



FAUNAL DIVERSITY OF *HADENA* SCHRANK, 1802 (LEPIDOPTERA; NOCTUIDAE, HADENINAE) IN IRAN

Ehsan Kazemi

Member of Young Researchers and Elites Club, Kerman Branch, Islamic Azad University, 7618167676, Kerman, Iran.

E-mail: ekazemi.kazemi86@gmail.com

ABSTRACT: The genus *Hadena* Schrank, 1802 belong to subfamily Hadeninae of the family Noctuidae (Lepidopera). This study presents former list of the genus *Hadena* Schrank, 1802 in Iran plus some new Faunal are added. Synonym of each species (if present) is given.

Keywords: Iran, *Hadena*, List, fauna.

INTRODUCTION

The genus *Hadena* Schrank, 1802 belong to subfamily Hadeninae of the family Noctuidae. This genus were revised by Hacker and Gyulai [8]. Totally 134 species were recognized. The member of this genus is median size body with hairy eyes. Similar wing markings makes many of species of *hadena* genus difficult to identify, So the genitalia must often be examined. Larvae feed on flowers and hide in the leaves during the day [7]. To survey biodiversity of genus *Hadena*, the expeditions have been done in various provinces of Iran. Many species have been discovered and illustrated. As the climate of Iran is too varied, we expect many existing species that haven't been discovered. Although the many native researchers have been studied and researched, but it's not enough (e.g. [9, 10, 11, 12, 13, 14, 15, 16, 17], etc.). This paper contains a list of *hadena* from Iran. Provincial distribution and synonymy of each species and subspecies (if present) is presented (Figure, 1). Published data and former researches by author have been used.

MATERIALS AND METHODS

The moth specimens were collected utilizing portable and light traps in different provinces of Iran, mainly in South and Southeast the country. Data of collected material were obtained from a four years sampling program following 2008. To identify the species properly, the genitalia of both male and female sexes (if present) were extracted and then mounted using Euparal mounting mediums. The specimens finally, were identified using both external and genital characteristics.

List of Iranian *Hadena* Schrank, 1802

Genus: *Hadena* Schrank, 1802

Hadena Schrank, 1802, *Fauna Boica* 2 (2): 158. Type species: *Phalaena bicruris* Hufnagel, 1766.

(Synonyms: *Miselia* Ochsenheimer, 1816; *Zeteolyga* Billberg, 1820; *Xanthopastis* Hubner, [1821]; *Epia* Hubner, [1821]; *Harmodia* Hubner, [1821]; *Dianthoecia* Boisduval, 1834; *Adena* Agassiz, [1847]; *Pronotestra* Hampson, 1905; *Kuruschia* Boursin, 1940; *Pinkericola* Hacker, 1987; *Preplexhadena* Beck, 1991; *Paraperplexia* Beck, 1991; *Maghadena* Beck, 1991; *Caeshadena* Beck, 1991; *Maschukia* Hacker, 1996; *Klappericola* Hacker, 1996; *Sinotibetana* Hacker, 1996; *Albhadena* Beck, 1999).

Table 1. Checklist of species of subfamily Catocalinae of Iran. Abbreviation: Syn- Synonym(s), AG- Azarbayjan-e-Gharbi, AS- Azarbayjan-e-Sharghi, Bo- Boushehr, EM- Elburz mountains, E- Esfahan, F- Fars, Gi- Gilan, G- Golestan, Ha- Hamadan H- Hormozgan, K- Kerman, Ke- Kermanshah, Ko- Kordestan, KB- Kohkiluyeh va Boyer-Ahmad, Kh- Khozestan, Khr- Khorasan, L- Lorestan, M- Mazandaran, NI- North of Iran, Q- Qom, SB- Sistan va Balouchestan, SI- South of Iran, T- Tehran, WI- West of Iran.

S.No	Taxon	Distribution in Iran
Genus: <i>Hadena</i> Schrank, 1802		
1	<i>Hadena capsincola</i> ([Denis & Schiffermuller], 1775) (Syn. : <i>impressa</i> Esper, [1790]; <i>fuligata</i> Warren, [1910])	M, T [1]
2	<i>Hadena magnolia</i> (Boisduval, 1829) (Syns. : <i>nummosa</i> Eversmann, 1844; <i>flavofasciata</i> Draudt, 1934)	F, T, Ko [1], K.
3	<i>Hadena magnolii fabiani</i> Hacker, 1986	E, L,F, KB [1], K.
4	<i>Hadena rjabovi</i> (Idrisov, 1961) (Syn. : <i>occidentalis</i> de freina & Hacker, 1985)	T [1], K.
5	<i>Hadena compta persica</i> (Schwingenschuss, 1939)	T, Gi,AG [19]
6	<i>Hadena compta kashgaia</i> (Brandt, 1947)	F, Ko [4], K.
7	<i>Hadena magnifica</i> Hacker, 1996	T [1].
8	<i>Hadena humilis</i> (Christoph, 1893)	NI [7]
9	<i>Hadena gueneei</i> (Staudinger, 1901)	T, F, Khr, Kh [1], K.
10	<i>Hadena albimacula</i> (Borkhausen, 1792) (Syns. : <i>concinna</i> Hubner, [1803]; <i>conserta</i> Hubner, [1820])	T, AG [1]
11	<i>Hadena vulcanica clarescens</i> (Draudt, 1936) (Syns. : <i>clarescens</i> Draudt, 1938; <i>chalceata</i> Schwingenschuss, 1938)	T [1]
12	<i>Hadena germaniciae</i> Boursin, 1959	NI [1]
13	<i>Hadena melanochoa</i> (Staudinger, 1892)	T, M, AG [1]
14	<i>Hadena nobilis intermediana</i> Hacker, 1996	NI [1].
15	<i>Hadena nobilis brandti</i> Hacker, 1996	F [1], K.
16	<i>Hadena canescens</i> (Brandt, 1947) (Syn. : <i>eberti</i> Boursin, 1961)	NI [1].
17	<i>Hadena vartianica</i> Hacker, 1996	T [1].
18	<i>Hadena tristis magna</i> Hacker, 1996	T [1], F, K.
19	<i>Hadena luteocincta</i> (Rambur, 1834) (Syns. : <i>capsophoba</i> Rambur, 1858 ; <i>kruegeri</i> Turati, 1907 ; <i>dubai</i> Turati, 1911 ; <i>schawerdae</i> Kruger, 1914; <i>azarai</i> Agenjo, 1940; <i>morosa</i> Forster & Wohlfahrt, 1971)	NI [6], F, K.
20	<i>Hadena thecaphaga</i> (Draudt, 1937)	T [5], F.
21	<i>Hadena lucida</i> (Brandt, 1938)	M, Ko, F [2], K.
22	<i>Hadena lucida hakkariensis</i> Hacker, 1996	NI [1].
23	<i>Hadena wehrlii frequens</i> Hacker, 1996	NI [1], F.
24	<i>Hadena persimilis</i> Hacker, 1996	NI [1].
25	<i>Hadena femina marmorea</i> Hacker, 1996	T [1].
26	<i>Hadena staudingeri</i> (F. Wagner, 1931)	T, Ko [1].
27	<i>Hadena elbursica</i> Hacker, 1996	Khr [1], K.
28	<i>Hadena danilewskyi</i> Hacker, 1996	Khr [1], K, SB.
29	<i>Hadena pfeifferi</i> (Draudt, 1934)	Khr [1].

30	<i>Hadena draudti</i> (Brandt, 1938)	F [1], SB.
31	<i>Hadena mesolampra</i> (Brandt, 1938)	F, L [2], K.
32	<i>Hadena clara gladys</i> (Wiltshire, 1947)	M, T, AG, Ha [1, 20].
33	<i>Hadena cimelia</i> (Brandt, 1938)	Khr, L, F, Kh [1, 2], K.
34	<i>Hadena pseudoclara cimeloides</i> Hacker, 1996	NI [1], F.
35	<i>Hadena hyrcanoides</i> Hacker, 1996	T [1].
36	<i>Hadena subhyrcana</i> Hacker, 1996	F [1], K.
37	<i>Hadena drenowskii kendevani</i> (Schwingenschuss, 1937)	T [18].
38	<i>Hadena drenowskii khorassana</i> (Brandt, 1947)	Khr [4], SB.
39	<i>Hadena montana</i> (Brandt, 1941)	Khr [3], K.
40	<i>Hadena syriaca podolica</i> (Kremky, 1937)	T [1].
41	<i>Hadena purpurea</i> Hacker, 1996	NI [1], F.
42	<i>Hadena praetermissa</i> Hacker, 1996	NI [1].
43	<i>Hadena pseudohyrcana</i> de Freina & Hacker, 1996	AG [1], F.
44	<i>Hadena syriaca imitaria</i> (Brandt, 1947)	F [4], K.
45	<i>Hadena perplexa perplexa</i> ([Denis & Schiffermuller], 1775) (Syns. : <i>lepida</i> Esper, [1790]; <i>carpophaga</i> Brahm, 1791; <i>carpophaga</i> Borkhausen, 1792; <i>ochracea</i> Haworth, 1809; <i>capsophila</i> Boisduval, 1840; <i>capsophila</i> Duponchel, 1842; <i>nisus</i> Germar, [1842]; <i>repanda</i> Herrich-Schaffer, [1850]; <i>pallida</i> Tutt, 1892 ; <i>brunnea</i> Tutt, 1892 ; <i>suffusa</i> Tutt, 1892 ; <i>atlas</i> A. E. Prout, 1929; <i>sicula</i> Draudt, 1933)	T, AG [1], SB, K, F.
46	<i>Hadena perplexa paghmana</i> (Brandt, 1947)	F, Khr [4], K.
47	<i>Hadena silenens mesopotamica</i> Hacker, 1992	NI [1].
48	<i>Hadena silenens csorbia</i> Hacker, 1996	SI [1], SB, K.
49	<i>Hadena pumila</i> (Staudinger, 1879)	NI [1], K.
50	<i>Hadena lypra hajara</i> Hacker & Legrain 1996	Kh, L, H, Ha, SB, [1].
51	<i>Hadena tephroleuca asiatica</i> (F. Wagner, 1931)	T, Ko [1].
52	<i>Hadena inexpectata</i> Varga, 1979	T, F [1], K
53	<i>Hadena vulpecula</i> (Brandt, 1938)	F [2], K, SB.
54	<i>Hadena silenides</i> (Staudinger, 1895)	WI [1], SB.
55	<i>Hadena confusa herczigi</i> Hacker, 1996	NI [1], K, SB, F.



Figure: 1. Map of Iran showing provinces in Iran.

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