

## Description of the female of *Notocelia punicana* Kuznetsov, 1956 (Tortricidae: Olethreutinae)

HELEN ALIPANAH

Insect Taxonomy Research Department, Plant Pests and Diseases Research Institute, P.O.Box 19395-1454, Tehran, Iran; e-mail: alipanah@ppdri.ac.ir

**Abstract.** The female of *Notocelia punicana* Kuznetsov, 1956 is described based on three females collected in the central part of Iran (Yazd province). Females are very similar to males in size and wing pattern. The female genitalia of this species can be separated from those of all other known west Palaearctic species by having broad papillae anales, a very strong eighth tergite, and a peculiar sterigma. In other *Notocelia* species, the sterigma is broader and longer, with well developed, proximally rounded anteostial section.

**Key words.** Lepidoptera, Tortricidae, Olethreutinae, *Notocelia punicana*, female, Iran.

*Notocelia* Hübner, [1825] comprises 20 species in the Palearctic region (Razowski 1989). *Notocelia punicana* was described by Kuznetsov (1956) from material collected in Kopet-Dagh (Kara Kala), Turkmenistan. The description was based on males only and the female remained unknown since then. During a survey conducted on the pest fauna of pomegranate (*Punica granatum*, Lythraceae) orchards in Yazd and Ghom provinces in Iran from 2000–2001, males and females of *N. punicana* were found. A redescription of the species is given below, with a description of the female genitalia and a comparison with closely related species.

### *Notocelia punicana* Kuznetsov, 1956

**Material.** 1P, 3P Iran, Yazd province, Yazd, vii.2000, H. A. Ahmadian leg. (on pomegranate tree).

**Description.** **Head.** Vertex and upper frons light brown; labial palpus light brown, with some darker scales in apical segment; ocellus as six shining dark brown spots; antennae brown. Mesonotum light brown; tegulae brown.

**Forewing** (Fig. 1). Forewing length 7.0 mm (measured from base to apex, including fringes); male and female similar in ground color and pattern of both fore- and hindwings; forewing upperside ground color pale brownish intermixed with cream, with dark brown and orange scales arranged in perpendicular lines; pattern elements including two distinct brown fasciae (basal and subbasal), each surrounded by two dark brown lines, a creamy-white interfascial spot, white costal strigulae of which basal and subbasal confluent to form patch, a light brown to orange pretornal spot, a light brown median fascia, and a brownish orange terminal fascia; fringes brown; forewing underside light brown except white costal strigulae.

**Hindwing.** Upperside uniformly brown except where forewing overlaps anterior to SC+R1; underside uniformly brown, concolorous with forewing underside.



**Figs. 1.** *Notocelia punicana* from Iran

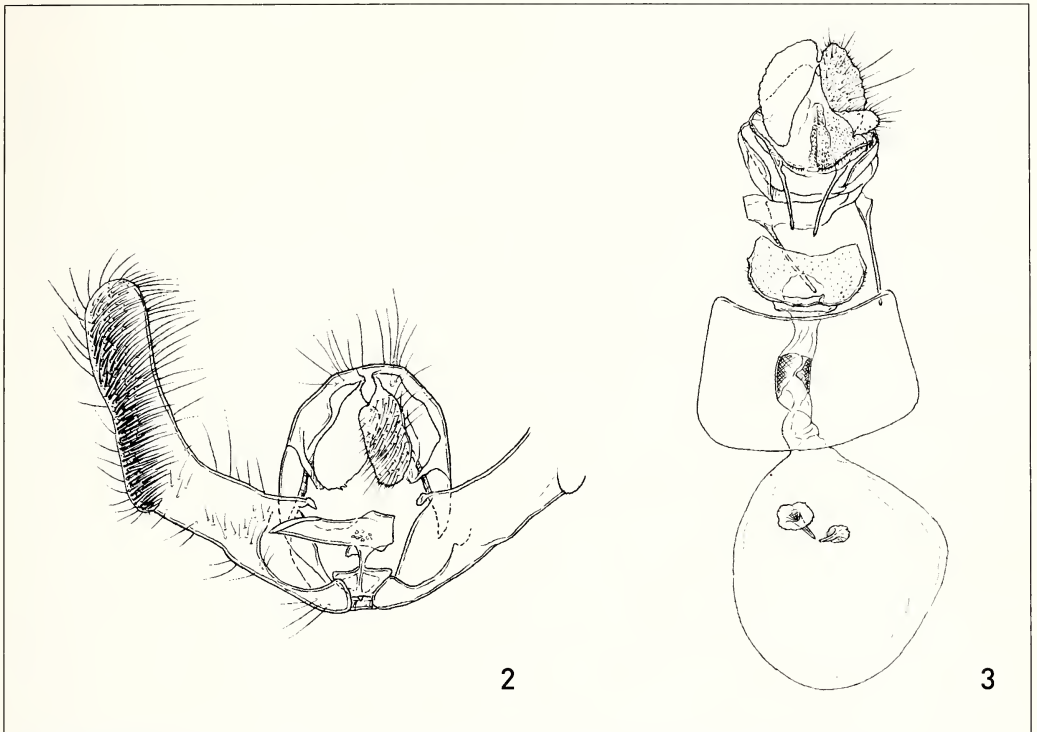
Male genitalia (Fig. 3). Tegumen rather short, broad; socius very large, expanding beyond naked base, especially beyond it internally; remnants of gnathos as slender, fairly long sclerites; valva long with weak ventral depression and rather broad neck; cucullus long, somewhat protruding ventro-proximally; aedeagus slender, with both deciduous and non-deciduous cornuti; the fixed cornuti with a pair of posterior spines, the deciduous cornuti are situated rather in middle of vesica.

Female genitalia (Fig. 4). Papilla analis broadest near middle, rather slender, tapering anteriorly; eighth tergite large with well sclerotized lateral folds; apophyses short; sterigma broad, moderately short with small median anteostial section, large ostium area, and weakly concave posterior edge; lateral edges of sterigma convex; ductus bursae moderately long; cingulum large, medially located; signa unequally sized.

**Diagnosis.** Externally, this species is similar to *N. trimaculana* (Haworth, [1811]) (= *N. suffusana* Zeller, 1846) and was originally compared with that species (Kuznetsov 1956). As in *N. rosaecolana* (Doubleday, 1850), males have no groups of melanic scales on the hindwing. The Iranian specimens have rather slenderer forewings than the populations of both above-mentioned European species. Their pattern is seemingly more strongly strigulated. The male genitalia are characterized by the very broad socii and long cucullus. This species differs in the lack of a terminal pair of non-deciduous cornuti and the horn-like process beyond the basal cavity of the valva. The female is quite different from all known west Palaearctic species in having broad papillae anales, a very strong eighth tergite, and a peculiar sterigma. The last character is similar in *Barbara herrichiana* Obraztsov, 1960, but it is broader and more concave posteriorly. In other *Notocelia* species the sterigma is broader and longer, with a well developed, proximally rounded anteostial section.

**Life history.** The reddish larvae of this species were collected for the first time under the bark of pomegranate trees (*Punica granatum*, Lythraceae) in the above-mentioned areas during April-May 2000. They feed on reproductive organs of flowers and cause the premature fall of the fruits.

**Remarks.** This is the first record of *N. punicana* from Iran. The external characters confirm the inclusion of this species in *Notocelia*. However, the lack of non-deciduous cornuti and the structure of the ovipositor and sterigma are possibly unique in this genus.



**Figs. 2–3.** *Notocelia punicana* from Iran. 2. Male genitalia. 3. Female genitalia.

### Acknowledgements

I wish to express my cordial thanks to Prof J. Razowski (Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Kraków) for his very kind help, his comments on the manuscript, and for redrawing the illustrations. I am also grateful to Prof V. I. Kuznetsov (Zoological Institute, St. Petersburg) for his helpful guidance. I am also thankful to Dr. S. Manzari (Plant Pests and Diseases Research Institute, Tehran) for editing the text.

### References

- Kuznetsov, V. I. 1956. Novyje Listovertki (Tortricidae) i moli-pestrjanki (Lithocolletoidea) iz sapadnogo Kopet-Daga. – *Entomologicheskoe Obozrenie* 35 (2): 447–461.
- Razowski, J. 1989. The genera of Tortricidae (*Lepidoptera*). Part II: Palaearctic *Olethreutinae*. – *Acta Zoologica Cracoviensia* 32 (7): 107–328.