chemistry), Ain Shams Univ. 1977

M.Sc. in Eviron. Biological Sci., Inst. of Environ.  
Studies and Res., Ain Shams Univ., 1994.

**THESIS**

Submitted for the Degree of

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**IN**

**ENVIRONMENTAL SCIENCES**

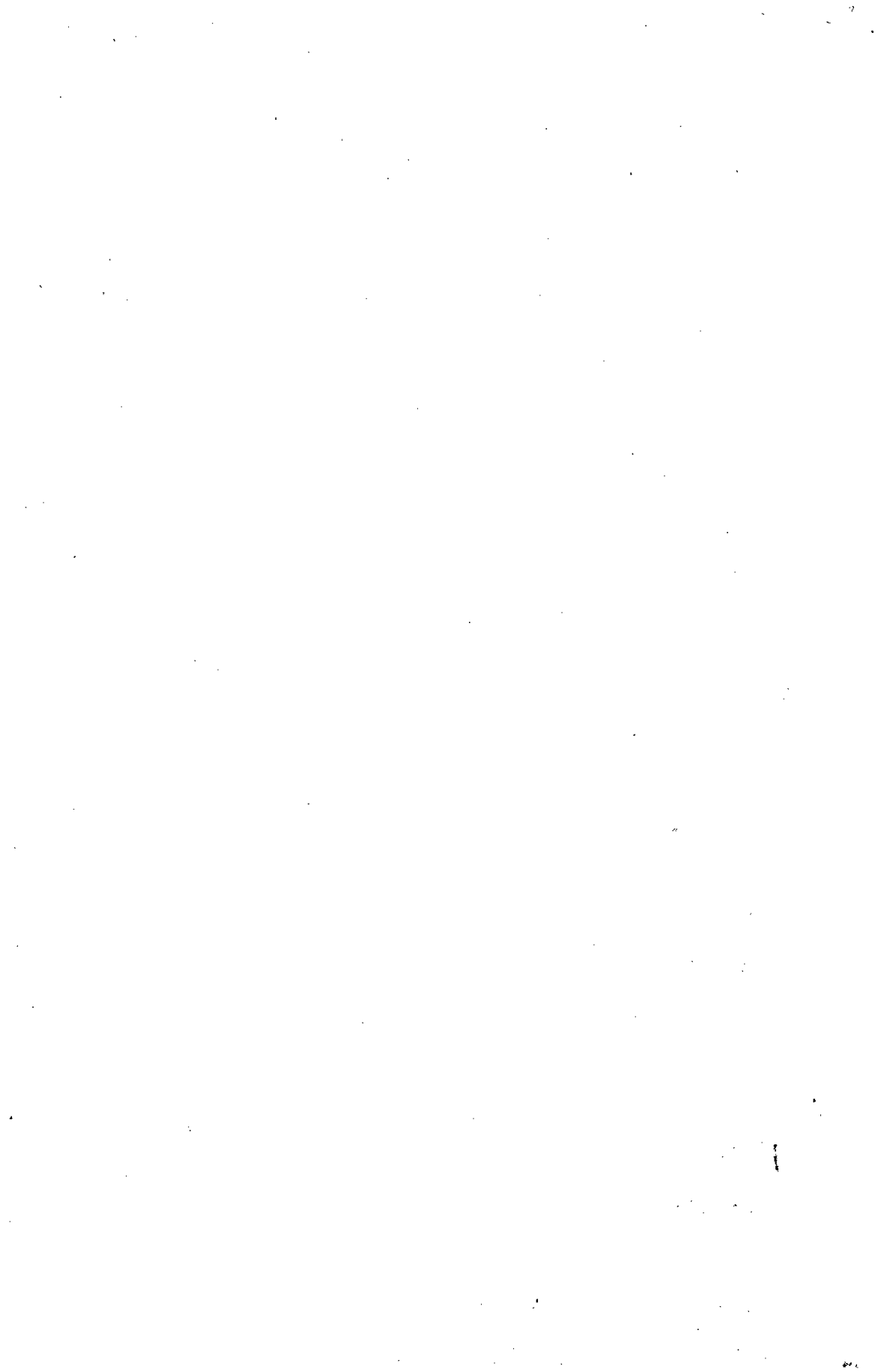
**DEPARTMENT OF BIOLOGICAL AND PHYSICAL SCIENCE**

**ENVIRONMENTAL STUDIES & RESEARCHES INSTITUTE  
AIN SHAMS UNIVERSITY**

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**1998**



**APPROVAL SHEET**

**ECOLOGICAL AND PHYTOCHEMICAL STUDIES  
ON *Cleome africana* Botsch.**

**BY**

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B.Sc. of Science (Chemistry) Ain Shams University, 1977.

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**APPROVAL SHEET**

Title of Thesis : Ecological and phytochemical studies on  
*Cleome africana* Botsch.

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## ABSTRACT

Name : Shalabia Shahhat Emam  
Title : Ecological and Phytochemical Studies on  
*Cleome africana* Botsch.  
Degree : Doctor of Philosophy.  
Submitted to : Biology Department, Institute of  
Environmental Studies and Research,  
Ain Shams University.

This investigation includes ecological, eco-physiological, phytochemical and biological studies on *Cleome africana* Botsch. It aimed to clarify the range of environmental conditions within which the plant can grow and adapt itself to the main communities and the reflection of these environmental conditions on the chemical constituents of the plant, which was collected from two different habitats. In addition to the previous study a preliminary biological study was done which aimed to clarify the pharmacognostical importance of the plant.

**Key words:** Flavonoids - Volatile oils - *Cleome* -  
Cleomaceae

