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Vernal aspect of the Lepidoptera from Nemrut Mountain and the vicinity of Karadut in the Kahta district with a description of a new species (SE Turkey, Adıyaman Province)

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Abstract: Vernal aspect of the Lepidoptera from Nemrut Mountain and the vicinity of Karadut in the Kahta district with a description of a new species (SE Turkey, Adıyaman Province). *Misc. Pap.* 174: 1-21, 37 figs.

A new species in the genus *Pyrausta* is described. Totally 116 vernal species of 28 families of Lepidoptera are mentioned. Among them 85 species are new to Adıyaman Province.

Keywords: Lepidoptera, fauna, new species, Karadut, Nemrut, Kahta, Adıyaman, Turkey.

Karadut village is a famous collecting site in SE Turkey (Adıyaman Province, Kahta district) for some foreign coleopterists in the near past. However, this territory has not been investigated from the lepidopterological standpoint.

Karadut is located at the southern slopes of Nemrut Mountain. The fauna and the flora of this mountain are poorly known today. For the butterfly records the most reliable source has been published by Hesselbarth et al. (1995). The internet site "Kelebek Türk" contains also important information, but restricted with the name of province Adıyaman only. Collecting records, regarding the butterflies of Nemrut, mentioned by Hesselbarth et al. (1995), are usually unclear; therefore, they cannot be used safely. After evaluating the collecting information given by Hesselbarth, only 45 butterfly species from Nemrut Mountain for the whole year can be taken into account.

The authors had a small opportunity to visit Karadut and its environment in early May of this year. However, the weather condition was cool and rainy, therefore unfavourable for the observation and collecting of the Lepidoptera in the countryside.

All the materials of 116 specific taxa mentioned here have been collected, identified by the authors and preserved in the Cesa Collection. Thus, the total species number of Lepidoptera recorded from Adıyaman Province raised to 223². Previous published numbers were 110 and 136, respectively (Kemal & Koçak, 2007; Koçak & Kemal, 2014).

The field studies have been realized within the research program on the Lepidoptera fauna of the 15th Region of the Ministry of Forest and Water Affairs, which comprises 14 East Anatolian Provinces.

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The localities, and studied times by the authors are as follows with their codes:

02Fc. Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018. Heavily degraded woodlands. By day (**Fig.1**).

02Fd. Adiyaman Pr., Kahta, Kan Vadisi 870m, 5-6.v.2018. Mainly *Quercus* woodland. Mainly by night also by day (**Fig.2**).

02Fe. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018. Mountain steppe. By night and by day (**Fig.3**).

02Fz. Adiyaman Pr., Kahta, Nemrut Mt. (total).

List of the butterflies

The following vernal butterflies (29 species of 6 families) recorded by the authors from the area are listed below. Among them, 9 species are new to Adiyaman Province.

Hesperiidae

1.*Muschampia nomas* (Lederer,1855)

Material studied: 1♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018. 3♂, Kahta, Nemrut Mt. 1480m, 6.v.2018.

New to Adiyaman Province!

2.*Carcharodus alceae* (Esper,[1780])

Material studied: 2♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018.

3.*Carcharodus orientalis* Reverdin,1913

Material studied: 2♂, Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018.

4.*Thymelicus lineolus* (Ochsenheimer,1808)

Material studied: 1♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018. 1♂, Kahta Kan valley 870m, 6.v.2018.

5.*Thymelicus sylvestris* (Poda,1761)

Observed in Kan Valley 870m, on 6.v.2018.

Papilionidae

6.*Archon apollinus* (Herbst,1798)

(**Fig. 4**)

Material observed: A number of full grown caterpillar on *Aristolochia* sp. were observed. According to the larval colouration and maculation, it belongs to subsp. *amasinus* Stgr. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018.

7.*Zerynthia (Allancastris) deyrollei* (Oberthür,1869)

Material studied: 1♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018. 1♂, Kahta, Nemrut Mt. 1480m, 6.v.2018.

Pieridae

8.*Aporia crataegi* (Linnaeus,1758)

Material studied: 1♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018. 1♂, Kahta, Nemrut Mt. 1480m, 6.v.2018.

9. *Euchloe (s.str.) ausonia* (Hübner,[1804])

Material studied: 1♂, Adıyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018.

Lycaenidae**10. *Chilades trochylus* (Freyer,[1843])**

Material studied: 1♂, Adıyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018.

11. *Glaucopsyche alexis* (Poda,1761)

Material studied: 2♂, Adıyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018.

12. *Lycaena (Thersamonia) asabinus* (Gerhard,[1850])

Material studied: 1♂, Adıyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018. 1♂, Kahta Kan valley 870m, 6.v.2018.

New to Adıyaman Province!

13. *Lycaena (Thersamonia) kefersteinii* (Gerhard,[1850]) (Fig.5)

Material studied: 1♂, Adıyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018.

14. *Lycaena (s.str.) phlaeas* (Linnaeus,1761)

Material studied: 1♂, Adıyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018.

15. *Plebejus (Plebejides) modicus* Verity,1935

Material studied: 4♂1♀, Adıyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018.

16. *Polyommatus antiochenus* (Lederer,1861)

Material studied: 1♂, Adıyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018. 1♂, Kahta Kan valley 870m, 6.v.2018.

New to Adıyaman Province!

17. *Polyommatus icarus* (Rottemburg,1775)

Material studied: 2♂, Adıyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018. 1♂, Kahta Kan valley 870m, 6.v.2018.

18. *Satyrium abdominalis* (Gerhard,[1850])

Material studied: 1♂, Adıyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018.

Argynnidae**19. *Argynnis niobe* (Linnaeus,1758)**

Material studied: 1♂, Adıyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018.

New to Adıyaman Province!

20. *Argynnis pandora* ([Denis & Schiff.],1775) (Fig.6)

Observed in Kan Valley 870m, on 6.v.2018

21. *Issoria lathonia* (Linnaeus,1758)

Material studied: 1♂, Adıyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018.

New to Adıyaman Province!

22. *Melitaea cinxia* (Linnaeus,1758)

Material studied: 1♂, Adıyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018.

23. *Melitaea collina* Lederer, 1861 (Figs. 8,9)
Material studied: 5♂ 5♀, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018.
New to Adiyaman Province!
24. *Melitaea ornata* Christoph, 1893
Material studied: 1♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018.
New to Adiyaman Province!
25. *Melitaea persea* Kollar, [1849] (Fig.7)
Material studied: 1♀, Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 6♂, Kan valley 870m, 6.v.2018. 1♂ 1♀, Kahta, Aydınpinar 1.8km E 900m, 6.v.2018.
New to Adiyaman Province!

Satyridae

26. *Coenonympha pamphilus* (Linnaeus, 1758)
Material studied: 1♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018. 1♂, Kahta, Kan valley 870m, 6.v.2018.
New to Adiyaman Province!
27. *Kirinia roxelana* (Cramer, [1777])
Material studied: 1♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018.
28. *Maniola (Telmessiola) telmessia* (Zeller, 1847)
Material studied: 2♂ 1♀, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018.
29. *Melanargia (Turcargia) grumi* Standfuss, 1892
Material studied: 1♂, Adiyaman Pr., Kahta, Aydınpinar 1.8km E 900m, 6.v.2018.

List of the moths

In the following list of 22 moth families are reported from the area. Totally 87 species are arranged in alphabetical order together with their families. Information of the species with sequence number belong to the present paper. Among them, 76 species are new to Adiyaman Province.

Autostichidae

30. *Syringopais temperatella* (Lederer, 1855) (Fig. 10)
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 6.v.2018, diurnal.
New to Adiyaman Province!

Coleophoridae

Totally 9 specimens (4 spp.) were collected by light trap. They will be separately studied.

Cosmopterigidae

Totally 7 specimens collected from the area and they will be separately evaluated.

Ctenuchidae**31. *Amata transcaspica* Obraztsov, 1941**

Material studied: 1♂. Adiyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018. 7♂2♀. Kahta, Kan valley 870m, 6.v.2018, diurnal. Fasta of a specimen (Cten01) is under preparation.
New to Adiyaman Province!

Drepanidae**32. *Watsonalla binaria* (Hufnagel, 1767)**

Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!

Ethmiidae**33. *Ethmia amasina* (Staudinger, 1879)**

Material studied: 2♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 2♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal. Fasta of a specimen (Eth03) is under preparation.
New to Adiyaman Province!

34. *Ethmia tripunctella* (Staudinger, 1879)

Material studied: 3♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal. Fasta of a specimen (Eth04) is under preparation.
New to Adiyaman Province!

35. *Ethmia caradjae* (Rebel, 1907)

Described from Amasya (N Turkey). This is one of the little known *Ethmia* species; however, it seems rather well distributed in East Turkey but its populations are very poor.
Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal (GP2961♂).
Fasta of the specimen (Eth02) is under preparation.
New to Adiyaman Province!

Gelechiidae**36. *Isophrictis* sp.**

Material studied: 4♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal & diurnal.

37. *Nothris verbascella* ([Denis & Schiffermüller], 1775)

Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 6.v.2018, nocturnal.
New to Adiyaman Province!

Metzneria spp. – 5 specimens (2-3 spp.) from Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.

Geometridae**38. *Aplasta ononaria* (Fuessly, 1783)**

Material studied: 3♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, diurnal.
New to Adiyaman Province!

- 39.** *Camptogramma bilineatum* (Linnaeus,1758) **(Fig. 11)**
Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, diurnal.
New to Adiyaman Province!
- Cataclysmes subtilisparvata* Wehrli,1932
“Nemrut Dag...1700-2000m”, leg. Fiebig & Rothe (coll.Stadie) (Stadie, Hausmann & Rajaei, 2014)
- 40.** *Charissa* sp.
Material: 3♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
- 41.** *Chiasmia clathrata* (Linnaeus,1758)
Material studied: 2♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
- Crocallis (s.str.) loebeli* Stadie & Fiebig,2014
Like *Cataclysmes* species, this was also reported from Nemrut Mt. (Stadie & Fiebig, 2014).
- 42.** *Dyscia* sp.
Material studied: 13♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
- 43.** *Eilicrinia cordiaria* (Hübner,1790)
Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
- 44.** *Eupithecia breviculata* (Donzel,1837)
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
- 45.** *Eupithecia* sp.
Material studied: 1♀. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
- 46.** *Gnopharmia irakensis* Wehrli,1938
Material studied: 2♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
- 47.** *Gnopharmia rubraria* Staudinger,1892
Material studied: 8♂2♀. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
- 48.** *Gnophos (Dicrognophos) sartatus* Treitschke,1827
Material studied: 12♂♀. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
- 49.** *Idaea degeneraria* (Hübner,[1799])
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
- 50.** *Idaea ossiculata* (Lederer,1871)
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 1♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

51. *Idaea camparia* (Herrich-Schaffer,[1852]) **(Figs. 22, 23)**
Externally and the male genitalia resemble to *camparia* H.-S. However, the minute spine at the subapical part of valva invisible. The identity of this species needs confirmation.
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
Apparently, new to Adiyaman Province!
52. ?*Nebula* sp.
Material: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
53. *Neognopharmia stevenaria* (Boisduval,1840)
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 1♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
54. *Nychiodes* sp.
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 6♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.

Protorhoe drechseli was described from Nemrut Mt. by Rajaei, Stadie & Hausmann (2017).
55. *Protorhoe unicata* (Guenée,[1858])
Material studied: 13♂. Adiyaman Pr., Kahta, Kan valley 870m, 6.v.2018, nocturnal.
New to Adiyaman Province!
56. *Pseudopanthera syriacata* (Guenée,[1858])
Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
57. *Rhodostrophia* (s.str.) *discopunctata* Amsel,1935
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
58. *Scopula marginepunctata* (Goeze,1781)
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 1♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
59. *Scopula sacraria* (A.Bang-Haas,1910) **(Figs. 24-26)**
Material studied: 2♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal. GP2963♂.
See also *Scopula sacraria* from Hazro (Diyarbakır) (Kemal & Koçak, 2015), and Nizip (Gaziantep) (Kemal & Koçak, 2017b).
New to Adiyaman Province!
60. *Scotopteryx vicinaria* (Duponchel,1830)
Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

Gracillariidae

61. *Phyllonorycter* sp.
Nocturnal in the Quercus woodland.

Lasiocampidae**62. *Malacosoma castrensis* (Linnaeus,1758) (Figs. 12, 13)**

Its caterpillar has been observed by the author.
New to Adiyaman Province!

Lymantriidae**63. *Parocneria terebinthi* (Freyer,[1838]) (Fig. 14)**

Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!

Noctuidae**64. *Acronicta aceris* (Linnaeus,1758)**

Material studied: 2♂. Adiyaman Pr., Kahta, Kan valley 870m, 6.v.2018, nocturnal.
New to Adiyaman Province!

Anthracia eriopoda (Herrich-Schäffer,[1851])

65. *Apamea (s.str.) syriaca* (Osthelder,1933)

Material studied: 2♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

66. *Apamea aff. sicula* (Turati,1909)

Material studied: 5♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 1♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

67. *Bena bicolorana* (Fuessly,1775) (Fig. 15)

Material studied: 2♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!

68. *Bryomima* sp.

Material studied: 5♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.

69. *Caradrina* sp.

Material studied: 2♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.

Caradrina (Eremodrina) avis (Pinker,1980)

Caradrina (Eremodrina) inumbrata (Staudinger,1900)

Caradrina (Eremodrina) salzi (Boursin,1936)

Catocala abacta Staudinger,1900

“Adiyaman, Sincik, Nemrut Dağı 2000m” (Hacker, Kuhna & Gross,[1987]).

Catocala mesopotamica Kuznesov,1903

Chersotis (s.str.) obnubila (Corti,1926)

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

- Material studied: 15♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
71. *Clytie (s.str.) syriaca* (Bugnion,1837)
Material studied: 2♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
72. *Cucullia verbasci* (Linnaeus,1758) (Fig. 16)
Observed as full grown caterpillar on *Verbascum*.
Material observed: Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, during feeding.
New to Adiyaman Province!
- Dichagyris anastasia* (Draudt,1936)
73. *Dichagyris (s.str.) erubescens* (Staudinger,1892)
Material studied: 18♂♀. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
- Dichagyris squalorum* (Eversmann,1856)
“Adiyaman, Sincik, Nemrut Dağı 2000m” (Hacker, Kuhna & Gross,[1987]).
- Dichagyris terminicincta* Corti & Draudt,1933
“Adiyaman, Sincik, Nemrut Dağı 2000m” (Hacker, Kuhna & Gross,[1987]).
74. *Dicycla oo* (Linnaeus,1758) (Figs. 17, 27-29)
Material studied: 5♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal (GP2962♂). A variable moth in markings and colouration. Male genitalia and the pale form (near *f.sulphurea* Stgr.1901) are here illustrated.
New to Adiyaman Province!
75. *Drasteria cailino* (Lefèbvre,1827)
Material studied: 5♂. Adiyaman Pr., Kahta, Kan valley 870m, 6.v.2018, nocturnal.
New to Adiyaman Province!
76. *Earias* sp.
Material studied: 2♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
77. *Eublemma chloroticum* (Lederer,1858)
Material studied: 8♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
78. *Hadena (Enterpia) laudeti* (Boisduval,1840)
Material studied: 2♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
79. *Hadena (s.str.) gueneei* (Staudinger,1901)
Material studied: 3♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
80. *Hadena (s.str.) magnolii* (Boisduval,1828)
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!

- 81.** *Hecatera bicolorata* (Hufnagel,1766)
Material studied: 2♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 3♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adıyaman Province!
- 82.** *Hecatera spinaciae* (Vieweg,1790)
(=#*dysodea* [Denis & Schiff.],1775, nomen nudum without description)
Material studied: 1♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adıyaman Province!
- 83.** *Hadula mendax* (Staudinger,1879)
Material studied: 8♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018. 2♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adıyaman Province!
- 84.** *Hadula mendica* (Staudinger,1895)
Material studied: 1♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adıyaman Province!
- 85.** *Meganola gigantula* (Staudinger,1879)
Material studied: 2♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adıyaman Province!
- 86.** *Meganola togatulalis* (Hübner,1796)
Material studied: 1♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adıyaman Province!
- 87.** *Mythimna (Aletia) vitellina* (Hübner,[1808])
Material studied: 2♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adıyaman Province!
- Polymixis (s.str.) rosinae* (Bohatsch,1910)
- 88.** *Rhypagla lacernaria* (Hübner,[1813])
Material studied: 8♂. Adıyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adıyaman Province!
- 89.** *Tyta luctuosa* ([Denis & Schiffermüller],1775)
Material studied: 1♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adıyaman Province!

Notodontidae

- 90.** *Spatalia argentina* ([Denis & Schiffermüller],1775) **(Fig. 18)**
Material studied: 7♂. Adıyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal (spring generation).
New to Adıyaman Province!

Oecophoridae

- 91.** *Pleurota* sp.
Identity of this species will be separately studied.
Material studied: 4♂. Adıyaman Pr., Kahta, Kan valley 870m, 6.v.2018, diurnal.

Pterophoridae

Totally 15 specimens (3 spp.) were collected by light trap from Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018. They will be separately studied.

Pyralidae**92. *Denticera divisella* (Duponchel,1842)**

Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

93. *Dolicharthria bruguieralis* (Duponchel,1833)

Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!

94. *Ecpyrrhorrhoe diffusalis* (Guenée,1854)

Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

95. *Isauria dilucidella* (Duponchel,1836)

Material studied: 2♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

96. *Epiepischnia pseudolydella* Amsel,1954

Material studied: 19♂♀. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal & diurnal.
New to Adiyaman Province!

97. *Eurhodope monogrammos* (Zeller,1867)

Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

98. *Euzopherodes lutisignella* (Mann,1869)

Material studied: 5♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

99. *Keradere lepidella* (Ragonot,1887)**(Figs. 30-33)**

Material studied: 7♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal (GP2960♂).
The identity of this species is based upon the re-description and genitalic illustrations by Amsel (1954).
New to Adiyaman Province!

100. *Pyrasia gutturalis* (Staudinger,1879)

Material studied: 2♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

101. *Pyrausta gulpembe* sp.n.**(Figs. 34-37)**

<http://zoobank.org/urn:lsid:zoobank.org:act:B2FBC871-0F4F-4185-8272-80861BA4E3A4>

Pyrausta delicatalis Caradja,1916, *Dt. Ent. Z., Iris* 30: 40 "Mardin" (**hom.n.**). According to the ICZN Rules, this name is unavailable and cannot be used as a valid name, as it is junior primary homonym of *Pyrausta delicatalis* South,1901, *Trans. Ent. Soc. Lond.* 1901: 499, pl.xv fig.27 "Western China".

Description:

Holotype ♂. Wingspan: 17.5mm, Forewing: 8.5mm. Upperside of forewing unicolour pink. On postdiscal area more or less developed cream band narrow, almost straight and parallel to termen.

Upperside of hindwing dark grey, submarginal area darker. Ciliae paler and unicolour on both wings. Underside: Dark grey on forewing, pinkish colouration restricted to apical and marginal area. Dirty cream postdiscal band incomplete but visible. Hindwing dirty cream with an incomplete irregular median line.

Paratypes 4♂. Wingspan: 15-18mm, Forewing: 7-9mm. Markings and colourations as holotype, but shape of cream transversal band on forewing variable, especially in Mukus specimen remarkably broader.

Type material: Holotype ♂. S. Turkey, Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018; 2♂ (paratypes) from same place and date. 1♂. SE Turkey, Siirt Pr., Şirvan Bacavan 1560m, 29.v.2013; 1♂,³ GP2959♂. Fauna of this specimen (Pyro02) is under preparation. E Turkey, Van Pr., Bahçesaray Upper Mukus valley 1840m, 25 5 2016, M.Kemal & A.Koçak leg. (Coll. Cesa).

Etymology: The Turkish word “gülpembe” means pink rose. At the same time, “gülpembe” is one of the much-loved song by the late Barış Manço in Turkey.

Habitat: Mountain steppe at upper heights (1480-1840m).

Phenology of the adult: Univoltin, May.

Distribution of the species: Apparently confined to E, SE Turkey: Adiyaman, Siirt, Van (new record); Mardin (Caradja,1916).

102. *Pyrausta sanguinalis* (Linnaeus,1767)

Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

103. *Pyrausta virginalis* Duponchel,1832

Material studied: 9♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

104. *Sitochroa verticalis* (Linnaeus,1758)

Material studied: 1♂. Adiyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018, diurnal. 2♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal. Belongs to nominate subspecies.
New to Adiyaman Province!

105. *Synaphe consecratalis* (Lederer,1855)

Material studied: 2♂. Adiyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018, diurnal. Fauna of a specimen (Pyro17) is under preparation.
New to Adiyaman Province!

106. *Synaphe uxorialis* (Lederer,1858)

Material studied: 1♀. Adiyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018, diurnal. Fauna of the specimen (Pyro18) is under preparation.
New to Adiyaman Province!

Scythridae

107. *Scythris apicalis* (Zeller,1847)

(Fig. 19)

Material studied: 2♂. Adiyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018, diurnal. 3♂. Kahta, Kan valley 870m, 6.v.2018, nocturnal. 1♂. Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

Sesiidae

***Bembecia hofmanni* Kallies & K.Spatenka,2003**

³ This specimen was recently illustrated by the authors as “*Pyrausta delicatalis*” and reported as new record for Siirt Province (Kemal & Koçak, 2017a: 34, fig.85).

This species is currently known from Nemrut Mt. (Adiyaman) and Yukarınarlıca (Van) in Turkey (Garrevoet, T. et al., 2015).

Sphingidae

108. *Marumba quercus* ([Denis & Schiffermüller], 1775)
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!
109. *Rethera komarovi* (Christoph, 1885)
Material studied: 2♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!

Tineidae

110. *Rhodobates pallipalpellus* Rebel, 1901
Material studied: 7♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018. 7♂. Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!

Tortricidae

111. *Aphelia (Zelothereses) ferugana* (Hübner, 1793)
Material studied: 2♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
112. *Cnephasia* spp. Various species of this genus have been recorded. They will be separately studied.
113. *Notocelia cynosbatella* (Linnaeus, 1758)
Material studied: 1♂. Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, nocturnal.
New to Adiyaman Province!
114. *Tortrix viridana* (Linnaeus, 1758)
Material studied: 1♂. Adiyaman Pr., Kahta, Kan valley 870m, 5.v.2018, nocturnal.
New to Adiyaman Province!

Zygaenidae

115. *Adscita obscura* (Zeller, 1847)
Material studied: 1♂. Adiyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018, diurnal.
New to Adiyaman Province!
116. *Jordanita subsolana* (Staudinger, 1862) **(Figs. 20, 21)**
Recently this species was found by the authors from Mardin (Artuklu) (GP2745♂) (unpublished).
Material studied: 11♂1♀. Adiyaman Pr., Kahta, Aydınpınar 1.8km E 900m, 6.v.2018, diurnal.
New to Adiyaman and Mardin Provinces!

References

- Amsel, H.G.**, 1954, Die Microlepidopteren der Brandt'schen Iran Ausbeute IV. *Ark. Zool.* 6 (16) (29 Dec.1953): 255-326, figs.
- Garrevoet, T., Garrevoet, J. & W. Garrevoet**, 2015, On the knowledge of *Bembecia hofmanni* with description of the female (Lepidoptera, Sesiidae). *Phegea* 43 (2): 26-30, figs.
- Hacker, H., Kuhna, P. & F.J. Gross**, [1987], 4. Beitrag zur Erfassung der Noctuidae der Türkei. Beschreibung neuer Taxa, Erkenntnisse zur Systematik der kleinasiatischen Arten und faunistisch bemerkenswerte Funde aus den Aufsammlungen von Gross und Kuhna aus den Jahren 1968-1984 (Lep., Noctuidae). *Mitt. münch. ent. Ges.* 76 (31.12.1986): 79-141, figs.
- Hesselbarth, G., Oorschot, H.v. & S. Wagener**, 1995, *Die Tagfalter der Türkei unter Berücksichtigung der angrenzenden Länder*. Bde. 1 & 2: 1354 S. 75 Abb., 21 Tab., 2 fb. Karte, 36 fb. Tab. Bd.3: 847 S., 128 fb. Tab., 13 sw Tab., vi+342 Karte. Selbstverlag S. Wagener, Bocholt.
- Kallies, A. & K. Spatenka**, 2003, The Clearwing Moths of Iran (Lepidoptera, Sesiidae). *Linneana Belg.* 19 (2): 81-94; 19 (3): 119-126, 22 figs.
- Kemal, M. & A.Ö. Koçak**, 2007, Synonymical and distributional List of the species of Adiyaman Province (South East Turkey) (Lepidoptera). *Misc. Pap.* 106: 3-8.
- Kemal, M. & A.Ö. Koçak**, 2015, First annotated list of the Lepidoptera recorded in Hazro district (Diyarbakır Prov., SE Turkey). *Cesa News* 109: 1-91, 69 figs., 87 maps.
- Kemal, M. & A.Ö. Koçak**, 2017a, New and little known Pyraloidea of Turkey, with some faunistic notes (Lepidoptera). *Cesa News* 130: 1-43, 103 figs.
- Kemal, M. & A.Ö. Koçak**, 2017b, On the vernal Lepidoptera fauna of Nizip-Birecik districts Euphrates region in South Turkey. *Cesa News* 137: 1-20, 51 figs.
- Koçak, A.Ö. & M. Kemal**, 2009, Revised checklist of the Lepidoptera of Turkey. *Priamus* (Suppl.) 17: 1-253.
- Koçak, A.Ö. & M. Kemal**, 2014, Faunal list of the Lepidoptera of the provinces in Turkey, together with the recorded pterygots. *Cesa News* 97: 1-3.
- Rajaei, H., Stadie, D. & A. Hausmann**, 2017, Taxonomic revision of the genus *Protorhoe* Herbulot, 1951 (Lepidoptera, Geometridae, Larentiinae), new taxonomic changes and description of two new species. *Zootaxa* 4282 (2): 269-291, figs.
- Sobczyk, T., Kallies, A. & H. Riefenstahl**, 2007, Die Arten der *Bembecia megillaeformis*-Gruppe (Hübner, 1813) aus der Türkei mit der Beschreibung von *Bembecia stuebingeri* sp. nov. (Lepidoptera, Sesiidae). *Ent. Z., Stuttg.* 117 (1): 17-26, figs.
- Stadie, D., Hausmann, A. & H. Rajaei**, 2014, *Cataclysmes subtilisparsata* Wehrli, 1932 (Lepidoptera, Geometridae, Larentiinae) recognized as bona species – an integrative approach. *Nota lepid.* 37 (2): 141-150.
- Stadie, D. & R. Fiebig**, 2014, Taxonomic notes on the morphology, ecology and distribution of the *Crocallis elinguaris* (Linnaeus, 1758) species lineage of Asia Minor and the eastern adjacent territories with description of five new species and one new subspecies (Lep. Geometridae). *Esperiana* 19: 225-254, figs.

Images



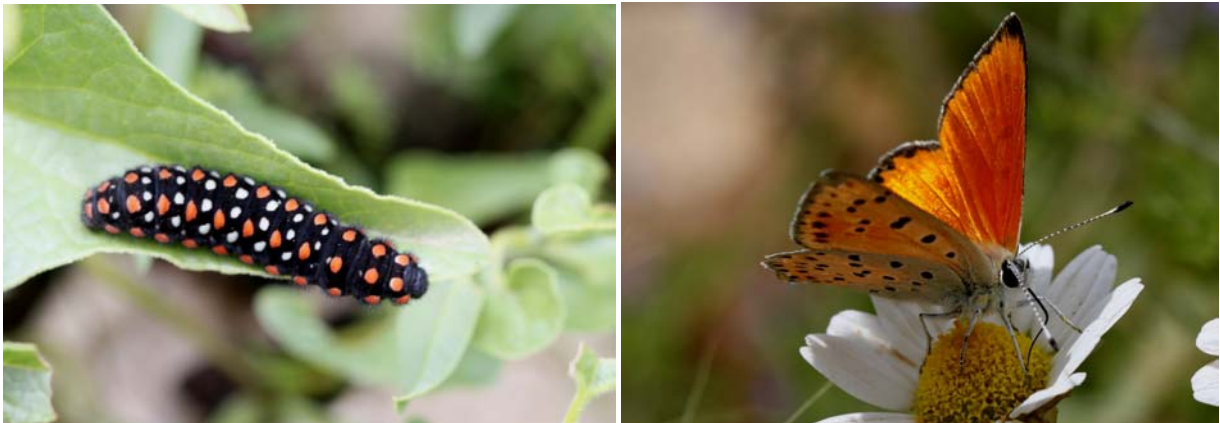
Fig. 1- Habitat (o2Fc). SE Turkey, Adiyaman Pr., Kahta, Aydınpınar 1.8km E, 850-900m, 6.v.2018, M. Kemal (Cesa)



Fig. 2- Habitat (o2Fd). SE Turkey, Adiyaman Pr., Kahta, Kan valley 870m, 5-6.v.2018, M. Kemal (Cesa)



Fig. 3- Habitat (O2Fe). SE Turkey, Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, M. Kemal (Cesa)



Figs. 4, 5 - *Archon apollinus* ssp. *amasinus*, full grown caterpillar on *Aristolochia* (*Aristolochiaceae*) (left). *Lycaena kefersteinii*, a male during feeding on *Anthemis* sp. (*Asteraceae*). Adiyaman Pr., Kahta, Nemrut Mt. 1480m 6.v.2018, M. Kemal (Cesa).



Figs. 6, 7 - *Argynnis pandora* at rest. Kahta, Aydınpınar 900m, 6.v.2018 (left); *Melitaea perseia*, at rest. Kahta, Kan valley 870m, 6.v.2018 (right), M. Kemal (Cesa)



Figs. 8, 9 – *Melitaea collina*. A female at rest. Kahta, Aydınpınar (02Fc), 6.v.2018, upperside (left), underside (right), M. Kemal (Cesa)



Figs. 10, 11 - *Syringopais temperatella*, at rest. Kahta, Kan valley 870m, 5.v.2018 (left); *Camptogramma bilineatum* at rest, Kahta, Aydınpınar (02Fc), 6.v.2018, M. Kemal (Cesa)



Figs. 12, 13 - *Malacosoma castrensis*. Full grown caterpillar, dorsal (above), ventral side (below). Kahta, Nemrut Mt. (02Fe), 6.v.2018, M. Kemal (Cesa)



Figs. 14, 15 –*Parocneria terebinthi*, at rest (left); *Bena bicolorana* at rest (right). Both from Kahta, Kan valley 870m, 5.v.2018, M.Kemal (Cesa)



Figs. 16, 17 –Full grown caterpillar of *Cucullia verbasci*, Kahta, Kan valley 870m, 5.v.2018 on *Verbascum* (left); *Dicycla oo*, at rest. Kahta, Kan valley 870m, 5.v.2018 (right), M.Kemal (Cesa)



Figs. 18, 19 – *Spatalia argentina* at rest. Kahta, Kan valley 870m, 5.v.2018 (left); *Scythris apicalis*. Kahta, Aydınpinar, 6.v.2018 (right), M. Kemal (Cesa).



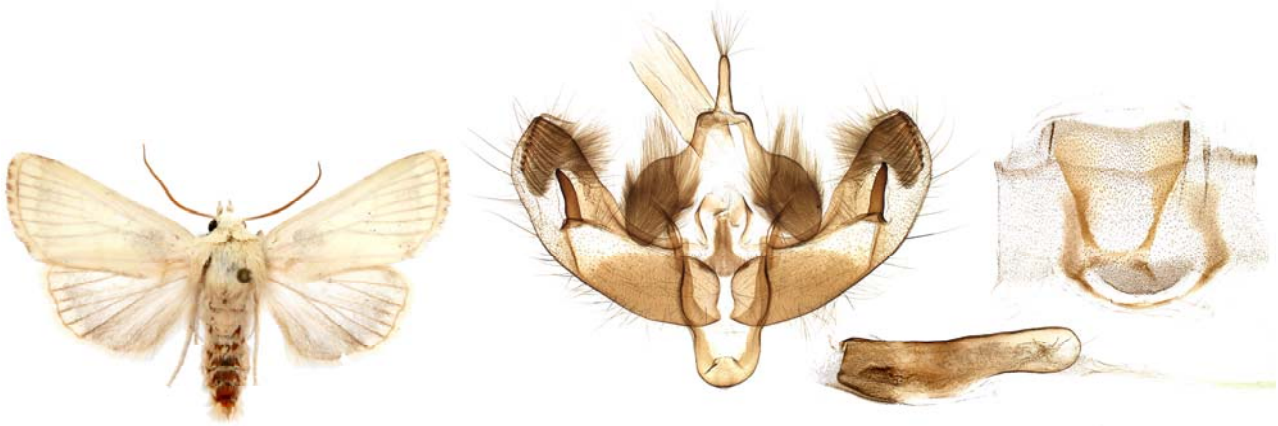
Figs. 20, 21 - *Jordanita subsolana*. Both males at rest, from Kahta, Aydınpınar (02Fc), 6.v.2018, M. Kemal (Cesa)



Figs. 22-23 - *Idaea* aff. *camparia*. Male genitalia, GP2964 (left). Tympanal organs (before & after preparation) (right), Adıyaman Pr. Kahta, Nemrut Mt., M. Kemal (Cesa)



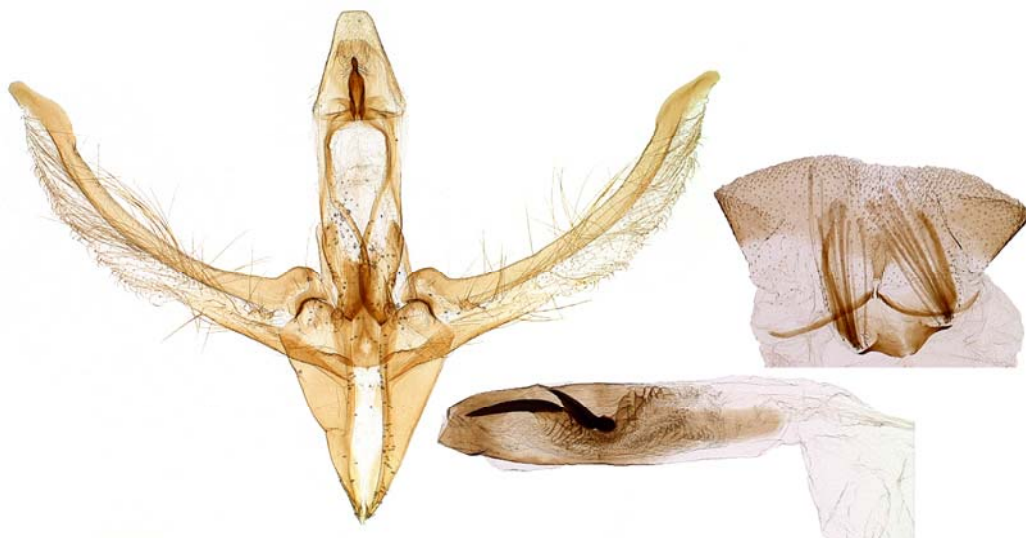
Figs. 24-26 - *Scopula sacraria*. Upperside of male and its genitalia with terminal abdominal segment, GP2963. Adıyaman Pr., Kahta, Nemrut Mt., 6.v.2018, M. Kemal (Cesa)



Figs. 27-29 - *Dicycla oo*. Upperside of male and its genitalia with the last abdominal segment, GP2962. Adiyaman Pr. Kahta, Kan valley 870m, 5.v.2018, M. Kemal (Cesa)



Figs. 30, 31- *Keradere lepidella*. Upperside of male (left), see below for its genitalia, GP2960. Tympanal organs (before & after preparation) (right), M. Kemal (Cesa)



Figs. 32, 33 – *Keradere lepidella*. Male genitalia and coremata (GP2960). Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018, M. Kemal (Cesa)



Figs. 34, 35 – *Pyrausta gulpembe* sp.n. - Upperside of Holotype, SE Turkey, Adiyaman Pr., Kahta, Nemrut Mt. 1480m, 6.v.2018 (left). Tympanal organs of the paratype, GP2959♂ Siirt Prov., Şirvan, Bacavan (right), M.Kemal & A.Koçak leg. (Cesa).



Figs. 36, 37 - *Pyrausta gulpembe* sp.n. Male genitalia and terminal segment of the abdomen of the paratype. Siirt Prov., Şirvan, Bacavan, M. Kemal (Cesa)

C o n t e n t s : Kemal, M., & A. Ö. Koçak, Vernal aspect of the Lepidoptera from Nemrut Mountain and the vicinity of Karadut in the Kahta district with a description of a new species (SE Turkey, Adiyaman Province). p.1 - **editorial**, p. 22

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