STUDY ON SOME ENVIRONMENTAL CONSEQUENCES OF INSECTS ASSOCIATED WITH WEEDS GROWING IN VEGETABLE FIELDS IN A.R. EGYPT

By

VIOLETTE SHOUKRY GUIRGUIS ABDEL-MALAK

B.Sc. Faculty of Science (Entomology), Cairo Univ., 1978.

M.Sc., Natural Resources, Institute of African Research and Studies, Cairo Univ., 1989.

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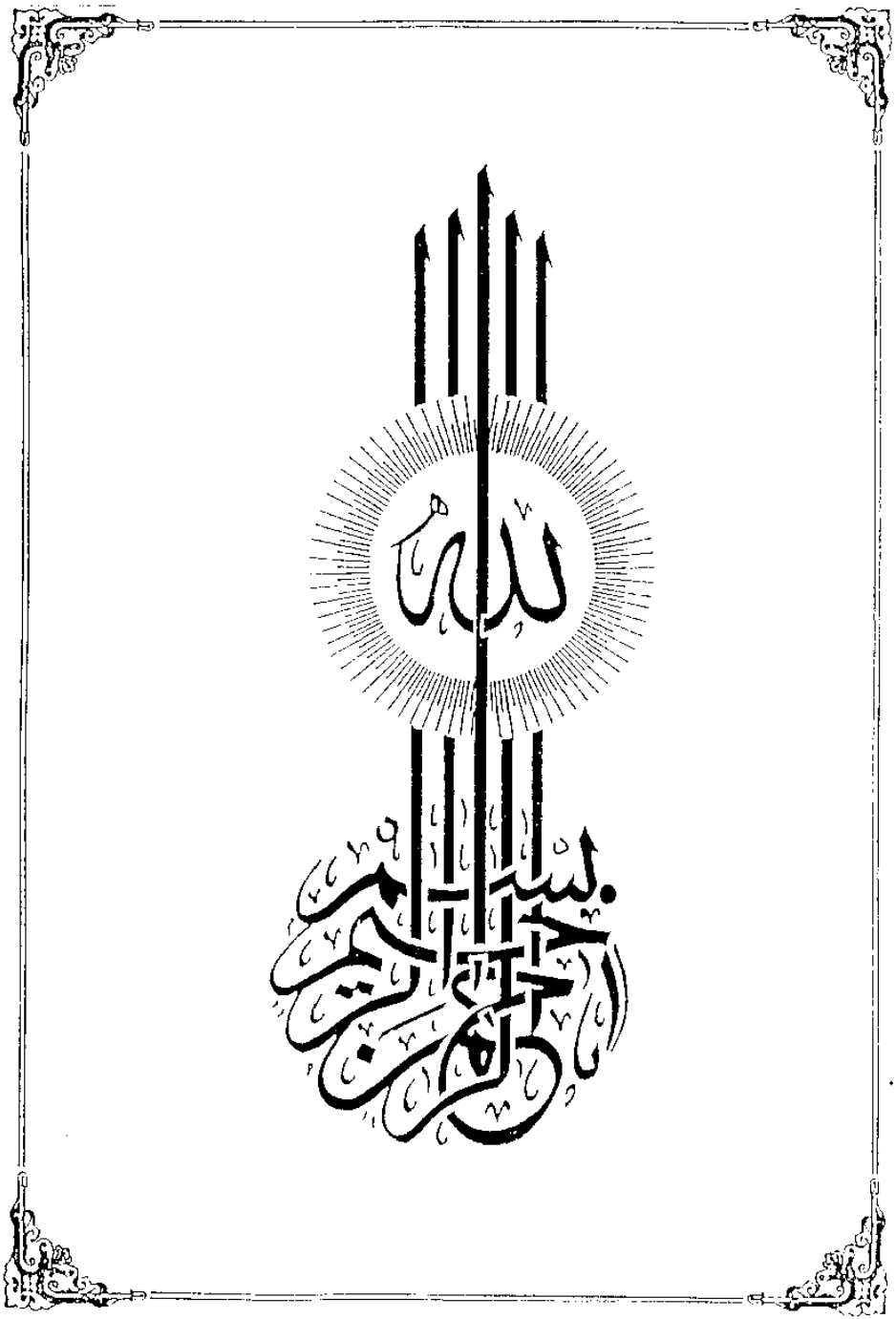

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By
VIOLETTE SHOUKRY GUIRGUIS ABDEL-MALAK
Research Assistant,
Plant Protection Research Institute,
Agricultural Research Center, Cairo

Supervised by

Prof.Dr. A. H. Kaschef
Prof. of Entomology,
Fac. of Science,
Ain Shams Univ.

Prof.Dr. S.I. Ghabbour
Prof. of Natural Resources,
Inst. of African Res. & Stud.,
Cairo Univ.

Prof.Dr. F.A. Herakly
Prof. of Entomology,
Agric. Res. Center

Assoc. Prof.Dr. S.M.A. El-Sayes
Prof. of Entomology
Inst. of Environ. Studies &
Research ,, Ain Shams Univ.

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APPROVAL SHEET

Name Of Student : VIOLETTE SHOUKRY GUIRGUIS ABDEL-MALAK

TITLE OF THESIS : STUDY ONE SOME ENVIRONMENTAL CONSEQUENCES OF INSECTS ASSOCIATED WITH WEEDS GROWING IN VEGETABLE FIELEDS IN A.R. EGYPT .

Degree : Ph. D in Environmental Sciences. Department of Biological and Physical Sciences

this thesis for Ph.D. degree in Environmental science has been approved **by:**

Prof.Dr.MohamedHassen.Kaschef .....
Prof of Entomology,
Fac. of Science, Ain shams University.

Prof.Dr.Samir.IRAHIMGhabbour .....
Prof of Natural Resources.
Inst. of African Res. & Stud.
Cairo University.

Prof.Dr.Mohamed.Fawzy.El.Shaarawi .....
Prof. of Economic Entomology
Fac of Agric. Ain Shams University

Prof.Dr.Fatma.Kamel.Adham .....
prof of Enotomology
Fac. of Science, Cairo University

Committee in charge

Date of examination 11/6/1997.

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ABSTRACT

Violette Shoukry Guirguis Abdel-Malak : Study on some environmental consequences of insects associated with weeds growing in vegetable fields in A.R. Egypt. Unpublished Ph.D. Thesis in Environmental Sciences, Institute of Environmental Studies and Research, 1997.

Vegetable crops are valuable diet of people in most countries. Weeds associated with the vegetable crops affect the fauna either positively or negatively. The fauna is either phytophagous (potential pests) or predators (natural enemies of pests). Weeds harbour both types.

The survey of arthropods and their populations on vegetables and weeds may help us to understand the role of weeds in actual infestation size of the pests and in allowing survival of predators and may help in planning appropriate control programmes for reducing the use of chemicals in control. The study was carried out in Kaha Research Station, North of Cairo. It revealed that the populations of phytophagous arthropods were higher in the unweeded treatment than in the other treatments and that the lowest population was in the weeded treatment. Also, predator populations were higher in the unweeded treatment.

The seasonal abundance differed from one arthropod species to the other and from one host plant to the other.

The total activity density of soil fauna in the treatments varied from year to year. Soil fauna was richer in species and had a more equitable distribution than above ground fauna.

The distribution of arthropod species was strongly related to the plant growing in the area of collection and the shading of canopy had a great influence on soil fauna distribution.

Key words : Vegetables, weeds, soil fauna, phytophagous arthropods, predator arthropods.

ABBREVIATIONS

(PD) : Population density

(AD) : Activity density

(T1) : Weeded treatment

(T2) : Unweeded treatment