

Research Article

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On a collection of *Lepidoptera* from Dağlıca (South-East Turkey, Hakkari Province)

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Abstract: On a collection of *Lepidoptera* from Dağlıca (South-East Turkey, Hakkari Province). *Cesa News* 139: 1-24, 42 figs.

In this paper, a collection of *Lepidoptera* from Hakkari Province, vicinity of Dağlıca, is evaluated faunistically. Nearly 900 specimens collected were identified as 189 species of 25 families. Faunistically 58 taxa at species level are new to Hakkari Province. Male and female genitalia, tympanal organs, abdominal skins, or antennae are prepared and illustrated. They are evaluated for the purpose of identification of the taxa or morphological comparison required.

Key words: *Lepidoptera*, fauna, Dağlıca, Yüksekova, Hakkari, Turkey.

Dağlıca (older name Oramar) is perhaps the most interesting place and nowadays very difficult and dangerous to enter in the South-East Turkey. It is located in the Hakkari Province, surrounded by steep mountains, 28km SW of Yüksekova city, and 7km north of Iraqi border (**Figs. 1-3**). The third author visited this locality in the spring, on 22-26 April, on 22-25 May 2017, and evaluated every opportunity for researching the *Lepidoptera* fauna in the vicinity of Dağlıca village. Under extremely inconvenient conditions, working alone but with great courage, resolutely, she observed and collected butterflies between 1530-1930m by day, and at the elevations of 1475-1865m for collecting moths by night, by using our simple light trap².

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² <https://archive.org/details/ASimpleButEffectiveLightTrapForInsectsPaitByTheCesa>



Figs. 1 -3 – Vicinity of Dağlıca village, 24-25 April 2017, H. Uçak

Dağlıca is encoded by the authors with “30Df” in their faunal publications in the past and in the future (Koçak & Kemal, 2017). The village itself is located on the steep slopes above the sea level between 1460-1560m.

Hakkari is extremely mountainous province in Turkey, and its Lepidoptera fauna was poorly studied so far. The total number of lepidopteran species was reported in the province as 762 (Koçak & Kemal, 2014). After one year, the authors listed 773 species from the province in details (Koçak & Kemal, 2015). If the second author's field studies in the Hakkari Province, realized by himself in the second half of the previous century are not taken here into account, the faunistic surveys in this province are concentrated in the last decade to an extent. Some of the results were published by the first authors (Kemal & Koçak, 2012, 2015; Koçak & Kemal, 2015).

In this paper, the collected material are evaluated, with some taxonomical remarks. Nearly 900 specimens were collected by the third author. They were identified by the other authors as 189 taxa of 25 families³. New faunistic records for Hakkari Province are marked with “*”. These are at least 58 species, representing ca. 30% of all the species listed here. The materials are currently preserved in the collections of YYUIRC⁴ and CESA⁵.

List of the species collected from Dağlıca in the spring of 2017

Butterflies

In the studying area, 47 species of butterflies in 7 families are reported here. Records of a few species are based on the observations through photography. The collected specimens are given with collecting date and the altitude of the place.

Argynnidæ

1. *Aglais urticae* (Linnaeus,1758)

Material studied: 25 4 2017 1675m 1♂. Besides, 1 male emerged from the pupa in the laboratory on 1th June, found in the area.

2. *Argynnis niobe* (Linnaeus,1758) (Fig.4)

Observed on 25 4 2017 from the the vicinity of Dağlıca.

3. *Issoria lathonia* (Linnaeus,1758)

Material studied: 25 4 2017 1675m 1♂, 25 5 2017 1580m 1♂.

4. *Melitaea (s.str.) arduinna* (Fabricius,1787)

Material studied: 25 5 2017 1580m 2♂.

5. *Melitaea (s.str.) cinxia* (Linnaeus,1758)

Material studied: 23 5 2017 1530m 1♂, 24 5 2017 1760m 1♂.

6. *Nymphalis* sp. (Fig.5)

Observed on 24 4 2017 from the vicinity of Dağlıca.

7. *Polygonia (Comma) c-album* (Linnaeus,1758)

Material studied: 25 4 2017 1675m 2♂, 26 4 2017 1930m 1♂.

8. *Vanessa (Cynthia) cardui* (Linnaeus,1758)

Material studied: 25 4 2017 1675m 1♂, 25 5 2017 1580m 1♂.

³ The identifications are based upon the Info-system of the Cesa <http://www.cesa-tr.org/Infos.htm>

⁴ <http://grbio.org/cool/39ot-itxm>

⁵ <http://grbio.org/cool/eaaz-xyfc>

Hesperiidae**9. *Carcharodus (Reverdinus) flocciferus* (Zeller,1847)**

Material studied: 25 4 2017 1675m 1♂.

10. *Carcharodus (s.str.) alceae* (Esper,[1780])

Material studied: 23 5 2017 1530m 1♂, 24 5 2017 1760m 2♂.

11. *Erynnis (Hesperopegasis) marloyi* (Boisduval,[1834])

Material studied: 24 5 2017 1760m 3♂.

12. *Erynnis (s.str.) tages* (Linnaeus,1758)

Material studied: 23 5 2017 1530m 5♂, 24 5 2017 1760m 4♂, 25 5 2017 1580m 3♂.

13. *Muschampia tersa* Evans,1949 (Fig. 20)

Evans (1949) described this taxon from Ordubad as a subspecies of *Muschampia tessellum*, but later considered as a bona species. The description of its male genitalia was given by Evans very short: "top of cuiller flat or concave and back more angled than rounded". Here we present the male genitalia with all important details visually, i.e., valva, cuiller, aedeagus with spines and a pair of short cornuti, strong juxta etc.

Material studied: 1♂ from 1865m on 23 5 2017.

14. *Pyrgus armoricanus* (Oberthür,1910)

Material studied: 23 5 2017 1530m 1♂.

15. *Pyrgus sidae* (Esper,[1784])

Observed in the vicinity of Dağlıca.

16. *Spialia (Neospialia) orbifer* (Hübner,[1823]) (Fig.6)

Material studied: 23 5 2017 1530m 1♂, 24 5 2017 1760m 3♂♀, 25 5 2017 1580m 1♂.

Libytheidae**17. *Libythea (s.str.) celtis* (Laicharting,1782)**

Material studied: 25 5 2017 1580m 1♂.

Lycaenidae**18. *Callophrys danchenkoi* Zhdanko,1998**

Material studied: 25 4 2017 1675m 1♂.

19. *Callophrys mystaphia* Miller,[1913]

Material studied: 25 4 2017 1675m 5♂, 26 4 2017 1930m 1♂.

20. *Celastrina argiolus* (Linnaeus,1758)

Material studied: 25 4 2017 1675m 2♂.

21. *Cupido osiris* (Meigen,[1829])

Material studied: 23 5 2017 1530m 1♂, 25 5 2017 1580m 4♂.

22. *Glaucopsyche (s.str.) alexis* (Poda,1761)

Material studied: 25 4 2017 1675m 1♂, 25 5 2017 1580m 3♂.

23. *Lycaena (Loweia) tityrus* (Poda,1761)

Material studied: 23 5 2017 1530m 1♂, 24 5 2017 1760m 1♂, 25 5 2017 1580m 1♂ 2♀.

24. *Lycaena (Thersamonia) kurdistanicus* (Riley,1921)
Observed in the vicinity of Dağlıca.
25. *Lycaena (Thersamonia) asabinus* (Gerhard,[1850])
Material studied: 25 5 2017 1580m 2♂.
26. *Lycaena (s.str.) phlaeas* (Linnaeus,1761)
Material studied: 25 5 2017 1580m 1♂.
27. *Plebejus (Plebejides) zephyrinus* (Christoph,1884)
Material studied: 24 5 2017 1760m 1♂, 25 5 2017 1580m 1♀.
28. *Polyommatus (Aricia (s.str.)) agestis* ([Denis & Schiffermüller],1775)
Material studied: 23 5 2017 1530m 1♂, 25 5 2017 1580m 2♂.
29. *Polyommatus (s.str. (Cyaniris)) antiochenus* (Lederer,1861)
Material studied: 23 5 2017 1530m 1♂.
30. *Polyommatus (s.str. (Lysandra)) bellargus* (Rottemburg,1775)
Material studied: 23 5 2017, 1530m 5♂, 24 5 2017 1760m 1♂, 25 5 2017 1580m 6♂.
31. *Polyommatus (s.str. (Neolysandra)) fatima* Eckweiler & Schurian,1980
Material studied: 23 5 2017 1530m 1♂,24 5 2017 1760m 1♂.
32. *Polyommatus (s.str.) icarus* (Rottemburg,1775)
Material studied: 23 5 2017 1530m 3♂, 25 5 2017 1580m 3♂.
33. *Tomares callimachus* (Eversmann,1848)
Material studied: 25 4 2017 1675m 1♂.
34. *Tomares romanovi* (Christoph,1882)
Material studied: 23 5 2017 1530m 1♂, 24 5 2017 1760m 3♂.

Papilionidae

35. *Zerynthia (Allancastris) deyrollei* (Oberthür,1869)
Material studied: 25 4 2017 1675m 1♂, 26 4 2017 1930m 1♂1♀, 24 5 2017 1760m 1♂.

Pieridae

36. *Anthocharis cardamines* (Linnaeus,1758)
Material studied: 24 5 2017 1760m 1♂, 25 5 2017 1580m 2♂.
37. *Anthocharis grueneri* Herrich-Schäffer,[1851]
Material studied: 25 4 2017 1675m 1♂,26 4 2017 1930m 1♂.
38. *Aporia (s.str.) crataegi* (Linnaeus,1758)
Material studied: 24 5 2017 1760m 1♂.
39. *Colias (Eriocolias) crocea* (Fourcroy,1785)
Material studied: 25 5 2017 1580m 2♀.
40. *Gonepteryx (s.str.) rhamni* (Linnaeus,1758)
Material studied: 25 4 2017 1675m 3♂, 26 4 2017 1930m 2♂, 25 5 2017 1580m 2♂.

41. *Leptidea duponcheli* (Staudinger,1871)

Material studied: 23 5 2017 1530m 1♂.

42. *Pieris (Artogeia) bryoniae* (Hübner,[1804])

Material studied: 25 4 2017 1675m 4♂♀, 26 4 2017 1930m 2♂.

43. *Pieris (Artogeia) ergane* (Geyer,[1828])

Material studied: 26 4 2017 1930m 1♂, 23 5 2017, 1530m 1♂, 24 5 2017 1760m 2♂♀.

44. *Pieris (Artogeia) pseudorapae* Verity,1908

Material studied: 23 5 2017 1530m 1♂, 24 5 2017 1760m 4♂♀.

45. *Pieris (s.str.) brassicae* (Linnaeus,1758)

Material studied: 25 4 2017 1675m 1♂, 26 4 2017 1930m 1♂, 25 5 2017 1580m 3♂♀.

46. *Pontia edusa* (Fabricius,1777)

Material studied: 24 5 2017 1760m 1♀.

Satyridae**47. *Coenonympha (s.str.) pamphilus* (Linnaeus,1758)**

Material studied: 26 4 2017 1930m 1♂, 23 5 2017 1530m 4♂, 25 5 2017 1580m 2♂.

Moths

In the studying area, 142 moth species of 18 families are reported here. The species collected are mostly nocturnal; therefore a light trap was used for collecting. The collected specimens are given with collecting date and the altitude of the place.

Arctiidae**48. *Arctia (Epicallia) marchandi* De Freina,1983 (Fig. 7)**

Material studied: 16♂♀ from 1457m, 1765m, 1865m on 23-25 5 2017.

49. *Phragmatobia placida* (Frivaldsky,1835)

Material studied: 2♂♀ from 1765m, 1865m on 23 5, 25 5 2017.

Coleophoridae**50. *Coleophora* sp.**

Material studied: 3♂ from 1650m, 1765m on 24-25 5 2017.

Drepanidae**51. *Cilix asiatica* A.Bang-Haas,1907**

Material studied: 1♂ from 1457m on 24 5 2017.

52. *Watsonalla binaria* (Hufnagel,1767)

Material studied: 4♂ 3♀ from 1457m, 1650m, 1765m, 1865m on 22-25 5 2017.

Ethmiidae

- 53. *Ethmia hakkarica* Koçak, 1986 (Figs. 21, 22)**
Material studied: 4♂ from 1457m, 1490m, 1865m on 22-24 5 2017 (GP2693♂).
This species was originally described in 1986 from Üzümcü (Hakkari Prov.) (Koçak, 1986). Later, it was also reported by the authors from Saklıvadi (Van Province) (Kemal & Koçak, 2017b). As an unpublished record, this species was also found by the authors in 2013 at Nallıkaya 1840m (Şirvan distr., Siirt Prov.) (GP2013♂).
The species is confined to the mountainous region of SE Turkey.
- 54. *Ethmia similis* Sattler, 1967**
Material studied: 1♂ from 1457m on 24 5 2017.
- 55. *Ethmia chrysopyga* (Zeller, 1844)***
Material studied: 1♂ from 1764m on 25 5 2017.

Gelechiidae

- 56. *Altenia* sp.* (Fig. 23)**
Material studied: 4♀ (GP2677) from 1525m, 1650m on 23-24 4 2017.
This species looks like to the species reported from Anamur (İçel Province, South Turkey) (Kemal & Koçak, 2017a). One of the important feature, discriminating this undescribed species from *Altenia modesta* Danilevsky, is the shape of the signum. Apparently, *Altenia modesta* is not recorded from Turkey.
- 57. *Gelechia* sp.* (Figs. 24, 25)**
Material studied: 1♂ (GP2676) from 1650m 24 4 2017.
A single adult male (wingspan 17.5mm, with a narrow forewing) was obtained in April. It cannot be identified specifically for the time being. Because, none of the european species of the genus *Gelechia* does not look like to this. Most of the gelechiid species are in larval stages in the spring, and adults emerge in the summer. Phenologically, this nocturnal species is also interesting. Apparently, almost nothing is known about this species. The male genitalia of this species shows significant differences especially on the uncus, valva, sacculus, aedeagus etc.
- 58. *Gelechiid* sp.**
Material: 1 ex from 1457m on 24 5 2017.
Comparable with the species of *Gnorimoschemini*.
- 59. *Metzneria aprilella* (Herrich-Schäffer, [1854])***
Material studied: 2♂ from 1457m 24 5 2017.

Geometridae

- 60. *Aplocera obsitaria* (Lederer, 1853)***
Material studied: 23 5 2017 1865m 1♂.
- 61. *Aplocera plagiata* (Linnaeus, 1758)**
Material studied: 9♂♀ from 1475m, 1765m, 1865m on 23-25 5 2017.
- 62. *Camptogramma bilineatum* (Linnaeus, 1758)**
Material studied: 2♂♀ from 1457m, 1765m on 24-25 5 2017.
- 63. *Chiasmia clathrata* (Linnaeus, 1758)**
Material studied: 5♂ from 1457m, 1765m, 1865m on 22-25 5 2017.

- 64. *Chloroclysta miata* (Linnaeus,1758)* (Figs. 26-28)**
Material studied: 1♀ from 1525m on 23 4 2017. GP2692♀.
Only a single overwintering female (wingspan: 32mm) was obtained at the light trap. Its identity is very difficult, if it is compared with the images of the female genitalia of *Chloroclysta miata* and *siterata* given (Hausmann & Viidalepp, 2012: 666, figs.133 & 134). Under these circumstances, we can barely identify this female as *miata*.
- 65. *Dasycorsa modesta* (Staudinger,1879)***
Material studied: 3♂ from 1650m on 24 4 2017.
- 66. *Docirava musculata* (Staudinger,1892)* (Fig. 8)**
Observed and collected from the vicinity of Dağlıca.
Material studied: 4♂ from 1525-1650m on 23-24 4 2017.
- 67. *Dyscia (Calodyscia) innocentaria* (Christoph,1885)* (Fig. 9)**
Material studied: 26♂♀ from 1457m, 1490m, 1765m, 1865m 23-25 5 2017.
- 68. *Eilicrinia cordiaria* (Hübner,1790)***
Material studied: 1♀ from 1525m on 23 4 2017.
- 69. *Eupithecia breviculata* (Donzel,1837)**
Material studied: 6♂ from 1475m, 1765m, 1865m on 23-25 5 2017.
- 70. *Eupithecia* sp.**
Material studied: 2 ex. from 1457m on 24 5 2017.
It can be compared with *silenicolata*.
- 71. *Eupithecia venosata* (Fabricius,1787)***
Material studied: 5♂♀ from 1457m, 1765m on 24-25 5 2017.
- 72. *Eupithecia spissilineata* (Metzner,1846)**
Material studied: 1 ex from 1490m on 24 5 2017.
- 73. *Gnopharmia colchidaria* (Lederer,1870)***
Material studied: 42♂♀ from 1457m, 1490m, 1765m, 1865m on 23-25 5 2017.
- 74. *Heliomata glarearia* (Brahm,1791)**
Material studied: 32♂♀ from 1457m, 1490m, 1865m on 22-25 5 2017.
- 75. *Hyposcotis* sp.1**
Material studied: 1♂ from 1457m on 24 5 2017.
Comparable with *variegata* Duponchel or related species.
- 76. *Hyposcotis* sp.2**
Material studied: 2♂ from 1457m, 1490m on 24 5 2017.
Comparable with *subtaurica* Wehrli or related species.
- 77. *Hyposcotis* sp.3**
Material studied: 7♂♀ from 1490m, 1765m, 1865m on 22-25 5 2017.
It can be compared with *onustaria* H-S, or related species.
- 78. *Idaea degeneraria* (Hübner,[1799])***
Material studied: 9♂♀ from 1475m, 1490m, 1765m, 1865m on 22-25 5 2017.
- 79. *Idaea flicata* (Hübner,[1799])***
Material studied: 10♂♀ from 1457m, 1490m, 1765m on 24-25 5 2017.

80. *Idaea* sp.

Material studied: 2♂ from 1490m, 1865m on 23-24 5 2017.

81. *Neognopharmia* sp.

For the specific identity, the genitalia of *stevenaria* and *cataleucaria* (Mardin) will be separately examined.

Material studied: 18♂♀ from 1457m, 1490m, 1765m, 1865m on 22-25 5 2017.

82. *Nychiodes (Eunychiodes) divergaria* (Staudinger,1892)*

Material studied: 3♂ from 1865m on 23 5 2017.

83. *Nychiodes* sp.

Material studied: 5♂♀ from 1457m, 1865m on 23-24 5 2017.

84. *Oulobophora externaria* (Herrich-Schäffer,[1848]) (Fig. 10)

Material studied: 9♂♀ from 1525m, 1530, 1865m on 22-23 4 2017, 22 5 2017.

85. *Peribatodes rhomboidarius* (Denis & Schiffermüller),1775)*

Material studied: on 24 5 2017, 1490m 1♀.

86. *Peribatodes umbrarius* (Hübner,[1809])* (Fig. 11)

Material studied: 2♂ from 1457m, 1765m on 23-24 5 2017.

87. *Protorhoe unicata* (Guenée,[1858])

Material studied: 2♂ from 1490m, 1765m on 24-25 5 2017.

88. *Pseudopanthera syriacata* (Guenée,1858) (Fig. 12)

Material studied: 11♂♀ from 1457m, 1865m n 22-24 5 2017.

89. *Ramitia kufrana* E.Seven,2016*

Material studied: 2♂ from 1457m, 1650m on 24 5 2017.

90. *Rhodostrophia (Pydna) bahara* Brandt,1938*

Material studied: 1♂2♀ from 1865m on 23 5 2017.

91. *Rhodostrophia (s.str.) discopunctata* Amsel,1935* (Fig. 13)

Material studied: 3♂ from 1475m, 1765m, 1865m on 23-25 5 2017.

92. *Scopula marginepunctata* (Goeze,1781)*

Material studied: 9♂♀ from 1457m, 1765m, 1865m on 22-25 5 2017.

93. *Scopula ornata* (Scopoli,1763)*

Material studied: 1♂ from 1457m on 24 5 2017.

Gracillariidae**94. *Caloptilia alchimiella* (Scopoli,1763)***

Material studied: 1♂ from 1865m on 22 5 2017.

Lasiocampidae**95. *Lasiocampa eversmanni* (Kindermann,1843) (Fig. 14)**

Observed as caterpillar.

96. *Phyllodesma (s.str.) tremulifolium* (Hübner,[1810])

Material studied: 2♂ from 1457m, 1765m on 24-25 5 2017.

Noctuidae

Nearly 12 specimens of *Nolinae*, collected in April 2017 couldnot be identified yet.

97. *Acontia (Emmelia) trabealis* (Scopoli,1763)

Material studied: 2♂ from 1865m on 22 5 2017.

98. *Aedia funesta* (Esper,[1786])*

Material studied: 4♂ from 1457m, 1765m, 1865m on 22-25 5 2017.

99. *Agrotis (s.str.) ipsilon* (Hufnagel,1766)

Material studied: 8♂♀ from 1457m, 1765m, 1865m on 22-25 5 2017.

100. *Agrotis (s.str.) segetum* ([Denis & Schiffermüller],1775)

Material studied: 9♂♀ from 1457m, 1525m, 1765m on 23 4, 24-25 5 2017.

101. *Apamea* sp.1

Material studied: 3♂ from 1765m on 25 5 2017.

102. *Apamea* sp.2

Material studied: 11♂♀ from 1490m, 1765m, 1865m on 22-25 5 2017.

103. *Autographa gamma* (Linnaeus,1758)

Material studied: 5♂ from 1475m, 1490m, 1765m, 1865m on 24-25 5 2017.

104. *Autophila* sp.1

Material studied: 2ex. from 1525m on 23 4 2017. These specimens looks like to some degree *asiatica* Stgr., externally.

105. *Autophila* sp.2

Material studied: 1 ex. from 1525m on 23 4 2017. It looks like to *chamaephanes* Brsn. Sympatric with the previous species; it differs from the former externally by well developed pale postdiscal band on upperside of hindwing, brown postdiscal bands on underside of both wings, and c-shaped brown discal marking on underside of forewing.

106. *Bryomima defreina* Hacker,[1987]

Material studied: 3♂ from 1475m, 1490m, 1865m on 22-24 5 2017.

107. *Bryophilopsis roederi* (Standfuss,1892)

Material studied: 11♂♀ from 1475m on 24 5 2017.

108. *Caradrina* sp.

Material studied: 28♂♀ from 1490m, 1650m, 1865m on 24-25 5 2017.
Comparable with *flavirena* Gn.

109. *Catephia alchymista* ([Denis & Schiffermüller],1775)

Material studied: 2♂ from 1765m, 1865m on 23, 25 5 2017.

110. *Catocala (Ephesia) brandti* Hacker & Kautt,1999

Material studied: 1♂ from 1765m on 25 5 2017.

111. *Chloantha hypericii* (Fabricius,1787)

Material studied: 7♂♀ from 1525m, 1530m, 1650m, 1765m, 1865m on 22-24 4, 23-25 5 2017.

112. *Cleonymia (Serryvania) opposita* (Lederer,1870)*

Material studied: 9♂♀ from 1490m, 1865m on 22-24 5 2017.

113. *Cornutiplusia circumflexa* (Linnaeus,1767)

Material studied: 5♂♀ from 1490m, 1530m, 1865m on 22 4, 22-24 5 2017.

114. *Cucullia* sp.

Material studied: 1 ex from 1650m on 24 4 2017.

115. *Dasypolia transcaucasica* L.Ronkay & Varga,1985*

Material studied: 2 ex from 1650m on 24 4 2017.

116. *Dichagyris (s.str.) erubescens* (Staudinger,1892)

Material studied: 1♂ from 1457m on 24 5 2017.

117. *Drasteria cailino* (Lefèbvre,1827) (Fig. 15)

Material studied: 12♂♀ from 1490m, 1765m, 1865m on 22-24 5 2017.

118. *Drasteria saisani* (Staudinger,1882) (Fig. 16)

Material studied: 4♂♀ from 1765m, 1865m on 22-25 5 2017.

119. *Dysgonia algira* (Linnaeus,1767)

Material studied: 1♂ from 1865m on 22 5 2017.

***Egira* spp. (Figs. 29- 40)**

Remarks: The forewing colouration and markings are variable in this genus (polymorphism?). The characters of the forewing cannot be used in discriminating the sexes. On the other hand, sexual dimorphism appears only on the antenna between male and female. The antenna is filiform in both sexes, but bare in the females of *fatima* and *anatolica* (Figs. 38, 40). In the males of both species, the antennae scaled dorsally, while ciliated ventrally (Figs. 34, 36). Therefore, male antenna are indistinctly thicker than that of female, in particular at basal part. Even though, this structural difference on the antenna is at a level, visible to the naked eye.

120. *Egira fatima* Hreblay,1994 (Figs. 29, 31, 33, 34, 37, 38)

Material studied: 5♂♀ from 1525-1530m on 22-24 4 2017 (GP2690♀, 2696♂).

The species could be identified by the authors, by using the genitalic characters of *Egira fatima* given in his original description by Hreblay (Hreblay,1994). *Egira fatima* is sympatric with the following species.

121. *Egira anatolica* (M.Hering,1933) (Figs. 30, 32, 35, 36, 39, 40)

Material studied: 15♂♀ from 1525-1530m on 22-24 4 2017 (GP2691♀, 2697♂).

Recently, this species was reported by the authors from Bahçesaray (Van Prov.) (Kemal & Koçak,2016). The female genitalia of this species has a pair, well-developed spines above anthrum.

122. *Eicomorpha kurdestanica* De Freina & Hacker,1985

Material studied: 1♂ from 1765m 25 5 2017.

123. *Eublemma ostrinum* (Hübner,[1808])*

Material studied: 2♂ from 1457m, 1765m on 24-25 5 2017.

124. *Eublemma parvum* (Hübner,[1808])*

Material studied: 4♂ from 1490m on 24 5 2017.

125. *Eupsilia transversa* (Hufnagel,1766)*

Material studied: 7♂♀ from 1525m, 1530m on 22-23 4 2017.

126. *Exophyla rectangularis* (Geyer,[1828])

Material studied: 1♂ from 1765m on 25 5 2017.

127. ***Hadena magnolii* (Boisduval,1840)***
Material studied: 1♂ from 1865m on 23 5 2017.
128. ***Hadena* sp.**
Material studied: 1♂ from 1765m on 25 5 2017.
129. ***Hecatera spinaciae* (Vieweg,1790)***
(=#*dysodea* [Denis & Schiff.],1775, nomen nudum)
Material studied: 2♂ from 1865m on 23 5 2017.
130. ***Helicoverpa armigera* (Hübner,[1808])***
Material studied: 3♂ from 1765m on 25 5 2017.
131. ***Heliothis peltigera* ([Denis & Schiffermüller],1775)**
Material studied: 4♂♀ from 1490m, 1765m, 1865m on 23-25 5 2017.
132. ***Hoplodrina ambigua* ([Denis & Schiffermüller],1775)***
Material studied: 9♂ from 1765m, 1865m on 23-25 5 2017.
133. ***Jodia croceago* (Fabricius,1787)***
Material studied: 1 ex from 1525m on 23 4 2017.
134. ***Leucania loreyi* (Duponchel,1827)**
Material studied: 5♂ from 1765m, 1865m on 22-25 5 2017.
135. ***Lithophane ornitopus* (Hufnagel,1766)***
Material studied: 2♂ from 1650m on 24 4 2017.
136. ***Megalodes eximia* (Freyer,1845)**
Material studied: 3♂ from 1865m on 23 5 2017.
137. ***Minucia bimaculata* Osthelder,1933**
Material studied: 40♂♀ from 1525m, 1530m on 22-24 4 2017.
138. ***Mythimna (Aletia) l-album* (Linnaeus,1767)**
Material studied: 8♂ from 1765m, 1865m on 23-25 5 2017.
139. ***Mythimna vitellina* (Hübner,[1808])**
Material studied: 1♂ from 1865m on 23 5 2017.
140. ***Noctua (Latanocua) orbona* (Hufnagel,1766)**
Material studied: 1♂ from 1765m on 25 5 2017.
141. ***Ophiusa lunaris* (Goeze,1781)* (Fig. 17)**
Material studied: 8♂♀ from 1525m, 1765m, 1865m on 23 4, 23-25 5 2017.
142. ***Ophiusa tirhaca* (Cramer,[1777])***
Material studied: 1♂ from 1765m on 25 5 2017.
143. ***Orthosia (Dioszeghyana) schmidtii* (Diószeghy,1935)***
Material studied: 32♂ from 1525m, 1530m on 22-23 4 2017.
Remarkably small species in the genus.
144. ***Orthosia (s.str.) incerta* (Hufnagel,1766)***
Material studied: 2♀ from 1525m on 23 4 2017.

145. ***Orthosia rubricosa* (Esper,[1786])***
(=#*miniosa* [Denis & Schiff.],1775, nomen nudum)
Material studied: 5♂♀ from 1525m, 1530m on 22-23 4 2017.
146. ***Perigrapha rorida* (Frivaldsky,1835)***
Material studied: 1♂ from 1650m on 24 4 2017.
147. ***Polypogon schwingenschussi* (Wagner,1937)**
Material studied: 2♂ from 1490m 24 5 2017.
148. ***Sideridis (Aneda) rivularis* (Fabricius,1775)***
Material studied: 5♂♀ from 1457m, 1490m, 1765m on 24-25 5 2017.
149. ***Sideridis (Luteohadena) luteago* ([Denis & Schiffermüller],1775)**
Material studied: 4♂ from 1490m, 1765m, 1865m on 22-25 5 2017.
150. ***Spodoptera exiguum* (Hübner,[1808])**
Material studied: 1♂ from 1457m on 24 5 2017.
151. ***Standfussiana lucernea* (Linnaeus,1758)**
Material studied: 1♂ from 1457m on 24 5 2017.
152. ***Thria robusta* Walker,[1858]**
Material studied: 1♂ from 1765m on 25 5 2017.
153. ***Trichoplusia ni* (Hübner,[1803])***
Material studied: 1♂ from 1765m on 25 5 2017.
154. ***Tyta luctuosa* ([Denis & Schiffermüller],1775)**
Material studied: 1♂ from 1865m on 22 5 2017.
155. ***Valeria oleagina* (Esper,[1786])**
Material studied: 2♂ from 1650m on 24 4 2017.
156. ***Zekelita (Rhynchodontodes) antiqualis* (Hübner,[1809])**
Material studied: 15♂♀ from 1457m, 1765m, 1865m 22-25 5 2017.
157. ***Zethes brandti* Janzon,1977**
Material studied: 11♂♀ from 1457m, 1865m on 22 5 2017.

Notodontidae

158. ***Drymonia ruficornis* (Hufnagel,1766)***
Material studied: 1♂ from 1650m on 24 4 2017.
159. ***Harpyia milhauseri* (Fabricius,1775)**
Material studied: 3♂ from 1650m on 24 4 2017.
160. ***Spatalia argentina* ([Denis & Schiffermüller],1775) (Fig. 18)**
Material studied: 3♂ from 1865m on 23 5 2017.

Oecophoridae

161. **Depressariid sp.**
Material: 1 ex from 1765m on 25 5 2017. This species will be later evaluated.

- 162. *Pleurota (s.str.) pyropella* ([Denis & Schiffermüller],1775)***
Material studied: 3♂ from 1865m 22 5 2017.

Pterophoridae

- 163. *Emmelina monodactyla* (Linnaeus,1758)*** (Figs. 41, 42)
Material studied: 1♂ from 1490m on 24 5 2017 (GP2695♂).

Pyralidae

- 164. *Cynaeda (Noctuelia) superba* (Freyer,[1844])*** (Fig. 19)
Observed on 25 4 2017 by day from the vicinity of Dağlıca.

- 165. *Epyrrhorhoe diffusalis* (Guenée,1854)***
Material studied: 5♂ from 1457m, 1490m on 24 5 2017.

- 166. *Elegia fallax* (Staudinger,1881)***
Material studied: 1♂ from 1865m on 22 5 2017.

- 167. *Euchromius bellus* (Hübner,1796)***
Material studied: 2♂ from 1765m on 25 5 2017.

- 168. *Isauria dilucidella* (Duponchel,1836)***
Material studied: 1♂ from 1865m on 23 5 2017.

- 169. *Keradere lepidella* (Ragonot,1887)**
Material studied: 10♂♀ from 1457m, 1490m, 1865m on 22-24 5 2017.

- 170. *Myelois* sp.**
Material studied: 6♂♀ from 1490m, 1475m, 1865m on 23-24 5 2017.

- 171. *Nomophila noctuella* ([Denis & Schiffermüller],1775)**
Material studied: 4♂ from 1457m, 1765m on 24-25 5 2017.
One of the commonest nocturnal species in the area.

- 172. *Pyrasia gutturalis* (Staudinger,1879)***
Material studied: 4♂♀ from 1457m, 1490m, 1865m on 22-24 5 2017.

- 173. *Pyrausta aurata* (Scopoli,1763)**
Material studied: 4♂ from 1525m, 1650m, 1865m on 23-24 4, 22 5 2017.

- 174. *Pyrausta despicata* (Scopoli,1763)**
Material studied: 4♂ from 1490m, 1650m on 24 4, 24 5 2017.

- 175. *Scopariine* sp.**
Material: 1♀ from 1865m on 23 5 2017.

- 176. *Udea ferrugalis* (Hübner,1796)***
Material studied: 3♂♀ from 1490m, 1865m on 22-24 5 2017.

Sphingidae

- 177. *Hyles livornica* (Esper,[1780])**

Material studied: 1♂ from 1490m on 24 5 2017.

178. *Laothoe populeti* (Bienert,[1870])

Material studied: 1♂ from 1490m on 24 5 2017.

179. *Marumba quercus* ([Denis & Schiffermüller],1775)

Material studied: 7♂♀ from 1457m, 1490m, on 24-26 5 2017.

Thyatiridae

180. *Asphalia ruficollis* (Fabricius,1787)

Material studied: 3♂ from 1650m on 24 4 2017.

181. *Polyploca korbi* Rebel,1901*

Material studied: 48♂♀ from 1525m, 1650m on 22-24 4 2017.

Tortricidae

182. *Aphelia (Zelothereses) ferugana* (Hübner,1793)

Material studied: 10♂♀ from 1475m, 1490m, 1765m on 24-25 5 2017.

183. *Crociosema plebejana* Zeller,1847*

Material studied: 4♂ from 1457m, 1765m, 1865m on 22-25 5 2017.

184. *Phtheochroa* sp.

Somewhat near to *gracillimana* Rbl., but the male genitalia differs remarkably; possibly a new species.

Material studied: 1♂ from 1457m on 24 5 2017, GP2698♂.

185. *Dichrorampha* ? sp.

Material studied: 22 5 2017 1865m 1♀.

186. *Pseudeulia asinana* (Hübner,[1799])*

Material studied: 7♂♀ from 1525m, 1650m on 23-24 4 2017.

187. *Tortrix viridana* (Linnaeus,1758)*

Material studied: 6♂♀ from 1457m, 1490m on 24 5 2017.

Yponomeutidae

188. *Plutella (s.str.) xylostella* (Linnaeus,1758)*

Material studied: 4♂ from 1457m, 1650m on 24 4, 24 5 2017.

Zygaenidae

189. *Adscita obscura* (Zeller,1847)*

Material studied: 1♂ from 1475m on 24 5 2017, GP2694♂.

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Figs. 4, 5 – *Argynnis niobe* (left), *Nymphalis* sp. (right), from Dağlıca, H. Uçak.



Figs. 6, 7 – *Spialia orbifer* (left), *Arctia marchandi* (right), from Dağlıca, H. Uçak.



Figs. 8, 9 – *Docirava musculata* (left), *Dyscia innocentaria* (right), Dağlıca, H.Uçak.



Figs. 10, 11 – *Oulobophora externaria* (left), *Peribatodes umbrarius* (right), Dağlıca, H.Uçak.



Figs. 12, 13 – *Pseudopanthera syriacata* (left), *Rhodostrophia discopunctata* (right), Dağlıca, H.Uçak.



Figs. 14, 15 – *Lasiocampa eversmanni* (left), *Drasteria cailino* (right), Dağlıca, H.Uçak.



Figs. 16, 17 – *Drasteria saisani* (left), *Ophiusa lunaris* (right), Dağlıca, H.Uçak.



Figs. 18, 19 – *Spatalia argentina* (left), *Cynaeda superba* (right), Dağlıca, H.Uçak.

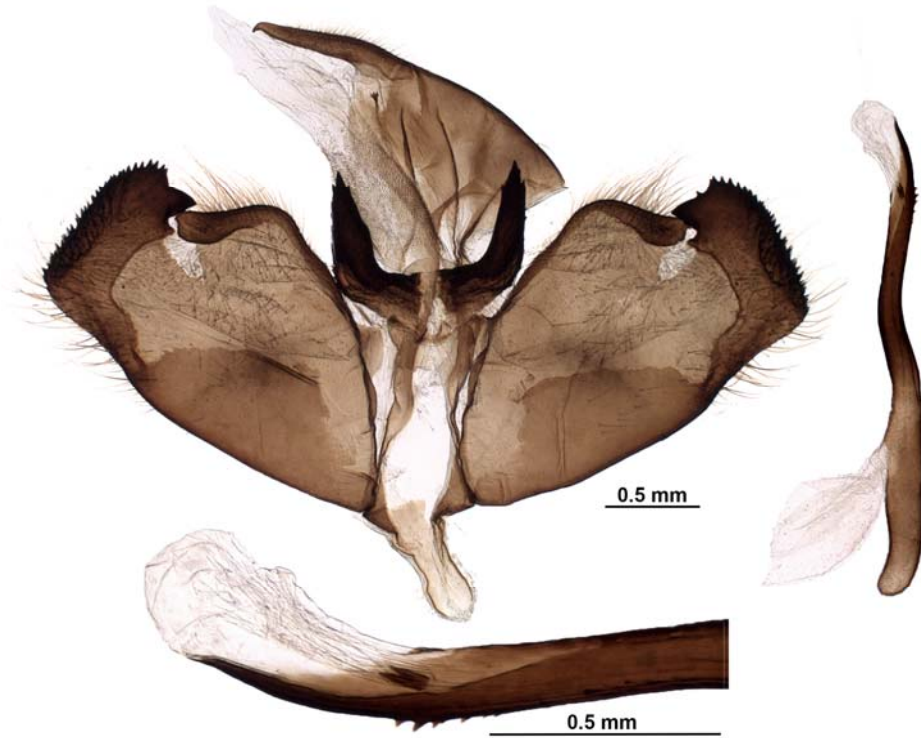
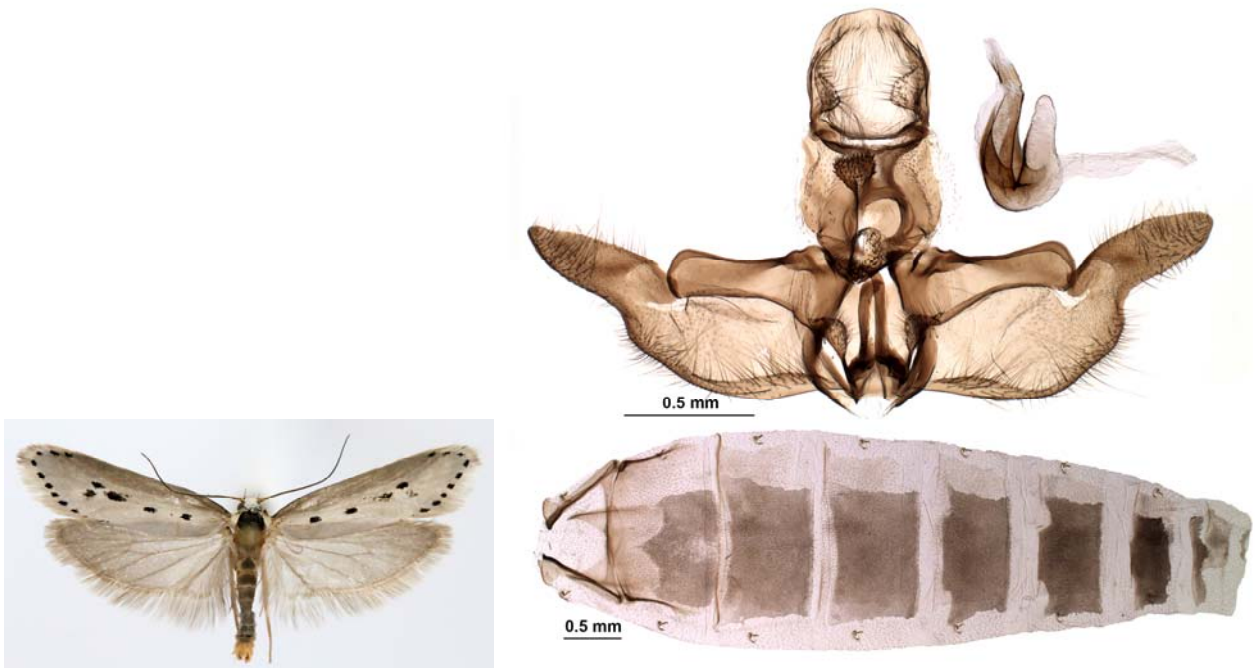


Fig. 20 - *Muschampia tersa* (*Hesperiidae*). Male genitalia with enlarged tip of aedeagus. GP2699. Dağlıca, genital preparation by M.Kemal (Cesa)



Figs. 21, 22 – *Ethmia hakkarica*. Upperside of male, male genitalia and abdominal skin (GP2693). Dağlıca, 1865m, 22 5 2017, genital preparation by M Kemal (Cesa)

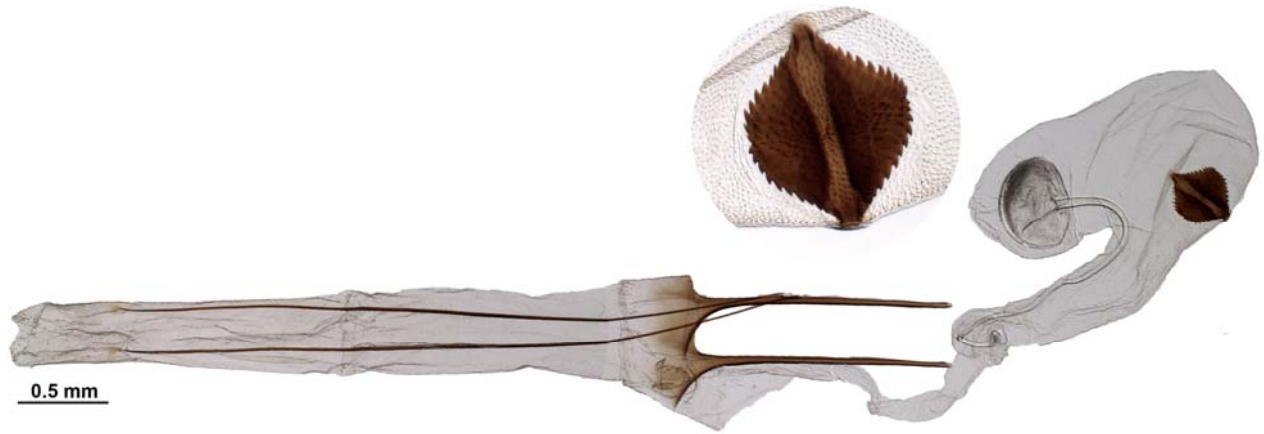
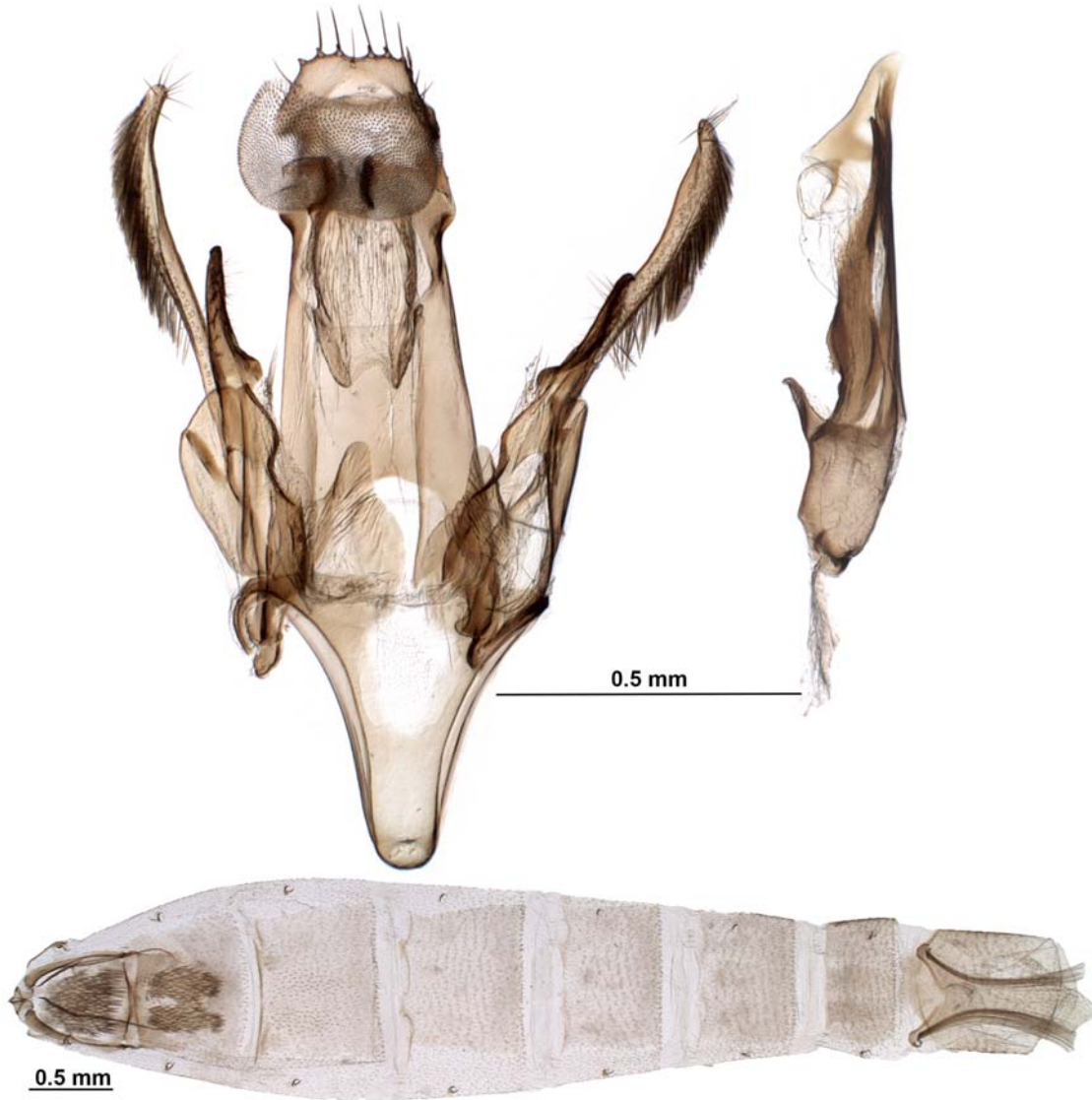
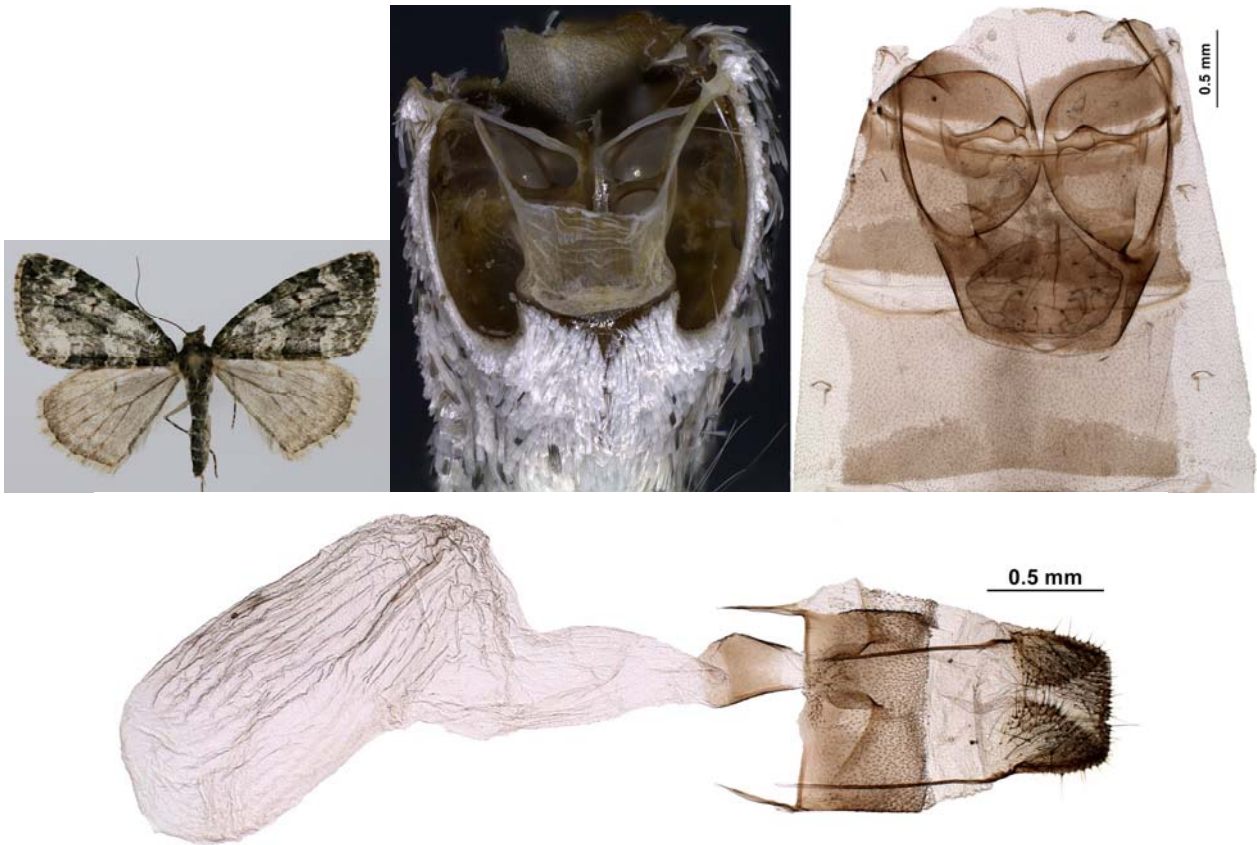


Fig. 23 – *Altenia* sp. (*Gelechiidae*), female genitalia, with enlarged signum, GP2677. Dağlıca 1525m, 23 4 2017, genital preparation by M Kemal (Cesa)



Figs. 24, 25 – *Gelechia* sp. (*Gelechiidae*), male genitalia, abdominal skin together with scent organs, GP2676. Dağlıca 1650m, 24 4 2017, genital preparation by M Kemal (Cesa)



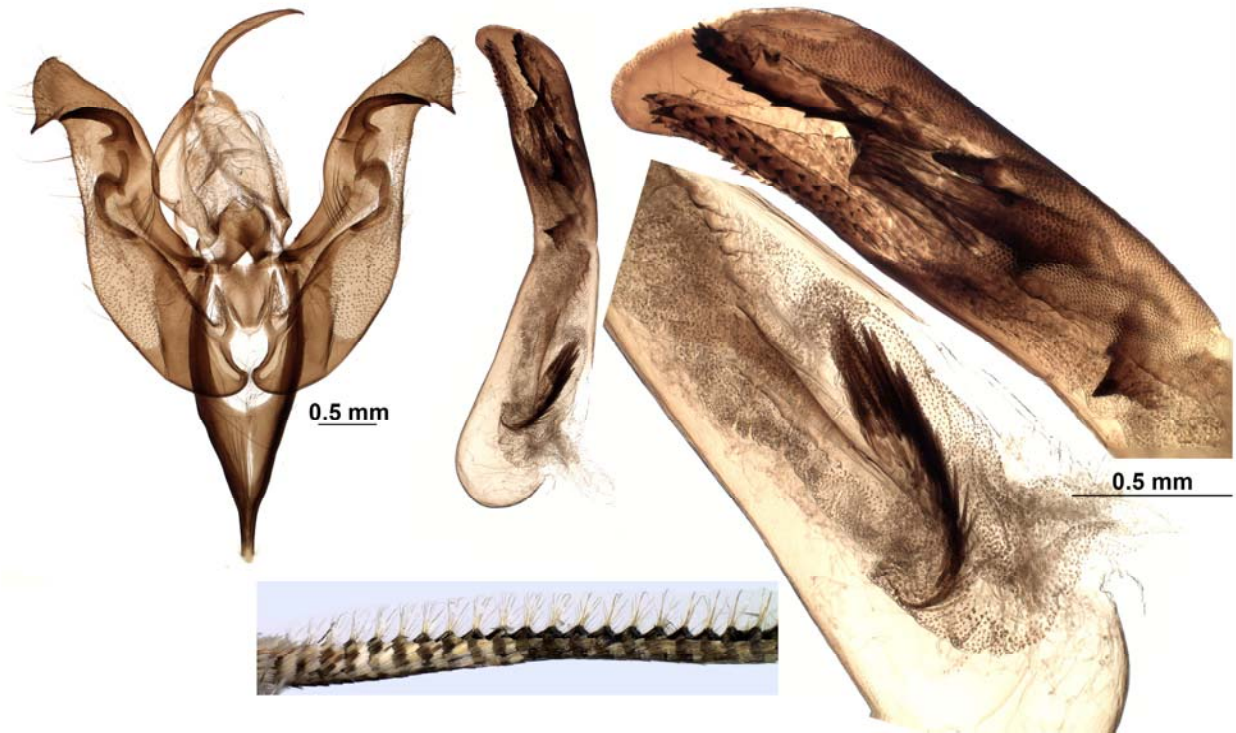
Figs. 26-28 – *Chloroclysta miata* (Geometridae), tympanal organ (before & after preparation), and female genitalia. GP2692. Dağlıca, 23 4 2017, preparations by M.Kemal (Cesa)



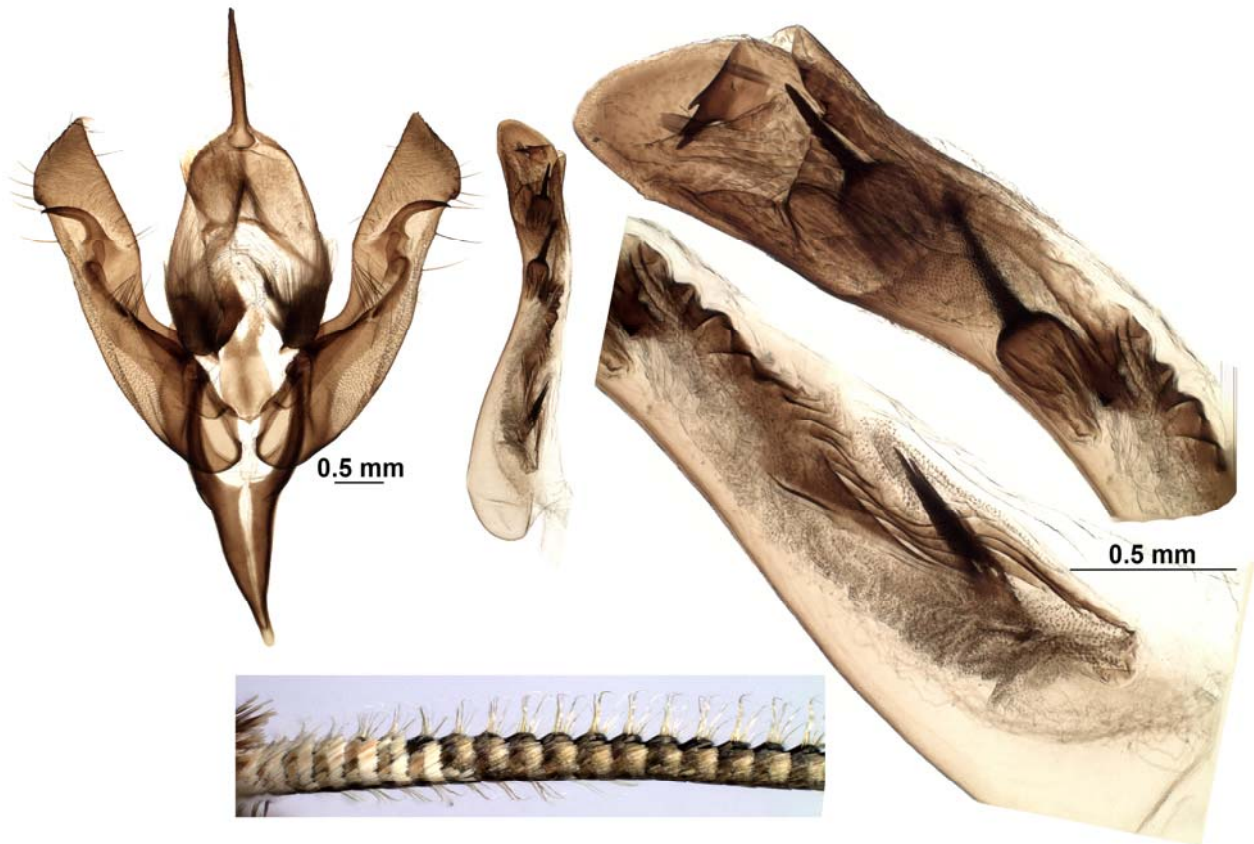
Figs. 29, 30 - Upperside of males. *Egira fatima* (left), *Egira anatolica* (right). Both from Hakkari Prov., Yüksekova, Dağlıca, H.Uçak leg., genital preparation by M.Kemal (Cesa) [see below for their genitalia and antennae]



Figs. 31, 32 - Upperside of females. *Egira fatima* (left), *Egira anatolica* (right). Both from Hakkari Prov., Yüksekova, Dağlıca, H.Uçak leg., genital preparation by M.Kemal (Cesa) [see below for their genitalia and antennae]



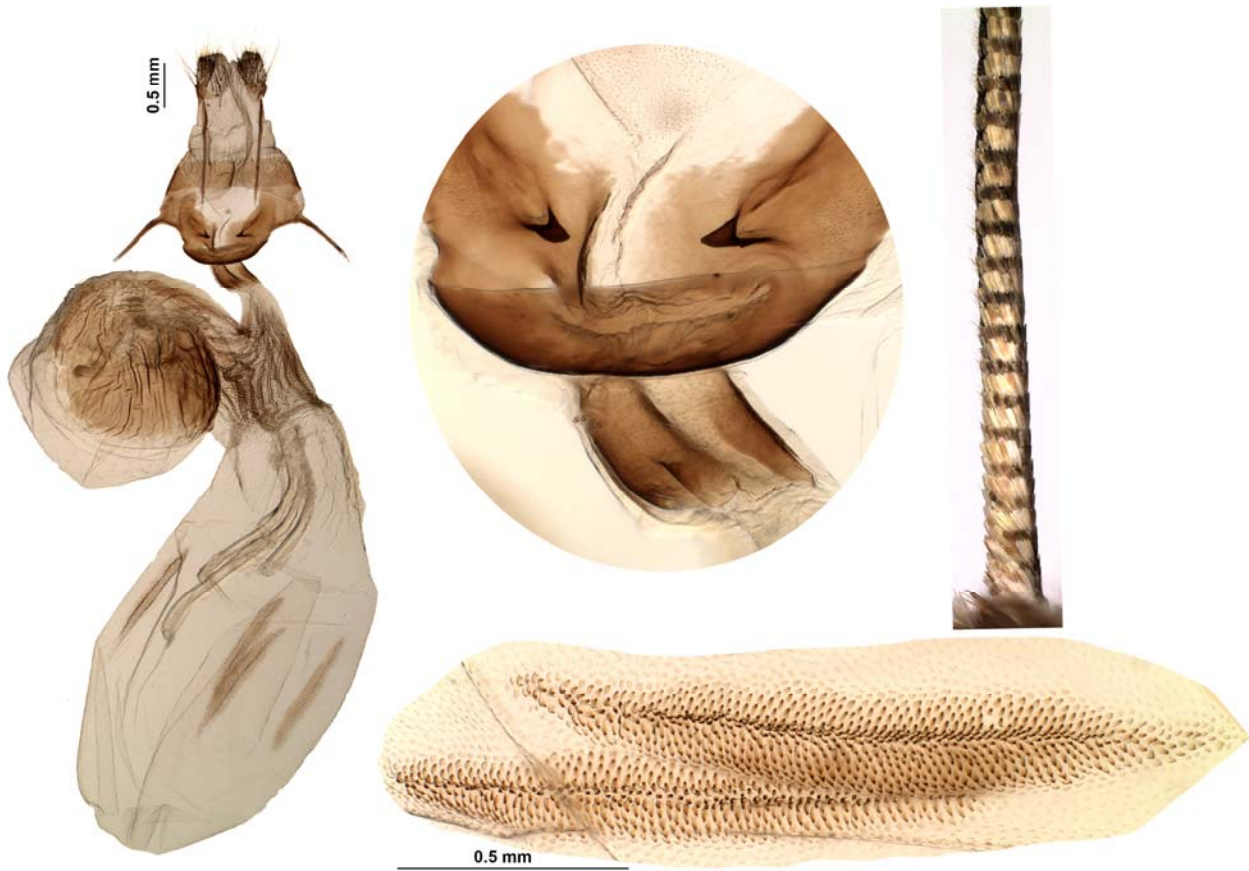
Figs. 33, 34 – *Egira fatima*. Male genitalia with enlarged parts of aedeagus, and base of antenna. GP2696, preparations by M.Kemal (Cesa)



Figs. 35, 36 – *Egira anatolica*. Male genitalia with enlarged parts of aedeagus, and base of antenna. GP2697, preparations by M.Kemal (Cesa)



Figs. 37, 38 - *Egira fatima*. Female genitalia, GP2690♀, and basal part of the female antenna from Dağlıca, preparations by M Kemal (Cesa).



Figs. 39, 40 - *Egira anatolica*. Female genitalia with enlarged anthrum, signa (GP2691♀), and basal part of female antenna from Dağlıca, preparations by M Kemal (Cesa)



Figs. 41, 42 – *Emmelina monodactyla*. Asymmetrical male genitalia and abdominal skin. GP2695♂. Dağlıca, genital preparation by M Kemal (Cesa)

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