

REDESCRIPTION OF SOME SPECIES OF FAMILY COSSIDAE LEPIDOPTHERA COMMONLY FOUND IN EGYPT.

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Abstract

The present work was carried out to classify the available species of family Cossidae (Leopard moths or carpenter) in Egypt. This study includes illustrated redescrptions, depending upon the male and female genitalia with demonstration plates for seven species belonging to six genera.

INTRODUCTION

The species studied in the present investigation are *Cosus L. _ nigrum* Baker, *C. niloticus* Joannis, *Dyspessa katylaria* Bang, *Eremocossus froleuca* Hamp., *Paropta paradoxa* H. _ S., *Phragmatoecia castanea* H. and *Zeuzera pyrina* L. These species were obtained from the insect collections of plant protection Research Institute, in addition to those obtained by light traps and trips.

Gathered information by the field trips and review of available literature (Lang 1935; Pierce 1935; Wiltshire 1948; Brues 1954; Forbes 1954; Viette 1962; Robinson 1976) were carried out.

It is worth to mention that the proper synonymy lists have been avoided for lack of authorized bibliography.

For Preparation of the adult genitalia, the abdomen was separated and boiled in 10% caustic soda solution for about 30 minutes, then washed in distilled water and dissected in 50% ethyl alcohol under a stereoscopic binocular microscope.

Afterwards, the specimens were dehydrated in series of alcohol, stained in basic fuchsin (dissolved in 70% alcohol) and dehydration continued gradually to 100% alcohol. The specimens were finally cleared in xylol and mounted in canada Balsam.

Identification of the species used in this work was confirmed at the British Museum of London by Dr. J.D. Holloway.

RESULTS AND DISCUSSION

The study includes illustrated redescription, depending upon the genitalia with demonstration plates for seven cossid species within six genera. Two keys are constructed, one for the males and the other for females , and a special part was devoted to give an idea about the taxonomical characteristics of each species.

KEY TO THE SPECIES

(Male genitalia)

1. Valvae fused basally 2
 - Valvae not - fused basally 3
2. (1) Clasper present, aedeagus cylinder
 - *Cossus nilotica* Joan.
 - Clasper absent ,aedeagus thin, long.....
 - *Phragmatocia castanea* H.
3. (1) Gnathos present *Cossus L - nigrum* B. - Baker
 - Gnathos absent 4
4. (3) Uncus two lobes, saccus subquadrate, aedeagus pointed
 - *Dyspessa Kabylaria* Bang.
 - Uncus one lobe 5

5. (4) Saccus large, broad, aedeagus swollen at middle

..... *Paropta paradoxa* H.S.

Saccus small, narrow; aedeagus stout

..... *Zeuzera pyrina* L.

(FEMALE GENITALIA)

1. Corpus bursae elongate; signum absent 2

Corpus bursae globular, signum present

..... *Zeuzera pyrina* L.

2. (1) Anterior apophyses present 3

Anterior apophyses absent .. *Cossus L.nigrum* B. - Baker

3 . (2) Ductus bursae long; bursae with lateral projection.....

..... *Cossus nilotica* Joan.

Ductus bursae short *Paropta paradoxa* H. - S.

Superfamily : Cossoidea

Family : Cossidae

Genus : *Cossus* Fabricius, 1794

Entomologia Systematica emendata et

aucto . Tom . III . Pars I. et II. Hafniae

1793 - 1794.

Cossus L. nigrum Baker , 1894

Tr. E.S. , 1894 P. 36 (Stgr. & Rbl. 1901 p.407).

General appearance of moth : Brown mixed with clay, forewing with dark brown reticular, ventrally clay, alar expanse about 45 mm.

Male genitatia (Pl. I & Fig. I) : Uncus (un.) somewhat broad; gnathos (gn.) narrow, stripe, tongue - like; tegumen (tg.) wide; vinculum (vin.) and saccus (sc.) U-shaped; valve (v.) broad, clasper moderately elongate, sacculus (scl.) developed;

juxta vase - shaped; aedeagus (aed.) cylinder and somewhat long.

Female genitalia (Pl. II & Fig. 1): Anal lobes (an. l.) subquadrate, weakly setosed; posterior apophyses (p.ap.) distinctly long, thin basally and swollen at terminal part; ostium (ost.) small surrounded with two vaginal plates; ductus bursae (dc. brs.) somewhat short with collar; corpus bursae (brs.) elongate without signa (si.).

Redescribed from 4 specimens (Fayium, on Acacia, 5.65; Shibin El - Kom, on Acacia, 3.65; El - Menya, 6.15; Wadi Rashid, 9.15)

COSSUS NILOTICA JOAN

General appearance of moth : Clay - brownish; forewing with three dark brown lines, ventrally clay; alar expanse about 42 mm.

Male genitalia (Pl. I & Fig. 2): Uncus tapered, tegumen somewhat broad; vinculum somewhat narrow, saccus rounded; valve subquadrate, costa convex, outer margin and sacculus sclerotized; aedeagus tubular.

Female genitalia (Pl. II & Fig. 2): Anal lobes somewhat long; anterior apophyses (a.ap.) long, as long as posterior apophyses; genital plate small, ostium rounded; ductus bursae short, narrow; corpus bursae elongate with lateral projection, signa absent.

Redescribed from 5 specimens (Cairo, 1916; Giza, 1927; Fayium, 1979; Ismailia, 1982; Sinai, 1986).

Genus: *Dyspessa* Hubner, 1822

Sammlung europaischer Schmetterlinge.

Augsburg (1793 -1827).

Dyspessa kabylaria Bang - Hass

Seitz II, 1913, P. 426.

General appearance of moth : Dorsally ashy speckled with cream scales, ventrally ash-gray, alar expanse about 19mm.

Male genitalia (Pl. I & Fig. 3): Uncus subtriangular, pointed apically; tegumen somewhat long, narrow at apex; vinculum V-shaped, saccus rounded; valve sharply

peaked; saccus subquadrate, small; aedeagus somewhat small, pointed.

Redescribed from 3 species (King Maryut, Alexandria, March, 1923).

EREMOCOSSUS FROLEUCA HAMPSON

General appearance of moth : Cream-whitish, speckled with clay scales; alar expanse about 27 mm.

this insect was represented in the main collection by one moth only, and thus it is difficult to submit it for genetical preparation. The species was recorded from El- Mohammadia, Giza during September, 1916 by A.W. Boyd.

Genus : *Paropta* Staudinger

Paropta paradoxa Herrich - Schaffer

I-VI, Regensburg (1843 - 1856)

General appearance of moth : Dorsally brown mixed with clay, forewing with dark brown lines, ventrally pale brown, alar expanse about 37 mm.

Male genitalia (Pl. I & Fig. 4): Uncus long, dome - shaped, apex rounded, setosed; tegumen wide; vinculum broad, shorter than tegumen , saccus broad , rounded; valve long, blade-shaped, apex rounded, costa curved at middle , concave near apex, sacculus normal; aedeagus with flattened apex, swollen at middle.

Female genitalia (Pl. II & Fig. 3) : Anal lobes long plates; anterior apophyses thin, about as half as posterior one; genital plate small , rounded, ostium small surrounded with two small vaginal plates; ductus bursae distinctly short and narrow; corpus bursae longitudinal without signa.

Redescribed from 4 specimens (Cairo, June, 1913; Minya, July, 1915; Tanta, April, 1961; Ismailia, June , 1982)

Genus : *Phragmatocia* Newman

Phragmatocia castaneae Hubner, 1790

Beitrage Zur Geschichte der Schmetterlinge,
Augsburg II.Bd. mit Nachtrag 1791.

General appearance of moth : Dull straw; ventrally concoloures; alar expanse about 38 mm.

Male genitalia (Pl. I & Fig. 5) : Uncus subtriangular, apex pointed; tegumen wide; vinculum and saccus V-shaped; valve with rounded apex, costa concave at middle , outer margin and sacculus normal ; aedeagus long, finger like , somewhat swollen basally.

Redescribed from 6 specimens (Alexandria, Aug. 1916).

Genus : *Zewzera* Latreille

Genera Crustaceorum et Insectorum

Secundum ordinem naturalem in familias

disposita I - IV. Paris 1802 - 1809.

Zeuzera pyrina linne, 1761

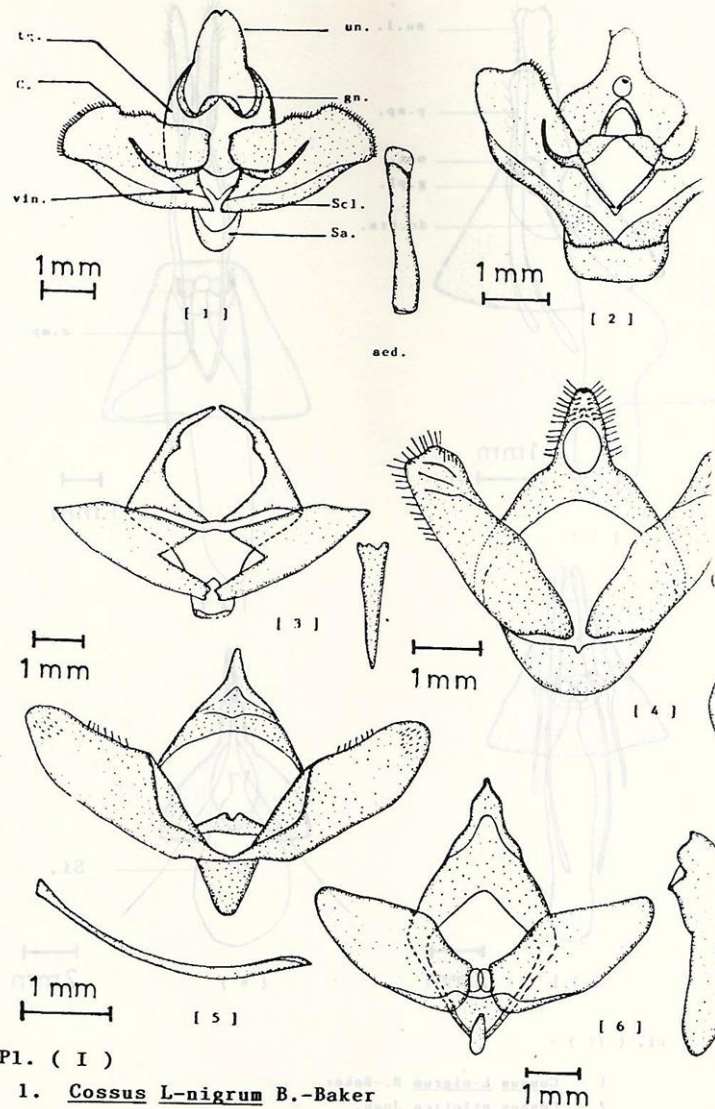
Fauna Svecica. Editio altera. Stockholmiae, 1761

General appearance of moth : Whitish speckled with blackish markings like dots on fore and hind wings; ventrally concoloures; alar xpanse about 45 mm.

Male genitalia (Pl. I & Fig. 5): Uncus pointed, subtriangular; tegumen narrow apically, broad basally; saccus pointed; valve subtriangular, apex rounded, costa somewhat arched at base, sacculus sclerotized; aedeagus rounded at apex, bent at middle.

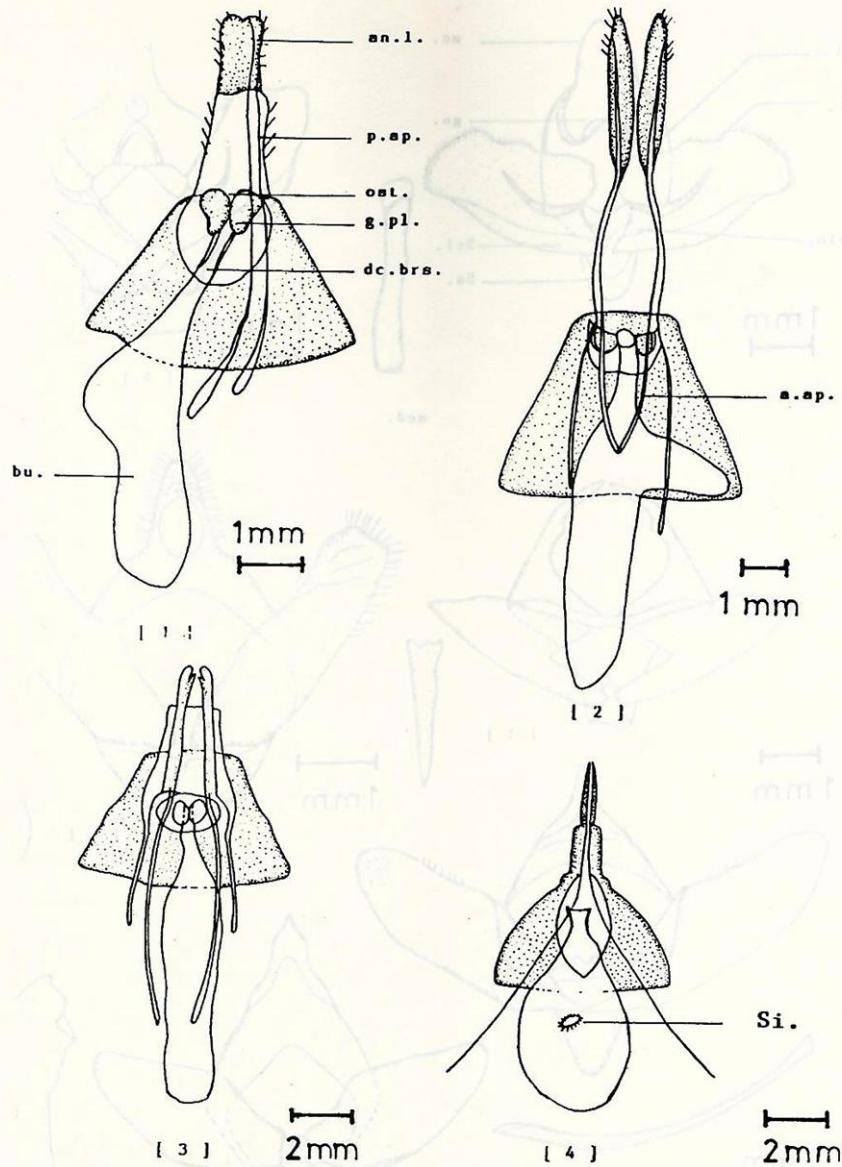
Female genitalia: Anal lobes narrow; posterior apophyses long, thin, anterior apophyses absent; ostium small; ductus bursae obviously short; corpus bursae globular; signum rounded .

Redescribed from 5 specimens (Qalyubiya, 5, 23; Alexandria, 5.67; Burg Al - Arab, 5.73).



Pl. (I)

1. Cossus L-nigrum B.-Baker
2. Cossus nilotica Joan.
3. Dyspessa kabylaris Bang.
4. Paropta paradoxa H.S.
5. Phragmatocia castanea H.



Pl. (II) :

- 1 - *Cossus L-nigrum* B.-Baker
- 2 - *Cossus nilotica* Joan.
- 3 - *Paropta paradoxa* H.S.
- 4 - *Zeuzera pyrina* L.

SUMMARY

Seven cossid species are here revised based upon the main taxonomic characters of male and female genitalia, these species are :

1. *Coussus L. nigrum* B. - Baker
2. *Cossus nilotica* Joan
3. *Dyspessa kabyalaria* Bang
4. *Eremocossus froleuca* Hamp.
5. *Parota paradoxa* H.-S.
6. *Phragmatoecia castanea* H.
7. *Zeuzera jpyrina* L.

A key, based upon the genitaliae is submitted.

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إعادة وصف بعض أنواع من فصيلة (حرشفية الأجنحة) المتواجدة في مصر

محمد محمد مصطفى الجمل

معهد بوث وقاية النبات - مركز البحوث الزراعية - الدقي.

شملت الدراسة إعادة وصف سبعة أنواع من الحشرات الناقرة بالاعتماد على أهم الصفات
التقسيمية لآلتي التسايف الذكرية والأنثوية مع عمل مفتاح تقسمي لكل منهما ، وهذه الأنواع هي :

1. *Coussus L. nigrum B. - Baker*
2. *Cossus nilotica Joan*
3. *Dyspessa kabyalaria Bang*
4. *Eremocossus froleuca Hamp.*
5. *Parota paradoxa H.-S.*
6. *Phragmatoecia castanea H.*
7. *Zeuzera pyrina L.*