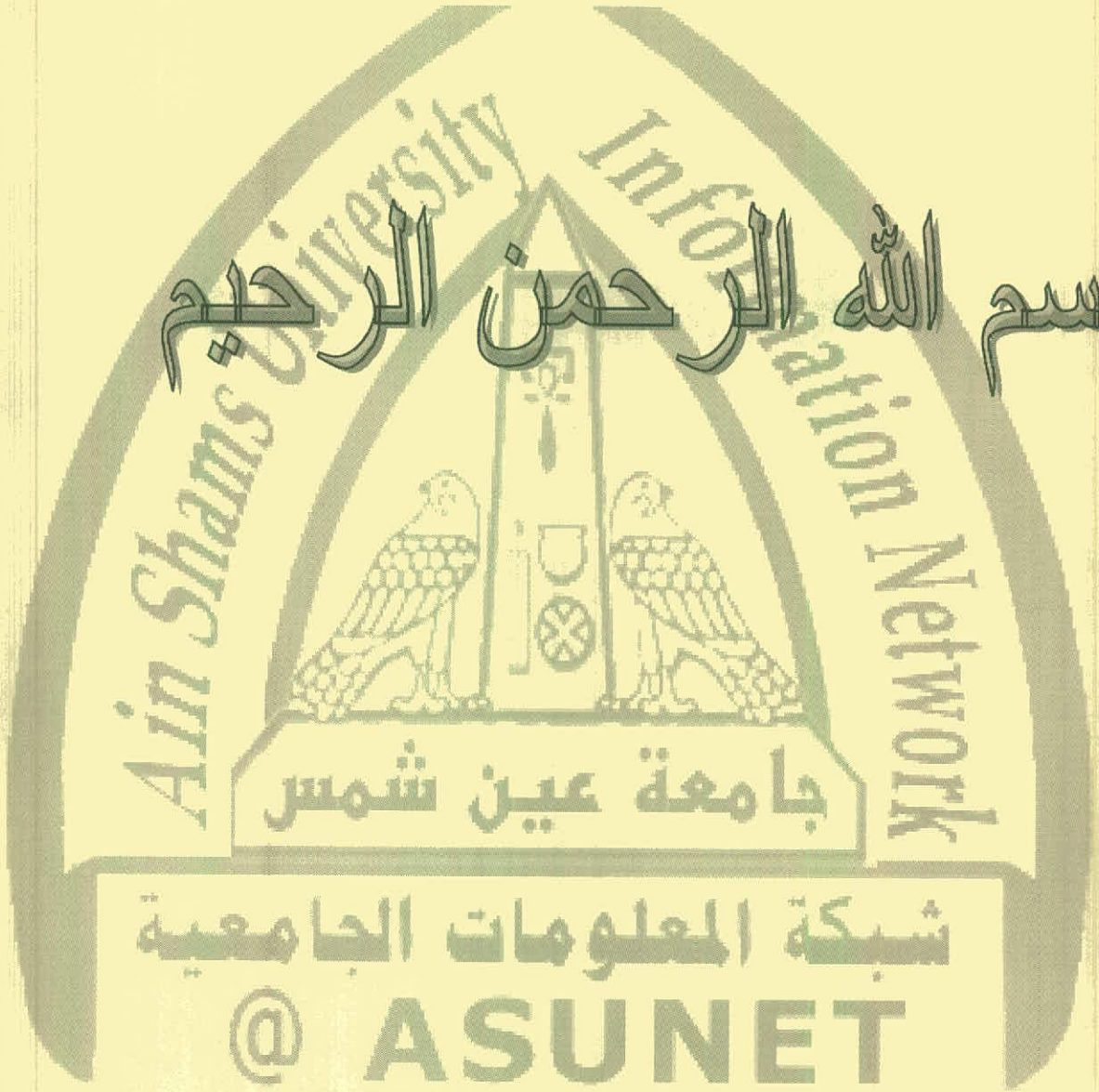
شبكة المعلومات الجامعية



بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

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

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات لم ترد بالاصل

ECOLOGICAL AND PHYTOCHEMICAL STUDIES ON *ASTRAGALUS SPINOSUS* (FORSSH.) MUSCHL.

By

HANONA SAMI YAECOUB

B.Sc. of Agric. (Industrial Foods), Mansoura University 1975
Master in Environmentted Sci., Ain Shams University 1998

A thesis Submitted for Doctor of Philosophy
In
Environmental Science

Department of Agricultural Science
Institute of Environmental Studies Research
Ain Shams University

2001

APPROVAL SHEET

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ABSTRACT

Name : Hanona Sami Yaecoub

Title : Eological and Phytochemical Studies on *Astragalus spinosus* (Forssk.) Muschl.

Degrr : Doctor of Environmental Science

Submitted to : Environmental Agriculture Science Department, Institute of Environmental Studies and Research, Ain shams University.

This investigation includes ecological, eco- physiological, phytochemical, biological, germination and seed's cultivation studies on *Astragalus spinosus* (Forssk.) Muschl. It aimed to clarify the rangr of environmental conditions within which the plant can grow and adapt itself in its main habitats and the reflection effect of these environmental conditions on its chemical constituents. The plant was collected from two different habitats El Grawla 30 km East and Fuka 82 km East of Marsa Matruh.

Key words : Ecology - Phytochemistry – Flavonoids – Astragalus - Leguminosae

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