

## First Records of the Summerfruit Tortricid, *Adoxophyes orana* F.v.R. in Greece<sup>1</sup>

M. SAVOPOULOU-SOULTANI, A.  
HATZIVASSILIADIS<sup>2</sup>, H.J. VLUG<sup>3</sup>,  
A.K. MINKS<sup>3</sup> and M.E.  
TZANAKAKIS

*Laboratory of Applied Zoology and  
Parasitology  
University of Thessaloniki  
54006 Thessaloniki, Greece*

In spring 1985, buds of apple and peach trees in the Naoussa area of northern Greece were severely damaged by larvae of a tortricid moth. Adults emerged in late May and early June. Later in the season, we found larvae of the same species established and feeding on leaves and green or ripe fruits of apple and peach, as well as on ripe cherries. Larvae collected in late June were reared in the laboratory on peach leaves and on an artificial diet. The adults obtained were identified as *Adoxophyes orana* Fischer von Rösslerstamm (Lepidoptera: Tortricidae). *A. orana* is a synonym of *A. reticulana* Huebner, *A. tripsiana* Eversmann, *A. fasciata* Walsh., or *Capua* or *Cacoecia reticulana* Huebner and most probably, is a recent introduction to Greece. The damage it causes to fruits such as apples, peaches and cherries is such that it could not have escaped the attention of fruit growers and plant protection specialists if the insect had earlier been present in the country. The species is not included in older or more recent lists of plant pests of Greece, such as those compiled by Isaakidès (1935, 1936, 1939), Pelekassis

(1962), Stathopoulos et al. (1967) and Mourikis and Vassilaina-Alexopoulou (1975), nor in more recent applied entomology Greek literature. *A. orana* has been established and caused damage to fruit trees in northwest and central Europe for approximately fifty years (Bovey 1966, Barèl 1973) and in southern Yugoslavia for at least the last ten years (Stamenković and Stamenković 1984, 1985). It is probable that it spread to northern Greece from neighboring Yugoslavia.

In the Naoussa area, the moths laid their eggs in batches on fruits or leaves. On peach and cherry the eggs were laid on both sides of the leaves, whereas on apple on the upper side as was observed also in other countries (Bovey 1966). In early October, the larvae abandoned their feeding sites and went next to axillary buds and crevices of the bark of branches to spin their hibernating webs.

According to Bovey (1966) the adult male has a wingspan of 15-20 mm and the female one of 19-22 mm. The fore wings of the male are yellow ochre reddish, and have distinct rusty-red designs (Fig. 1). There is a basal darker (brown) area, and two large darker stripes. The median one departs from the basal third of the costa and terminates, widening or divided in two branches, at the tornus. The other stripe is preapical and may take the form of a triangular spot of which sometimes only the borders are visible. The fore wings of the female are nor-

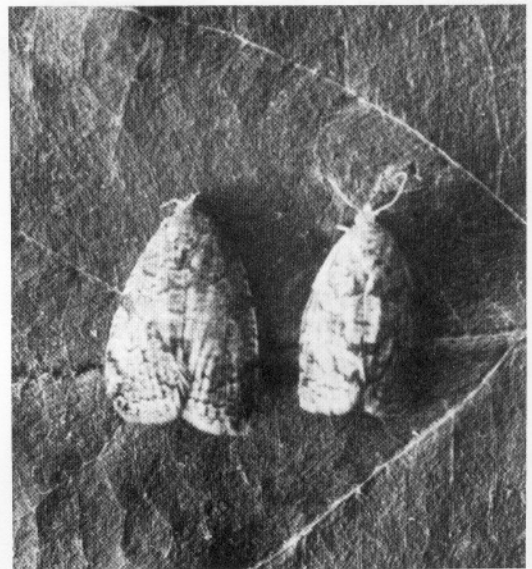


FIG. 1. Adults of *A. orana*, left female, right male.

<sup>1</sup> Received for publication December 31, 1985.

<sup>2</sup> Union of Agricultural Cooperatives of Naoussa, Greece.

<sup>3</sup> Research Institute for Plant Protection, Wageningen, The Netherlands.

mally darker than those of the male, often blackish-brown, and have darker and dimmer stripes and other markings. The hind wings are light grey in the male and grey-brown in the female. The ground colour in the specimens of north-western Europe is varying from light brown to dark brown.

The fully grown larva is 18-20 mm long, green, with a light brown head. It somewhat resembles the larva of another tortricid, *Archips rosanus* L. which is a monovoltine polyphagous species common in Greek orchards in spring. *A. orana* is polyvoltine and feeds on buds, leaves and fruits of a great number of cultivated and wild plants. Among its reported many hosts are species of *Betula*, *Crataegus*, *Cydonia*, *Gossypium*, *Ligustrum*, *Lonicera*, *Malus*, *Medicago*, *Pyrus*, *Populus*, *Pistacia*, *Parrotia*, *Prunus*, *Quercus*, *Ribes*, *Rubus*, *Rosa*, *Salix*, *Solanum*, *Syringa*, *Tilia*, *Ulmus*, *Vaccinium* (Janssen 1958, from Bovey 1966) and the grapevine *Vitis vinifera* (Heddergott and Weidner 1953).

## References

- Barèl, C.J.A. 1973. Studies on the dispersal of *Adoxophyes orana* F.v.R. in relation to the population sterilization technique. Meded. Landb. Wageningen 73: 1-104.
- Bovey, P. 1966. Super-famille des Tortricidae. In "Entomologie Appliquée a l'Agriculture" A.S. Balachowsky (ed.), Tome II Lepidoptères. Masson et Cie. Paris. pp. 456-893.
- Heddergott, H. and H. Weidner. 1953. Superfamilie: Tineoidea. In, P. Sorauer's Handbuch der Pflanzenkrankheiten. Vol. IV (ed. by H. Blunck) pp. 17-190.
- Isaakidès, C.A. 1935. List I des insectes et autres animaux nuisibles aux plantes cultivées et des insectes auxiliaires de la Grèce. Anns Inst. Phytopath. Benaki 1(2): 1-12.
- Isaakidès, C.A. 1936. Liste II des insectes et autres animaux nuisibles aux plantes cultivées et des insectes auxiliaires de la Grèce. Anns Inst. Phytopath. Benaki 2(1): 5-7.
- Isaakidès, C.A. 1939. List III des insectes et autres animaux nuisibles aux plantes cultivées et des insectes auxiliaires de la Grèce. Anns Inst. Phytopath. Benaki 3(1): 5-8.
- Mourikis, P.A. and P. Vassilaina-Alexopoulou. 1975. Report on the most important pests observed on cultivated plants in Greece from 1963 to 1966. Anns Inst. Phytopath. Benaki (N.S.) 11: 141-150.
- Pelekassis, C.E.D. 1962. List of the most important insects and other animals injurious to the cultivated plants in Greece, during the last thirty years. Anns Inst. Phytopath. Benaki (N.S.) 5: 5-104.
- Stamenković, S. and T. Stamenković. 1984. A contribution to the study of the life cycle of the summer fruit tortricid *Adoxophyes orana* F.v.R. (Lepidoptera, Tortricidae). Zastita Bilja 35: 233-247.
- Stamenković, S. and T. Stamenković. 1985. The life cycle of the summer fruit tortrix *Adoxophyes orana* F.v.R. (Lepidoptera, Tortricidae) in western Serbia. Zastita Bilja 36: 65-80. (From Rev. Appl. Entomol. 73(7): 4994).
- Stathopoulos, D.G., I.A. Mentzelos and S.D. Savvidis. 1967. Survey of insects and other pests on crops of Macedonia and Thrace. II. Annu. Rept. Plant Prot. Agric. Res. Sta., Thessaloniki, Greece, 3 (1965): 102-106 (in Greek).

**KEY WORDS:** *Adoxophyes orana*, Tortricidae, Summer fruit tortrix moth, Leaf roller moth

## Πρώτη Διαπίστωση του *Adoxophyes orana* F.v.R. στην Ελλάδα

Μ. ΣΑΒΒΟΠΟΥΛΟΥ-ΣΟΥΛΤΑΝΗ, Α. ΧΑΤΖΗΒΑΣΙΛΕΙΑΔΗΣ, Η.Ι. ΒΛΥΓ, Α.Κ. ΜΙΝΚΣ και Μ.Ε. ΤΖΑΝΑΚΑΚΗΣ

Εργαστήριο Εφαρμοσμένης Ζωολογίας και Παρασιτολογίας  
Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης  
54006 Θεσσαλονίκη

## ΠΕΡΙΛΗΨΗ

Το πολυφάγο Λεπιδόπτερο *Adoxophyes orana* F.v.R. της οικογένειας Tortricidae παρατηρήθηκε για πρώτη φορά στην περιοχή της Νάουσας το 1985, σε μηλιές, ροδακινιές και κερασιές, όπου προσέβαλε την άνοιξη τους οφθαλμούς και αργότερα τα φύλλα και τους καρπούς. Πιθανότατα εισήλθε στην Ελλάδα από τη γειτονική Γιουγκοσλαβία, όπου ήταν γνωστό και προκαλούσε ζημιά στα οπωροφόρα δέντρα τουλάχιστον από το 1975. Το ενήλικο σε γενικό χρωματισμό και μορφή μοιάζει με το επίσης πολυφάγο φυλλοδοτικό Λεπιδόπτερο *Archips rosanus* L. Το άνοιγμα των πτερύγων στο ενήλικο αρσενικό είναι 15-20 mm και το θηλυκό 19-22 mm. Οι πρόσθιες πτέρυγες στο αρσενικό έχουν βασικό χρώμα κίτρινο ώχρας και στο θηλυκό σκοτεινότερο, συχνά καστανόμαυρο. Οι πτέρυγες αυτές και στα δύο φύλλα, έχουν χαρακτηριστικές κηλίδες και λωρίδες σκοτεινότερες από το βασικό χρώμα. Η πλήρως αναπτυγμένη προνύμφη είναι πράσινη και μήκους 18-20 mm.