

Field Characteristics of Eight Species of Family Noctuidae (Lepidoptera) from Libya

Y.M.Z.Yahiya

Dept.of Plant Prot.Fac.of Agric,Omar El Mokhtar Univ.,Libya

Email: y_yahiya_2006@yahoo.com

ABSTRACT

The present study is comprising identification of eight species of family Noctuidae (Lepidoptera) from Libya. They were *Noctua comes* Hübner, *Noctua pronuba* (Linnaeus), *Spodoptera exigua* Hübner, *Agrotis exclamationis* Linnaeus, *Agrotis segetum* Denis & Schiffermuller, *Agrotis ipsilon* Hufnagel, *Autographa gamma* (Linnaeus), *Cucullia umbratica* Linnaeus. The study is aimed to give preliminary description for the species dependent on color characters.

Key words: Lepidoptera - Noctuidae - Libya.

INTRODUCTION

The name of family Noctuidae (Phalaenidae of some authors) is derived from the oldest generic name *Noctua* L (1758), Noctuidae is approximately 38.000 named species world wide (Poole, 1989).Whereas Kemal and Kocak (2007) reported that order Lepidoptera includes 180.000 species world wide, among them 22904 species in Africa , 473 species recorded in Libya. Wiltshire (1948) divided family Noctuidae into two sections, i.e. quadrifinae and trifinae. However Scoble (1995) classified family Noctuidae into ten quadrifine subfamilies and eight trifine subfamilies. Crumb (1956) in his study to the family Noctuidae divided it into 17 subfamilies, while Berror *et al.* (1989) mentioned that family Noctuidae was divided into a number of subfamilies according to wing characters. Zavattari (1934) published the first list of Libyan fauna, he recorded 259 species of family Noctuidae.Damiano (1961) listed 146 species of Lepidoptera form Libya. Hessein (1980) recorded 96 species belonging to six orders and 30 families form Tripoli region in Libya among them species belonging to family Noctuidae. El-Ghariani (1992) recorded many Lepidopteran species captured by light trap form El-Beida region in Libya. El-Ghariani *et al.* (1999 / 2000) gave a list including species of family Noctuidae form Al-Jabal Al-Akhdar region in Libya. El- Meghrabi (2001) described 26 Lepidopteran species from Benghazi region in Libya. El- Meghrabi and

Amin (2007) surveyed Lepidopteran insects and recorded 66 species in El-Beida. The present study aim is to distinguish between eight spp. of family Noctuidae from Libya.

MATERIALS AND METHODS

The insect samples used in this study were presented in the museum section in plant protection department, faculty of Agriculture, University of Omar El Mokhtar. They were collected in different periods of the year. Eight species of family Noctuidae were chosen for this study.

RESULTS AND DISCUSSION

***Noctua comes* Hübner, 1813 (The Lesser Yellow Under wing) (Plate1A)**

Moths are medium sized; (wingspan 38-48 mm). The forewings are variable; from light brown to almost black with brown terminal line. There are two oval dark spots in the center of wing close to each others and surrounded by fine whitish line. It has orange-yellow hindwings with a black sub-terminal band and a black discal spot.

***Noctua pronuba* (Linnaeus, 1758) (The Large Yellow Underwing) (Plate1B)**

This is a quite large and heavy species ;(wingspan 50–60 mm). The forewings are quite variable from light brown to almost black with light subterminal line and a black spot on the outer fourth of costal margin. There is a kidney-shaped spot, brown in colour in the outer of wing. The darker individuals often have a pale streak along the Costa. The hind wings are bright orange-yellow with a black sub-terminal band.

***Spodoptera exigua* (Hübner, 1808) (Beet army worm) (Plate1C)**

A medium size; (wingspan 25-30 mm). The forewings area mottled gray and brown with irregular double wavy lines and a light colored bean-shaped spot near the center. The hindwings are uniform white or dirty white with a dark line near the margin.

***Agrotis exclamatoris* Linnaeus, 1758 (The Heart and Dart)
Plate1D)**

A medium size ; (wingspan 35-44 mm). Forewings ranging from pale to dark brown but always recognizable by the distinctively heart shaped dark stigmata which give it its common name. The hind wings are whitish.

***Agrotis segetum* Denis & Schiffermuller, 1775 (The Turnip Moth)
(Plate1E)**

A medium size; (wingspan 32-42 mm). Forewings ranging from pale buff through to almost black. The paler forms have three dark-bordered stigmata on each forewing. Hindwings are very pale, pearly white.

***Agrotis ipsilon* (Hufnagel, 1766) (The dark sword-grass) (Plate1F)**

Fairly large; (wingspan 40-55mm). Forewings pale brown with dark brown terminal wavy line and three fine triangular black markings. Hindwings, greyish white with brown venation and a thin dark line along the margins.

***Autographa gamma* (Linnaeus, 1758) (The Silver Y) (Plate1G)**

A medium-size (wingspan 30 - 45 mm). The forewings are grayish-brown. in the centre of each forewing there is a silver-coloured mark shaped like a letter Y or a Greek letter Gamma. The hindwings are grayish white at the base with broad dark gray margins, veins are dark brown.

***Cucullia umbratica* Linnaeus, 1758 (The Shark) (Plate1H)**

This is a fairly large species, with long, narrow wings giving a streamlined appearance; (wingspan 52-59 mm). The forewings are grey with brown and black streaks. The hind wings are grey.



A



B



C



D



E



F



G



H

A-*Noctua comes* (38-48mm) **B**-*Noctua pronuba* (50 –60mm) **C**-*Spodoptera exigua* (20–30mm)
D-*Agrotis exclamatoris* (35-44mm) **E**-*Agrotis segetum* (32–42mm) **F**-*Agrotis ipsilon* (40 –
55mm) **G**-*Autographa gamma* (30 – 45mm) **H**-*Cucullia umbratica* (52 – 59mm)

Photos quoted from internet

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الملخص العربي

التمييز الحقلّي لثمانية أنواع من فصيلة Noctuidae من رتبة Lepidoptera في ليبيا

يوسف موسى زايد يحيى

قسم وقاية النبات - كلية الزراعة- جامعة عمر المختار
mail: y_yahiya_2006@yahoo.com

تضمنت الدراسة تعريفاً لثمانية أنواع من الفراشات فصيلة Noctuidae من رتبة Lepidoptera وهي *Spodoptera exigua* و *Noctua pronuba* (Linnaeus) و *Noctua comes* Hubner Denis & Schiffermuller و *Agrotis exclamationis* Linnaeus, Hübner *Autographa* و *Agrotis ipsilon* Hufnagel و *Agrotis segetum* Linnaeus و *gamma*(Linnaeus) في ليبيا وكان الهدف الاساسي هو وصف بسيط لهذة للانواع معتمداً على الصفات اللونية.