

Contribution to the faunal study of the Tortricidae of Pelion Mountains (Greece) with description of *Cydia magnesiae* Trematerra & Colacci, sp. n. (Lepidoptera: Tortricidae)

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Abstract

The following contribution highlights an overview of the 50 species of Tortricidae captured on Pelion Mountain, in Central Greece, during several field trips by the authors. Eleven new species to the Greek fauna were recorded: *Aethes margaritana*, *Eana incanana*, *Paramesia diffusana*, *Tosirips magyarus*, *Eudemis profundana*, *Ancylis badiana*, *Pelochrista modicana*, *Grapholita lathyрана*, *Grapholita tenebrosana*, *Dichroranpha alpigenana* and *Dichroranpha inconspiqua*. *Ceratoxanthis giansalottii*, *Endothenia apotomisana* and *Cydia pelionae* are found to be endemic to Greece. *Dichroranpha inconspiqua* is reported for the first time in Europe. *Cydia magnesiae* Trematerra & Colacci, sp. n. is described as new.

KEY WORDS: Lepidoptera, Tortricidae, fauna, first records, *Cydia magnesiae*, Greece.

Contribución a la fauna de Tortricidae del Monte Pelion (Grecia) con la descripción de *Cydia magnesiae* Trematerra & Colacci, sp. n. (Lepidoptera: Tortricidae)

Resumen

La siguiente contribución, nos da una visión general de las 50 especies de Tortricidae capturadas en el Monte Pelion, en Grecia central, durante varios viajes de estudio realizados por los autores. Se registran once nuevas especies para la fauna de Grecia: *Aethes margaritana*, *Eana incanana*, *Paramesia diffusana*, *Tosirips magyarus*, *Eudemis profundana*, *Ancylis badiana*, *Pelochrista modicana*, *Grapholita lathyрана*, *Grapholita tenebrosana*, *Dichroranpha alpigenana* y *Dichroranpha inconspiqua*. *Ceratoxanthis giansalottii*, *Endothenia apotomisana* y *Cydia pelionae* son endémicas en Grecia. *Dichroranpha inconspiqua* es citada por primera vez en Europa. *Cydia magnesiae* Trematerra & Colacci, sp. n. se describe como nueva.

PALABRAS CLAVE: Lepidoptera, Tortricidae, fauna, nuevos registros, *Cydia magnesiae*, Grecia.

Introduction

Our survey is based on specimens collected during 2016 by the junior author on the Pelion Mountains (Thessaly, Central Greece) (Figures 1-6). The Pelion Mountain range closes off the Pagasetic Gulf. The highest peak is Pourianos Stavros (altitude 1624 m). Pelion's diverse ecosystem is made up of coastal, plain and mountain zones. The area consists of thick forestal vegetation of deciduous forests and developed maquis shrubs. It has three vegetation zones with fourteen ecotypes, supporting rich species communities. The typical Mediterranean shrubland (*Quercetalia ilicis*) covers the low altitudes and includes most of the self-sown aromatic and pharmaceutical taxa, such as *Salvia fruticosa* Mill., *Thymus* spp., *Sideritis* spp., etc. The para-Mediterranean broad-leaved deciduous trees

zone (*Quercetalia pubescentis*) covers the middle altitude of the area and includes Oak (*Quercus frainetto* Ten.) and chestnut forests (*Castanea sativa* Mill.). The beech forest zone (*Fagetalia*) covers the areas above the para-Mediterranean zone up to the tree-limit zone.

The central part of the Pelion Mountains is covered by a thick beech-tree forest (*Fagus sylvatica* L.) with excellent structure and maintenance state, which is the dominant vegetation of the higher zones. There are also aspen-tree formations (*Populus tremula* L.) and willow trees (*Salix caprea* L.). Cultivated species consist mainly of fruit-trees (apples, apricots, cherries, kiwis, lemons, oranges, pears, almonds and walnuts and also olive trees and vineyards).

Depending on the area, the Pelion Mountains, have either a moist climate with long, hot summers and mild winters, very moist through all seasons, or a mild Mediterranean climate with hot and dry summers and mild winter season. Heat waves and intense cold periods are rare.

Material and methods

The specimens reported in the paper were collected by M. Colacci on Pelion Mountains, mainly by net and by attraction to light at night-time. The localities visited were: Portaria, at 750 m a.s.l. and at 1000 m a.s.l.; Drakia, at 980 m a.s.l.; Chania, at 1150 m a.s.l. and at 1350 m a.s.l.

The material was primarily identified morphologically, supplemented by molecular data of the COI barcode region according to HAJIBABAEI *et al.* (2006) and RATNASINGHAM & HEBERT (2007).

In the compilation of the list we follow the systematic arrangement adopted by RAZOWSKI (2002, 2003) with some modifications suggested by BROWN (2005) and by GILLIGAN *et al.* (2014). Biology and distribution of the species are largely taken from RAZOWSKI (1996), TREMATERRA (2003) and AARVIK (2013), with new data from Trematerra's personal catalogue (unpublished data).

Abbreviations utilized in the distribution of specimens in Europe:

IC – Iceland	DT – Germany	CH – Switzerland
NR – Norway	NL – Netherlands	AU – Austria
DK – Denmark	GB – United Kingdom	HG – Hungary
SW – Sweden	IR – Ireland	YU – ex Yugoslavia
SF – Finland	BL – Belgium	RO – Romania
EE – Eastern Europe	LX – Luxembourg	BG – Bulgaria
EN – Estonia	FR – France	AL – Albania
LV – Latvia	ES – Spain	GR – Greece
LT – Lithuania	PR – Portugal	CR – Crete
PL – Poland	CO – Corsica	TR – European Turkey
CZ – Czech Republic	MA – Malta	
SK – Slovakia	IT – Italy	

TORTRICIDAE TORTRICINAE TORTRICINI

Tortrix viridana Linnaeus, 1758

Material examined: 5 ♂♂, 1 ♀, Portaria, 750 m, 15-V-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, IT, CH, AU, HG, YU, RO, BG, AL, GR); Morocco; Asia Minor; Georgia; Azerbaijan; Transcaucasus; W Kazakhstan; Iran.

Aleimma loeflingianum (Linnaeus, 1758)

Material examined: 1 ♂, Chania, 1350 m, 13-V-2016; 5 ♂♂, Portaria, 750 m, 15-V-2016; 4 ♂♂,

Chania, 1150 m, 15-V-2016; 3 ♂♂, Portaria, 1000 m, 19-V-2016; 1 ♂, 3 ♀♀, Portaria, 750 m, 12-VI-2016; 2 ♀♀, Portaria, 750 m, 23-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, IT, CH, AU, HG, YU, RO, BG, AL, GR, CR, TR); Asia Minor; Syria; Georgia; Caucasus; Transcaucasus; Iran.

Acleris variegana ([Denis & Schiffermüller], 1775)

Material examined: 1 ♂, Portaria, 1000 m, 8-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, MA, IT, CH, AU, HG, YU, RO, BG, AL, GR, CR); NW Africa; Caucasus; Transcaucasus; Ural Mts; Iran; Kazakhstan; Turkmenistan; Afghanistan; Tajikistan; SW Siberia; China; Japan; N America.

COCHYLINI

Obraztsoviana maculosana (Haworth, 1811)

Material examined: 1 ♂, Chania, 1150 m, 19-IV-2016.

Distribution: Europe (EE, CZ, SK, DT, GB, IR, BL, FR, ES, PR, CO, IT, AU, HG, YU, RO, BG, GR, CR); Asia Minor; Israel; Transcaucasus.

Ceratoxanthia giansalottii Bassi, 2014

Material examined: 1 ♂, Portaria, 1000 m, 19-V-2016; 2 ♂♂, Chania, 1350 m, 10-VI-2016; 2 ♂♂, Chania, 1350 m, 20-VI-2016; 1 ♂, Chania, 1350 m, 28-VI-2016.

Distribution: Europe (GR).

Aethes margaritana (Haworth, [1811])

Material examined: 1 ♀, Portaria, 1000 m, 19-V-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, BL, LX, FR, ES, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; Transcaucasus; Kazakhstan; Central Asia; W Siberia. **New Record for Greece.**

CNEPHASIINI

Eana incanana (Stephens, 1852)

Material examined: 1 ♂, 1 ♀, Chania, 1150 m, 15-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, BL, LX, FR, ES, IT, CH, AU, HG, YU, RO, BG, AL, GR); Transcaucasus; Russian Far East. **New Record for Greece.**

Cnephasia incertana (Treitschke, 1835)

Material examined: 1 ♂, Chania, 1150 m, 7-V-2016; 1 ♀, Portaria, 750 m, 15-V-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, IT, CH, AU, HG, YU, RO, BG, AL, GR, CR, TR); N Africa; from Near East to Iraq; Transcaucasus.

Cnephasia communana (Herrich-Schäffer, 1847)

Material examined: 1 ♂, Chania, 1150 m, 27-IV-2016; 1 ♂, Chania, 1350 m, 27-IV-2016; 1 ♂, Portaria, 1000 m, 10-V-2016; 3 ♂♂, Chania, 1350 m, 13-V-2016; 1 ♂, Portaria, 1000 m, 8-VI-2016; 1 ♀, Chania, 1350 m, 10-VI-2016; 1 ♀, Chania, 1350 m, 20-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, BL, LX, FR,

ES, IT, CH, AU, HG, YU, RO, BG, AL, GR, CR); Morocco; Libya; N Africa; Asia Minor; Caucasus; Transcaucasus; Kazakhstan; Turkmenistan, WS Siberia.

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

Cnephasia cupressivorana (Staudinger, 1871)

Material examined: 3 ♂♂, Portaria, 750 m, 6-IV-2016; 2 ♂♂, Drakia, 980 m, 6-IV-2016; 2 ♂♂, Chania, 1350 m, 14-IV-2016; 3 ♂♂, Chania, 1150 m, 19-IV-2016; 1 ♂, Portaria, 750 m, 21-IV-2016; 1 ♂, Chania, 1150 m, 27-IV-2016; 1 ♂, Portaria, 750 m, 9-V-2016; 2 ♂♂, 1 ♀, Portaria, 1000 m, 10-V-2016; 10 ♂♂, Chania, 1350 m, 13-V-2016; 1 ♂, Portaria, 1000 m, 19-V-2016.

Distribution: Europe (BL, FR, ES, CO, IT, CH, AU, HG?, YU, RO, BG?, AL, GR, CR); Asia Minor; Kyrgyzstan.

Cnephasia abrasana (Duponchel, 1843)

Material examined: 2 ♂♂, 1 ♀, Portaria, 750 m, 21-IV-2016; 1 ♂, 1 ♀, Portaria, 750 m, 5-V-2016; 3 ♀♀, Portaria, 750 m, 9-V-2016; 2 ♀♀, Portaria, 1000 m, 19-V-2016.

Distribution: Europe (EE, EN, LT, SK, BL, FR, PR, CO, IT, AU, HG, YU, RO, BG, AL, GR, CR); Asia Minor.

Cnephasia ecullyana Réal, 1951

Material examined: 1 ♂, Portaria, 1000 m, 8-VI-2016; 1 ♀, Portaria, 750 m, 12-VI-2016.

Distribution: Europe (CZ, SK, DT, FR, ES, PR, IT, CH, AU, HG, YU, RO, BG, GR); Asia Minor.

ARCHIPINI

Pseudargyrotoza conwagana (Stainton, 1859)

Material examined: 1 ♀, Portaria, 750 m, 15-V-2016; 1 ♀, Chania, 1350 m, 10-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; Caucasus; Transcaucasus; China; Nepal; Russian Far East; S Korea; Japan.

Epagoge grotiana (Fabricius, 1781)

Material examined: 1 ♂, Portaria, 1000 m, 17-VI-2016; 1 ♂, 1 ♀, Portaria, 750 m, 23-VI-2016; 5 ♂♂, Chania, 1350 m, 28-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, CO, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; S Ural Mts; Kazakhstan.

Paramesia diffusana (Kennel, 1899)

Material examined: 1 ♂, Chania, 1350 m, 28-VI-2016.

Distribution: Europe (EN, ES, IT, CO, GR). **New Record for Greece.**

Archips crataeganus (Hübner, [1799])

Material examined: 1 ♀, Portaria, 750 m, 23-VI-2016.

Distribution: Europe (NR, DK, SW, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, CO, IT, CH, AU, HG, YU, RO, BG, GR, TR); Morocco; N Africa; Asia Minor; Ural Mts; Transcaucasus; Iran; Kazakhstan; Siberia; China; S Korea; Japan.

Tosirips magyarus Razowski, 1987

Material examined: 1 ♂, Portaria, 750 m, 15-V-2016.

Distribution: Europe (CO, IT, HG, YU, RO, BG, GR). **New Record for Greece.**

Ptycholoma lecheana (Linnaeus, 1758)

Material examined: 1 ♂, 1 ♀, Portaria, 750 m, 5-V-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, IT, AU, CH, HG, YU, RO, BG, AL, GR); Asia Minor; Caucasus; Ural Mts; Kazakhstan; Trans-Baikal; Russian Far East; China; Korea; Japan.

Syndemis musculana (Hübner, [1799])

Material examined: 1 ♂, 1 ♀, Portaria, 1000 m, 10-V-2016; 1 ♂, Chania, 1350 m, 13-V-2016; 1 ♂, 1 ♀, Chania, 1150 m, 17-V-2016; 3 ♂♂, Portaria, 1000 m, 19-V-2016; 1 ♀, Portaria, 1000 m, 8-VI-2016; 1 ♀, Chania, 1350 m, 10-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, CO, IT, CH, AU, HG, YU, RO, BG, GR); Caucasus; Transcaucasus; Ural Mts; Kazakhstan; Trans-Baikal; Mongolia; Russian Far East; Korea; Japan.

Aphelia ferrugana (Hübner, 1793)

Material examined: 1 ♂, Portaria, 750 m, 5-V-2016; 1 ♂, Portaria, 750 m, 9-V-2016; 2 ♂♂, Portaria, 1000 m, 10-V-2016; 4 ♂♂, Portaria, 1000 m, 19-V-2016.

Distribution: Europe (EE, CZ, SK, DT, NL, FR, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; Syria; Iraq; Caucasus; Iran.

OLETHREUTINAE
OLETHREUTINI

Endothenia marginana (Haworth, 1811)

Material examined: 1 ♂, Portaria, 750 m, 12-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, MA, IT, CH, AU, HG, YU, RO, AL, GR); NW Africa; from Ural Mts to Mongolia; Russian Far East; China.

Endothenia apotomisana Trematerra & Colacci, 2016.

Material examined: 1 ♂, Drakia, 980 m, 6-IV-2016.

Distribution: Europe (GR).

Lobesia botrana ([Denis & Schiffermüller], 1775)

Material examined: 1 ♂, Portaria, 750 m, 9-V-2016; 4 ♂♂, Portaria, 750 m, 10-V-2016; 4 ♂♂, Portaria, 1000 m, 19-V-2016.

Distribution: Europe (DK, SW, EE, LT, PL, CZ, SK, DT, GB, BL, LX, FR, ES, PR, CO, MA, IT, CH, AU, HG, YU, RO, BG, GR, CR); N Africa; Near East; Asia Minor; Iraq; Transcaucasus; Iran; Kazakhstan; Japan; N and S America.

Eudemis profundana ([Denis & Schiffermüller], 1775)

Material examined: 3 ♀♀, Portaria, 750 m, 23-VI-2016; 1 ♀, Portaria, 750 m, 26-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor. **New Record for Greece.**

Hedya nubiferana (Haworth, 1811)

Material examined: 1 ♂, Portaria, 750 m, 5-V-2016; 2 ♂♂, Portaria, 750 m, 15-V-2016; 1 ♀, Portaria, 1000 m, 8-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, IT, CH, AU, HG, YU, RO, BG, AL, GR, CR); Asia Minor; Iraq; Caucasus; Iran; Turkmenistan; WS Siberia; N America.

Olethreutes arcuellus (Clerck, 1759)

Material examined: 1 ♂, Chania, 1150 m, 19-IV-2016; 2 ♂♂, Chania, 1150 m, 7-V-2016; 1 ♂, Portaria, 750 m, 9-V-2016; 1 ♀, Portaria, 1000 m, 10-V-2016; 1 ♂, Chania, 1350 m, 13-V-2016; 1 ♂, 1 ♀, Portaria, 750 m, 15-V-2016; 2 ♂♂, 1 ♀, Chania, 1150 m, 17-V-2016; 1 ♀, 1 ♀, Portaria, 750 m, 22-V-2016; 1 ♂, Portaria, 1000 m, 8-VI-2016; 1 ♂, Chania, 1350 m, 10-VI-2016; 1 ♂, Chania, 1150 m, 15-VI-2016; 1 ♀, Portaria, 1000 m, 17-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; Caucasus; Ural Mts; Iran; Kazakhstan; NW China; W Siberia.

Syricoris lacunana ([Denis & Schiffermüller], 1775)

Material examined: 6 ♂♂, Chania, 1150 m, 17-V-2016; 6 ♂♂, 2 ♀♀, 1150 m, 15-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; Caucasus; Transcaucasus; W Siberia; NE China; Mongolia; Korea; Japan.

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

ENARMONIINI

Ancylis badiana ([Denis & Schiffermüller], 1775)

Material examined: 1 ♂, Chania, 1150 m, 27-IV-2016; 1 ♂, Chania, 1350 m, 10-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, CO, IT, CH, AU, HG, YU, RO, BG, GR); Asia Minor; Transcaucasus; China; Mongolia; Russian Far East; Korea; Japan. **New Record for Greece.**

EUCOSMINI

Epinotia festivana (Hübner, [1799])

Material examined: 1 ♂, Portaria, 750 m, 12-VI-2016.

Distribution: Europe (EE, CZ, SK, FR, ES, PR, IT, CH, AU, HG, YU, RO, AL, GR); Asia Minor; Crimea; Dagestan; Transcaucasus; Iran.

Pelochrista agrestana (Treitschke, 1830)

Material examined: 1 ♂, Portaria, 750 m, 26-VI-2016; 1 ♂, Portaria, 750 m, 5-IX-2016.

Distribution: Europe (LT, FR, CO, IT, AU, YU, BG, GR, CR); Asia Minor.

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

Pelochrista modicana (Zeller, 1847)

Material examined: 3 ♂♂, Portaria, 1000 m, 19-V-2016; 1 ♂, Portaria, 1000 m, 8-VI-2016; 1 ♂, Chania, 1350 m, 10-VI-2016; 2 ♂♂, Portaria, 1000 m, 17-VI-2016; 2 ♂♂, 1 ♀, Chania, 1350 m, 20-VI-2016.

Distribution: Europe (EE, PL, CZ, SK, DT, FR, ES, PR, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; Transcaucasus; Turkmenistan; Kazakhstan. **New Record for Greece.**

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

Epiblema graphanum (Treitschke, 1835)

Material examined: 1 ♂, Portaria, 1000 m, 19-V-2016; 1 ♂, Chania, 1350 m, 20-VI-2016.

Distribution: Europe (DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, BL, LX, FR, ES, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; Transcaucasus; Iran; Kazakhstan; Afghanistan; Trans-Baikal; WS Siberia; China.

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

Epiblema sp.

Material examined: 1 ♂, Portaria, 750 m, 15-V-2016; 1 ♂, Portaria, 1000 m, 19-V-2016.

Remarks: Identified only by molecular data of the COI barcode region.

Notocelia cynosbatella (Linnaeus, 1758)

Material examined: 1 ♂, Chania, 1150 m, 27-IV-2016; 1 ♀, Portaria, 750 m, 5-V-2016; 3 ♂♂, Chania, 1150 m, 7-V-2016; 2 ♂♂, 1 ♀, Portaria, 1000 m, 10-V-2016; 1 ♂, 2 ♀♀, Chania, 1150 m, 17-V-2016; 2 ♂♂, 5 ♀♀, Portaria, 1000 m, 19-V-2016; 1 ♀, Portaria, 750 m, 22-V-2016; 1 ♀, Portaria, 1000 m, 8-VI-2016; 2 ♀♀, Chania, 1350 m, 10-VI-2016; 1 ♂, Portaria, 1000 m, 17-VI-2016; 1 ♀, Chania, 1350 m, 20-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, IT, CH, AU, HG, YU, RO, AL, GR); Near East; Asia Minor; Caucasus; Transcaucasus; Ural Mts; Iran; Turkmenistan; Kazakhstan; Mongolia; Russian Far East.

Notocelia uddmanniana (Linnaeus, 1758)

Material examined: 1 ♀, Portaria, 1000 m, 17-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, CO, IT, CH, AU, HG, YU, RO, AL, GR, CR); N Africa; Caucasus; Transcaucasus; Trans-Ural; Iran; Kazakhstan; Tadjikistan; S Siberia.

Rhyacionia buoliana ([Denis & Schiffermüller], 1775)

Material examined: 1 ♂, Chania, 1150 m, 17-V-2016; 2 ♂♂, Chania, 1150 m, 15-VI-2016; 1 ♂, 1 ♀, Portaria, 1000 m, 17-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, MA, IT, CH, AU, HG, YU, RO, BG, GR); N Africa; Asia Minor; Israel; Caucasus; Transcaucasus; Ural Mts; China; Korea; Japan; introduced to N and S America.

GRAPHOLITINI

Cydia plumbiferana (Staudinger, 1871)

Material examined: 1 ♀, Chania, 1350 m, 28-VI-2016.

Distribution: Europe (FR, IT, GR, CR); Lebanon.

Cydia succedana ([Denis & Schiffermüller], 1775)

Material examined: 1 ♂, Chania, 1350 m, 10-VI-2016; 1 ♂, Chania, 1150 m, 15-VI-2016; 2 ♂♂, Chania, 1350 m, 20-VI-2016; 1 ♀, Portaria, 1000 m, 17-VI-2016; 1 ♀, Chania, 1350 m, 28-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, MA, IT, CH, AU, HG, YU, RO, BG, AL, GR, CR); Morocco; Asia Minor; Transcaucasus; Iran; Kazakhstan; Afghanistan; Central Asia; Mongolia.

Cydia triangulella (Goeze, 1783)

Material examined: 1 ♂, Portaria, 750 m, 5-IX-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, BL, LX, FR, ES, PR, IT, CH, AU, HG, YU, RO, BG, GR); Morocco; S Ural Mts; Caucasus; Transcaucasus; Japan.

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

Cydia fagiglandana (Zeller, 1841)

Material examined: 1 ♂, Portaria, 750 m, 23-VI-2016; 3 ♂♂, 1 ♀, Portaria, 750 m, 26-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, PR, CO, MA, IT, CH, AU, HG, YU, RO, BG, AL, GR, CR); NW Africa; Asia Minor; Syria; Caucasus; Iran, Turkestan.

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

***Cydia magnesiaae* Trematerra & Colacci, sp. n.**

Material examined: Holotype, 1 ♂, 1 ♀, Portaria, 750 m, 23-VI-2016; Paratypes, 2 ♀♀, Portaria, 750 m, 26-VI-2016; 1 ♂, Portaria, 750 m, 5-IX-2016 (Sample ID: LEP-SS-00491). Deposited in the Trematerra collection, Campobasso, Italy.

Adult (Figure 10): Wing span 14-16 mm. Head brownish, palps light brown. Thorax brownish, abdomen honey colour. Forewing grey, sprinkled whitish-cream with greyish strigulae and suffusion; costal strigulae delicate, whitish or white-cream, dividings dark brown; post-apical strigula white-cream; speculum olive grey often with grey suffusion, with refractive lines and blackish inner spots, outer lines of speculum silvery. Dorsal patch white-grey, diffused distally and extending towards middle of wing, marked by brownish lines. Basal blotch brown-grey, distinctly convex medially; subternal blotch dark brown often entirely edging speculum area, extending towards apex of wing. Cilia brownish grey; basal line creamish-grey. Hindwing brownish with cilia brown-cream, basal line cream. Males with greyish white blotch in anal area with white-cream cilia.

Male genitalia (Figures 11, 13, 14): Tegumen developed with enlarged base; small hairy prominence at top of tegumen proximally and scales on lateral surfaces; valvae elongate with costa convex in the median part; caudal angle of sacculus weak; neck of valva broad; cucullus slightly elongate, convex caudally, with small ventral group of spines; ventral incision quite pronounced; basal cavity rather elongated; aedeagus long and slender, basally large and at the terminal part very slender, slightly curved.

Female genitalia (Figures 12, 15): Subgenital sternite trapezoidal, strongly concave terminally; postostial part of sterigma small, slightly expanding posteriorly, convex terminally; colliculum membranous; cingulum elongated; ductus seminalis near corpus bursae; weak sclerite at base of ductus seminalis; bursa copulatrix developed and broad.

Distribution: Known only from the type locality.

Biology: Probably bivoltine. Our specimens were collected with the net at Portaria, on Pelion Mountain (Greece), in late June and in early September. Larval foodplant unknown.

Diagnosis: Externally *Cydia magnesiaae* sp. n. looks like *Grapholita funebrana* (Tr.), but in the genitalia it is similar to *Cydia fagiglandana* (Z.) (DANILEVSKI & KUZNETSOV, 1968; RAZOWSKI, 2003) (Figures 7, 8). From the latter species in male genitalia it differs by the conformation of valvae, the caudal angle of the sacculus, by cucullus and by aedeagus having basal part enlarged (Figures 8, 11, 13, 14). The female genitalia differ by the post-ostial part of the sterigma, by the cingulum being elongated, by the presence of a weak sclerite at base of ductus seminalis, and by the absence of a diverticulum (Figures 9, 12, 15).

Barcoding analyses: The distance of the *C. magnesiaae* (BCLEP040-16) from the nearest neighbour (NN) is equal to 2,98%. The NN is *C. fagiglandana* (BIN: BOLD AAC5023).

Etymology: The name is derived from Magnesia region (Thessaly, Greece).

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

Cydia amplana (Hübner, [1799])

Material examined: 7 ♂♂, 4 ♀♀, Portaria, 750 m, 5-IX-2016.

Distribution: Europe (DK, SW, EE, PL, CZ, SK, DT, NL, GB, BL, FR, ES, PR, IT, CH, AU, HG, YU, RO, BG, GR, CR); Asia Minor; Syria; Transcaucasus.

Cydia pelionae Trematerra & Colacci, 2016

Material examined: 1 ♂, Chania, 1150 m, 17-V-2016; 1 ♂, Portaria, 1000 m, 8-VI-2016; 2 ♂♂, Chania, 1150 m, 15-VI-2016; 1 ♂, 2 ♀♀, Portaria, 1000 m, 17-VI-2016.

Distribution: Europe (GR).

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

Grapholita fissana (Frölich, 1828)

Material examined: 1 ♂, Chania, 1350 m, 10-VI-2016.

Distribution: Europe (SW, EE, PL, CZ, SK, DT, LX, FR, IT, CH, AU, HG, YU, RO, BG, AL, GR); Asia Minor; Transcaucasus; Ural Mts.

Grapholita lathyra (Hübner, [1813])

Material examined: 1 ♂, Chania, 1150 m, 19-IV-2016; 2 ♂♂, Chania, 1150 m, 7-V-2016; 6 ♂♂, Chania, 1350 m, 13-V-2016; 1 ♀, Chania, 1350 m, 10-VI-2016.

Distribution: Europe (PL, CZ, SK, DT, NL, GB, BL, FR, IT, CH, AU, HG, YU, RO, BG, AL, GR); **New Record for Greece.**

Grapholita nebritana Treitschke, 1830

Material examined: 1 ♀, Portaria, 750 m, 15-V-2016.

Distribution: Europe (EE, LT, PL, CZ, SK, DT, BL, FR, ES, PR, IT, CH, AU, HG, YU, RO, AL, GR); N Africa; Asia Minor.

Grapholita tenebrosana Duponchel, 1843

Material examined: 1 ♀, Portaria, 1000 m, 17-VI-2016.

Distribution: Europe (NR, DK, SW, SF, EE, EN, LV, LT, PL, CZ, SK, DT, NL, GB, IR, BL, LX, FR, ES, IT, CH, AU, HG, RO, BG, GR); Asia Minor; Transcaucasus; Kazakhstan; Russian Far East; Japan. **New Record for Greece.**

Dichrorampha alpigenana (Heinemann, 1863)

Material examined: 1 ♀, Chania, 1150 m, 19-IV-2016; 1 ♂, Chania, 1150 m, 15-VI-2016.

Distribution: Europe (DT, FR, IT, CH, AU, YU, GR); W Siberia. **New Record for Greece.**

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region.

Dichrorampha inconspiqua (Danilevsky, 1948)

Material examined: 4 ♂♂, Chania, 1150 m, 19-IV-2016; 1 ♂, Chania, 1150 m, 27-IV-2016; 4 ♂♂, Portaria, 1000 m, 10-V-2016; 2 ♂♂, Chania, 1350 m, 13-V-2016; 2 ♂♂, Chania, 1150 m, 17-V-2016; 3 ♂♂, 1 ♀, Portaria, 1000 m, 19-V-2016; 1 ♂, Chania, 1350 m, 10-VI-2016; 1 ♂, Chania, 1350 m, 20-VI-2016.

Distribution: Europe (GR); S Transcaucasus; Azerbaijan. **New Record for Europe.**

Remarks: Identified morphologically, supplemented by molecular data of the COI barcode region (Figures 16, 17, 18).

Dichrorampha sp.

Material examined: 1 ♀, Chania, 1350 m, 20-VI-2016.

Remarks: Identified only by molecular data of the COI barcode region.

Discussion

During the last decade, the Tortricidae from Greece have received only sporadic attention by both local and foreign lepidopterists with publications referring to one or few entities (e.g. AARVIK & KARSHOLT, 1993; TREMATERRA & KARSHOLT, 1996; TREMATERRA & AARVIK, 1998; GOZMANY, 2012; BASSI, 2014; TREMATERRA & COLACCI, 2016), while lacking summary works that consider the Hellenic fauna as a whole.

In RAZOWSKI (1996) mentioned 209 species of Tortricidae as present in Greece from the 925 recorded for Europe. In the latest checklist of Lepidoptera, the electronic version of the Fauna Europaea, the number of Tortricidae reported from Greece is 211 (AARVIK, 2013). In addition, there are two new species, *Endothenia apotomisana* Trematerra & Colacci and *Cydia pelionae* Trematerra &

Colacci, described from Pelion Mountains (TREMATERRA & COLACCI, 2016). For Crete Island, RAZOWSKI (1996) listed 30 species of Tortricidae, while in the Fauna Europaea are recorded 32 species (AARVIK, 2013). Recently HUEMER (2016) studied the Tortricidae collected by Walter Ruckdeschel on the island of Crete and cited 40 species thus increasing the total species number of the Island to 56. In the Trematerra personal catalogue are noted 233 species referred to Greece and 62 to Crete (unpublished data).

The species listed in the present paper are 50, of which 11 are recorded for the first time in Greece: *Aethes margaritana*, *Eana incanana*, *Paramesia diffusana*, *Tosirips magyarus*, *Eudemis profundana*, *Ancylis badiana*, *Pelochrista modicana*, *Grapholita lathyрана*, *Grapholita tenebrosana*, *Dichrorampha alpigenana* and *Dichrorampha inconspiqua*. *Ceratoxanthis giansalottii*, *Endothenia apotomisana*, and *Cydia pelionae* are endemic of Greece. *Dichrorampha inconspiqua* is reported for the first time in Europe. *Cydia magnesia* sp. n. is described as new to science.

Thus, with the records cited in the present paper, the Lepidoptera Tortricidae of the Greek fauna are now 244.

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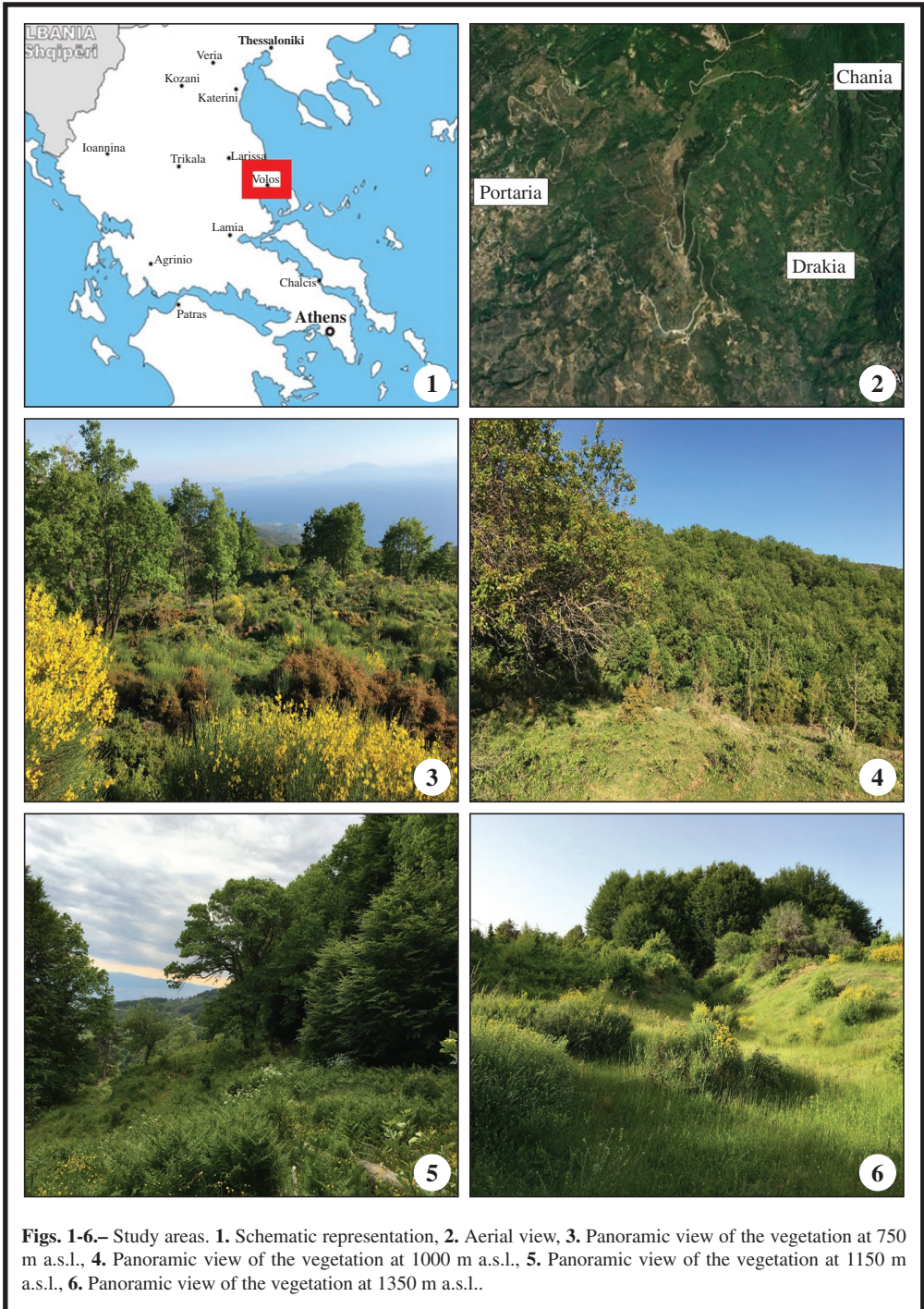
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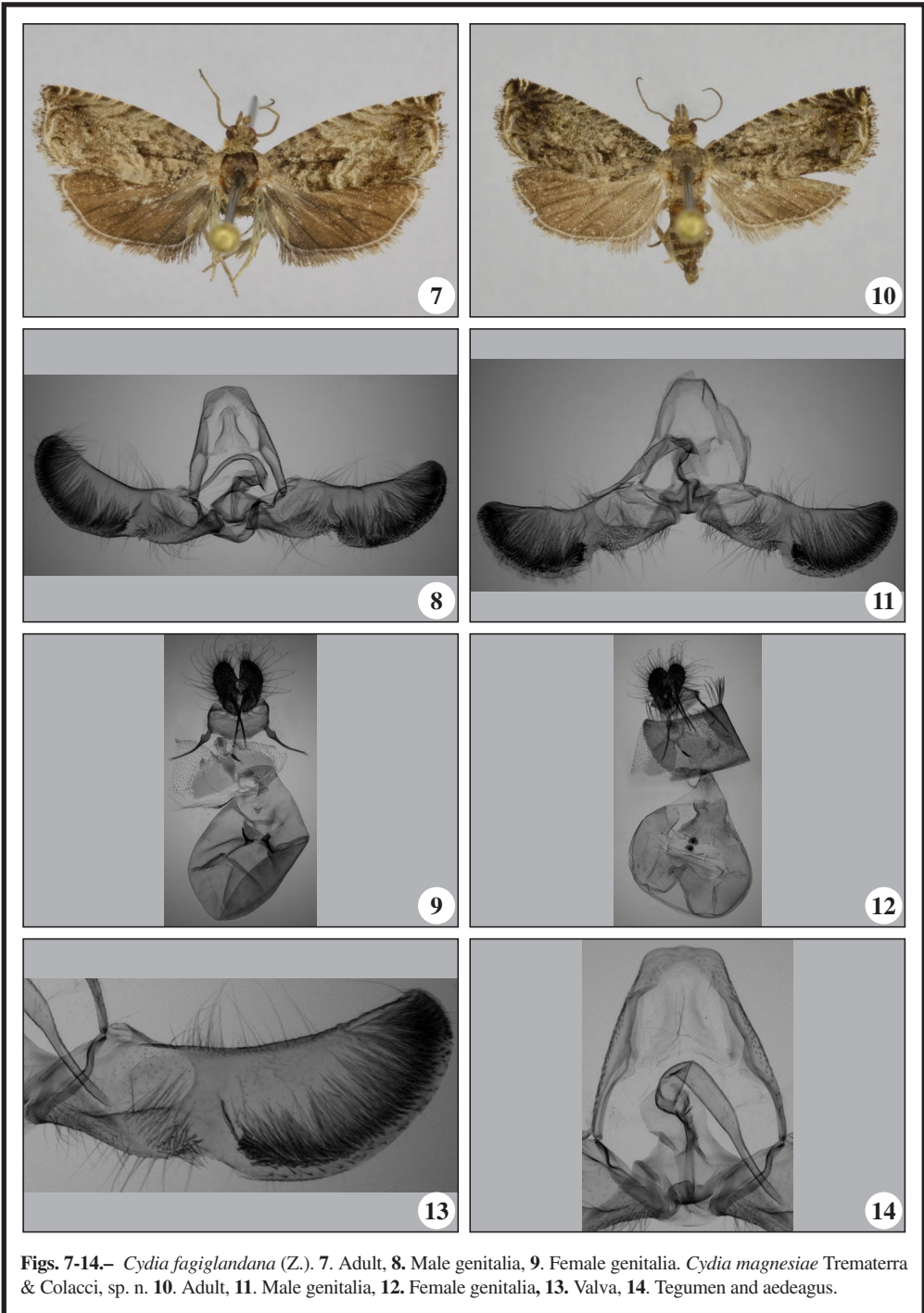
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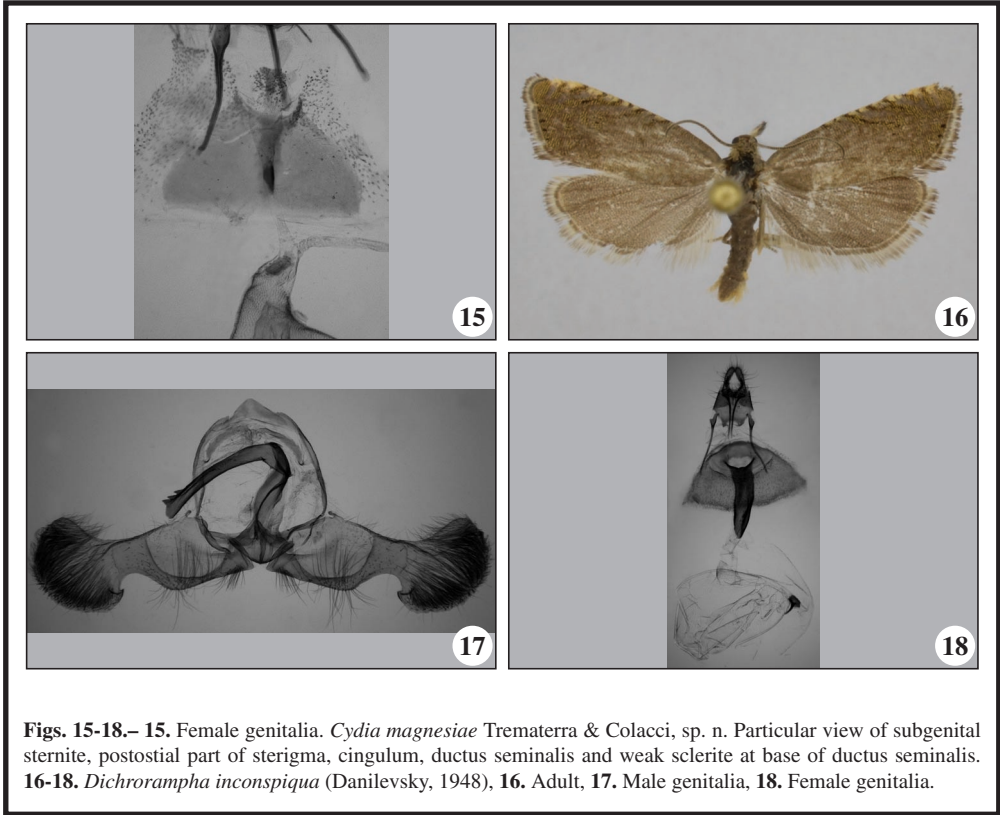
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Figs. 1-6.– Study areas. **1.** Schematic representation, **2.** Aerial view, **3.** Panoramic view of the vegetation at 750 m a.s.l., **4.** Panoramic view of the vegetation at 1000 m a.s.l., **5.** Panoramic view of the vegetation at 1150 m a.s.l., **6.** Panoramic view of the vegetation at 1350 m a.s.l.



Figs. 7-14.– *Cydia fagiglandana* (Z.). 7. Adult, 8. Male genitalia, 9. Female genitalia. *Cydia magnesia* Trematerra & Colacci, sp. n. 10. Adult, 11. Male genitalia, 12. Female genitalia, 13. Valva, 14. Tegumen and aedeagus.



Figs. 15-18.— **15.** Female genitalia. *Cydia magnesia* Trematerra & Colacci, sp. n. Particular view of subgenital sternite, postostial part of sterigma, cingulum, ductus seminalis and weak sclerite at base of ductus seminalis. **16-18.** *Dichrorampha inconspiqua* (Danilevsky, 1948), **16.** Adult, **17.** Male genitalia, **18.** Female genitalia.