

THE FIG LEAF ROLLER, *CHOREUTIS NEMORANA*  
(HUBNER) (CHOREUTIDAE, LEPIDOPTERA)  
AS A NEW RECORD IN EGYPT

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**Abstract**

The fig leaf roller, *Choreutis nemorana* (Hbn.) was detected for the first time in Egypt at the north west coastal region (Matrouh Governorate) on fig trees, *Ficus carica* L. in July 1991. Larvae were collected from various fig orchards and reared in the laboratory on fig leaves till adult emergence. Specimens of moths were not available in the collection of the Plant Protection Research Institute. Specimens were sent to the British Museum and were identified by Mr. K. Tuck on the 23rd of July 1992 as *Choreutis nemorana* (Hbn.).

**INTRODUCTION**

Fig trees, *Ficus carica* L. are well spread over large area at the northern coastal region of Egypt as well as in many other localities such as Qualubia and Fayoum governorates. Fig trees are attacked by different insect pests. The most important pests are scale insects, mealy bugs, stem borers, mites and fruit flies. Reported herein the first recording and identification of the fig leaf roller *Choreutis nemorana* (Hbn.) in Egypt.

## MATERIALS AND METHODS

Preparation of specimens for drawings and description was followed according to Forbes (1923). For preparation of the wings, they were left for a short time in 95% alcohol, transferred to 10% hydrochloric acid, then to a solution containing equal portions of water and sodium hypochloride where the scales were removed with a fine brush. The cleared wings were rinsed in water and then run in alcohol as usual, stained in basic fuchsin and put in Canada balsam for mounting. For preparation of genitalia of the adult moth, the abdomen was separated and boiled in 10% caustic soda solution for about 30 minutes, then washed in distilled water and dissected in 50% alcohol, under dissecting stereoscopic binocular microscope. Afterwards it was passed in a series of alcohol, stained in acid fuchsin dissolved in 45% alcohol and continued gradually to 100% alcohol, then cleared in xylol and finally mounted in Canada balsam.

## CLASSIFICATION

*Tortrix nemorana* Hubner, (1799)\*, Sammlung Europaischer Schmetterlinge volume 7, plate 1, figure 3.

*Choreutis nemorana* Hubner, (1825)\*, Verzeichniss Bekannter Schmetterling, page 373, species number 3577.

*Asopia incisalis* Treitschke, 1829, Samml. Eur. Schmett., Tortr., 7, pl. 1, fig. 3.

*General appearance of moth* : Greyish-brown alar expanse 12.5-17 mm. Head light greyish-tawny, densely mixed with white; antenna brown, banded with white, ciliations in male; palpus flattened laterally, long, at base rectangularly bent, thence porrected.

*Thorax* : rather bright greyish-fulvous, slightly mixed with white.

*Fore wing* : Greyish-brown, broad, subtriangular, costa strongly curved at base, little curved in middle, apex obviously rectangular, termen prominent in middle, gently concave above and below this, little oblique. Sc reaching costal margin at about one-half length of wing,  $R_1$  starting from discal cell at about two-seventh of its length;  $R_2$  from the top of superior angle of discal cell;  $R_3$  and  $R_4$  arising from apex of cell and reaching before apex of wing;  $R_5$ ,  $M_4$ ,  $M_4$  and  $M_3$  reaching outer margin of wing,  $M_3$  and  $Cu_1$  somewhat parallel,  $Cu_1$  located at the

inferior angle of cell;  $Cu_2$  starting from cell at six-sevenths of its length; 1A present at termen,  $A_{2+3}$  with long basal stalk. -

Hind wing : As fore wing in colour; costa moderately arched, apex rounded;  $Sc+R_1$  starting from base of wing reaching to costal margin before apex; Rs to apex;  $M_1$ ,  $M_2$  somewhat parallel,  $M_3$  short-stalked to  $Cu_1$ ;  $Cu_2$  veins parallel to  $Cu_1$ ; 2A and 3A arise from one point basally and convergin to tornus.

Male genitalia : uncus moderately long, rounded apically; tegumen moderate; vinculum robust, as long as tegumen, strongly concave; valva obliquely truncate; costa broad, cucullus forming a separate oblong and rounded process, densely long-bristled; sacculus concave, somewhat sclerotic, narrowed at top with a longitudinal flat harpe, densely bristled throughout; edge of valvae, between cucullus and sacculus slightly oblique; juxta sclerotic, robust and inverted-T-shaped. Aedeagus moderately long, shorter than valvae, cornuti absent.

Female genitalia : ovipositor normal; posterior apophyses thin and longer than anterior apophyses; ostium small; ductus bursae narrow, little sclerotized; corpus bursae ovate, signum small, denticulate suboval sclerite, with down curved upper end.

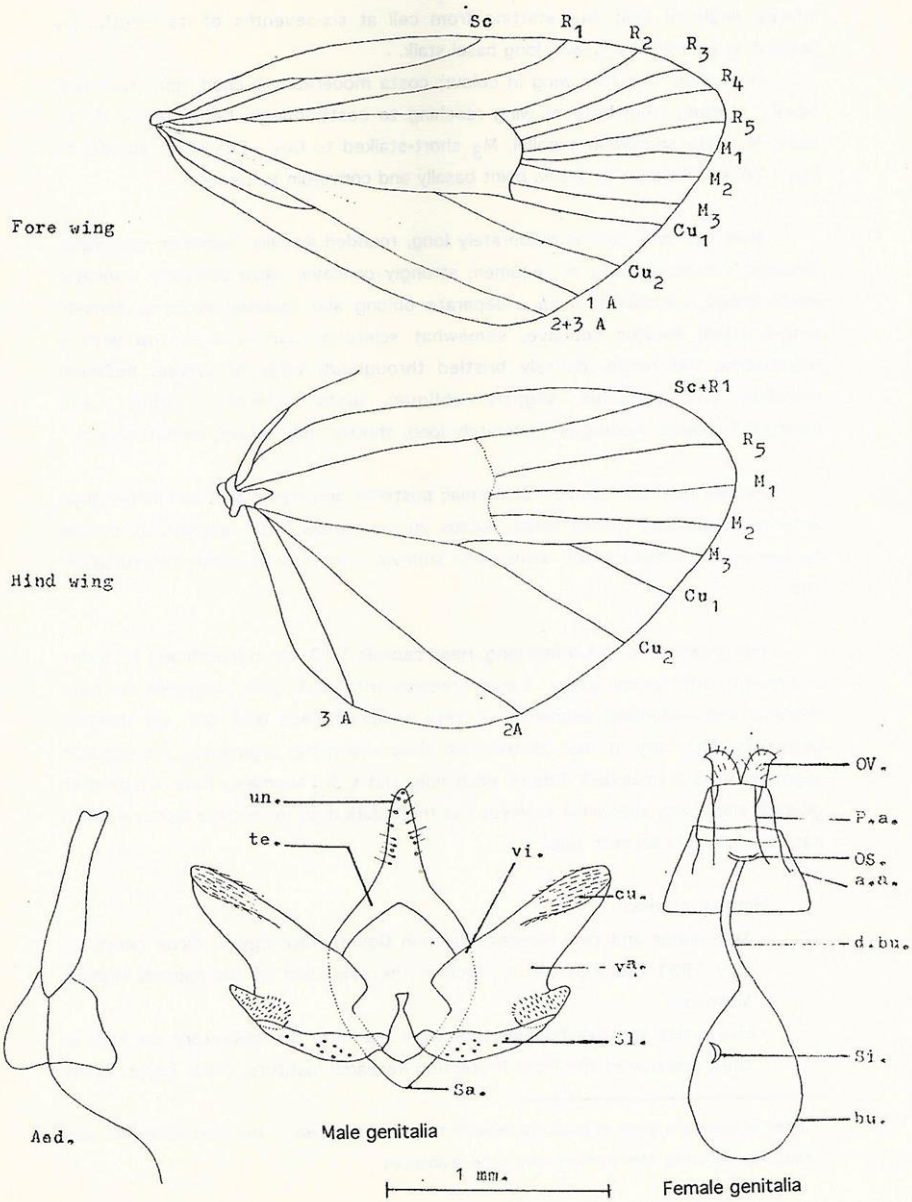
Full grown larva : 13.0 mm long. Head capsule 1.10 mm in length and 1.15 mm in breadth with honey colour. Larva greenish with dark dots scattered on both thoracic and abdominal segments. A seta arises of each dark dot. On thoracic segments dots vary in their distribution than abdominal segments. 1st thoracic segment bears 7 small dark dots on each side, 2nd & 3rd segments have 4 dark dots on each side. Each abdominal segment has three dark dots except the last one which has two dark dots on each side.

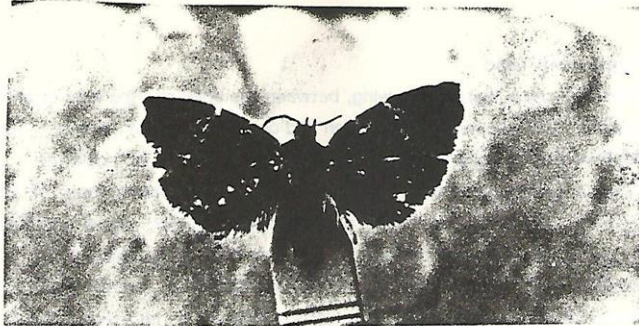
Material studied :

- Two males and two females, Matrouh Governorate Egypt, *Ficus carica* L., July 1991 (kept by Mr. K. Tuck in the collection of the Natural History Museum).
- Five males and five females that were reared in the laboratory are kept in the collection of the Plant Protection Research Institute, Dokki Egypt, (June

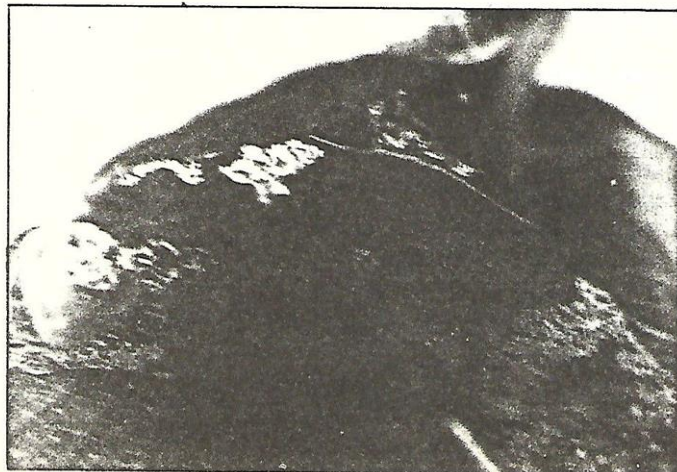
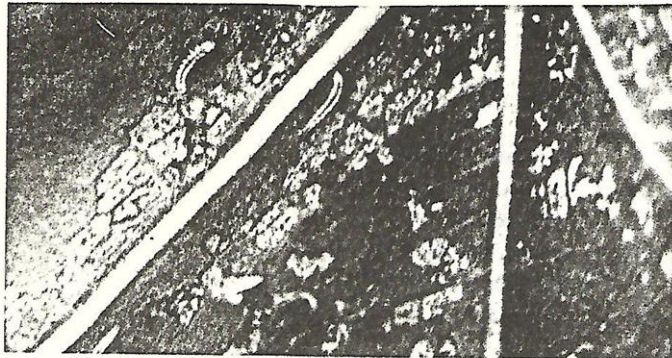
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\* Dates of issue are given in brackets because they do not appear in the publications but were rather identified by later workers using other evidences.





Adult moth of the fig leaf roller, *Choreutis nemorana*



Larvae and symptoms of infestation of the fig leaf roller, *C. nemorana*

1992).

Expressions used :

Termen : outer margin of a wing, between the apex and the hind or anal angle.

Tornus : the junction of the termen and dorsum of the wing, hind or anal angle.

Postmedia : an apparently distinct vein between media and cubitus.

Valvae : pairs of clasping organs developed as appendages of the ninth abdominal sternite, articulating with the caudal margin of the vinculum and the base of tegumen (in male genitalia).

Anellus : a chitinized structure supporting and often surrounding the terminal part of the aedeagus, it also articulates with the bases of the valvae, and its ventral part in so doing often forms a median plate below the aedeagus which is called the juxta.

Abbreviations :

I For wings :

A. = Anal veins A<sub>1</sub> to A<sub>3</sub>.

Cu. = Cubitus veins, Cu<sub>1</sub> to Cu<sub>2</sub>.

ds. c. = Discal cell.

M. = Median veins, M<sub>1</sub> to M<sub>3</sub>.

R. = Radius veins, R<sub>1</sub> to R<sub>5</sub>.

Sc. = Subcostal veins.

II For male genitalia :

Aed. = Aedeagus.

Cu. = Cucullus.

Jx. = Juxta.

Sc. = Saccus.

Scl. = Sacculus.

Tg. = Tegumen.

Un. = Uncus.

V. = Valvae.

Vin. = Vinculum.

III For female genitalia

- a. ap. = Anterior apophyses.  
an. l. = Anal lobes.  
Crb. brs. = Corpus bursae.  
d. brs. = Ducts bursae.  
ost. = Ostium.  
p. op. = Posterior apophyses.  
sg. = Signum.

Adult moth description mentioned, above was compared with description published in *Microlepidoptera Palaearctica* 1986, Vo. 7, 208 - 210.

#### REFERENCES

1. Forbes, W. T. M. 1923. The Lepidoptera of New York and neighboring states. Cornell Univ., Agric. Exp. Sta. Mem., 68 : 1 - 729, FF. 7 - 439.

**حشرة أوراق التين كوربوتس نيمورانا (عائلة كوربوتيدى،  
رتبة حرشفية الأجنحة) كأول تسجيل فى مصر**

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معهد بحوث وقاية النباتات - مركز البحوث الزراعيه - مصر.

تم اكتشاف وتسجيل حشرة تتبع رتبة حرشفية الأجنحة تصيب أشجار التين فى مصر وذلك بمحافظة مرسى مطروح على الساحل الشمالى الغربى. ولقد تم تعريف هذه الحشرة بالمتحف البريطانى للتاريخ الطبيعى تحت اسم كوربوتس نيمورانا كما تم وصفها فى مصر بالإعتماد على الصفات التصنيفيه للأجنحة والأجهزه التناسليه الخارجيه المذكوره والمؤنثه ودعم ذلك بلوحات توضيحيه .