



Further studies on Noctuidae (Lepidoptera) fauna of Kerman province, southeast Iran

Saeideh Shahreyari-Nejad

Department of Plant Protection, Faculty of Agriculture, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

✉ ssaideh@gmail.com

<https://orcid.org/0000-0002-5390-6717>

Mehdi Esfandiari

Department of Plant Protection, Faculty of Agriculture, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

✉ esfandiari@scu.ac.ir

<https://orcid.org/0000-0002-0949-5180>

Arash Rasekh

Department of Plant Protection, Faculty of Agriculture, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

✉ a.rasekh@scu.ac.ir

<https://orcid.org/0000-0002-4688-5049>

Mohammad Saeed Mossadegh

Department of Plant Protection, Faculty of Agriculture, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

✉ mossadegh_ms@yahoo.com

<https://orcid.org/0000-0002-8166-0611>

Asghar Shirvani

Department of Plant Protection, Faculty of Agriculture, Shahid Bahonar University of Kerman, Kerman, Iran.

✉ shirvani@uk.ac.ir

<https://orcid.org/0000-0002-4647-1030>

ABSTRACT. This paper is a part of a long-term study on the Noctuidae fauna of Kerman province. Here, we report the newly identified species, which were collected mainly in the South of this province during the years 2015 and 2016. Totally, here we report 30 Noctuidae taxa from 13 genera and six subfamilies namely: Acronictinae (five taxa), Amphipyrynae (three taxa), Heliiothinae (two taxa), Condicinae (two taxa), Bryophilinae (six taxa) and Noctuinae (12 taxa). Among these reports, there are 12 new provincial records from Kerman. *Amphipyra kitti* Gaal-Haszler, Lödl, Ronkay, Ronkay & Varga are recorded here as a new species for the fauna of Iran. The material examined is listed together with the provincial distribution for each taxon. Wing patterns and male and female genitalia structures of *A. kitti* are illustrated here. The female genitalia of this species is described here for the first time. According to this data, we concluded that despite the vast area of Kerman province, its fauna has been less explored compared to some of its neighbouring provinces. We suggest exploring the higher altitudes of this province.

Key words: *Amphipyra kitti*, distribution, Jiroft, fauna, owlet moths

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INTRODUCTION

With an extremely complex climate and habitat features, Iran is one of the highly interesting destination countries for entomologists. Recently, the most comprehensive catalogue of the Lepidoptera of Iran was published with the contribution of 73 lepidopterists from around the world (Rajaei et al., 2023a). The catalogue summarised the knowledge of lepidopterology in the last two hundred years. Such a catalogue largely serves as a guideline for further faunal research on the Lepidoptera of Iran, which is essential in the current global warming and increasing pressure on the natural habitats and biodiversity of Iran

Corresponding author: Mehdi Esfandiari, M. ✉ esfandiari@scu.ac.ir

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(Rajaei & Karsholt, 2023). According to the latter study, one of the early important Lepidoptera expeditions in Kerman was carried out in 1956 by the German entomologist Willi Richter (1895–1966). Later, and until recently several other publications were listed as results of exploring Kerman province by other lepidopterists (e.g., Hacker & Kautt, 1999; Hacker & Meineke, 2001; Ebert & Hacker, 2002; Rajaei, 2010; Rajaei et al., 2011, 2012; Shirvani, 2012a; Shahreyari-Nejad et al., 2018, 2020; Rajaei et al., 2019, 2022; Wanke et al., 2019, 2020; Arnscheid et al., 2021; Stadie et al., 2022).

As the largest province in Iran, Kerman province is situated in the southeastern of the country, covering an area of 182,000 km². The physical features that delineate the province are primarily deserts. However, the last stretches of the Zagros Mountain chain from northwest to southeast spanning the province provide colder climates than lowland parts (Borjian, 2023). According to Rajaei et al. (2023b), the number of recorded species per province for Kerman is 591 out of a total of 4812 valid Iranian Lepidoptera species, which is less than some of its neighbouring provinces: Fars (1625), Sistan va-Balouchestan (827) and Hormozgan (661). The number of type locality per province for Kerman is 59, which is far from Sistan va Balouchestan (235) and Fars (518), and less than Hormozgan (85) (Rajaei et al., 2023b: fig. 4). Despite the vast area of Kerman province and its variable climate; it goes without saying its fauna has been less explored compared to some other provinces like Sistan va-Balouchestan. This paper is the continuation of our previous studies (e.g. Shirvani et al., 2008; Shirvani, 2012a; Shahreyari-Nejad et al., 2017; Shirvani, 2022, Shirvani & Ghaemmaghmanian, 2022) on the fauna of Noctuidae of Kerman province with report of a new Noctuidae species for the fauna of Iran.

MATERIAL AND METHODS

The samplings were conducted mostly in the South of Kerman province, Jiroft and adjacent areas during 2015–2016. This area includes a succession of mountain chains with a general pattern from Northwest to Southeast, spanning the province. Specimens were collected using light traps powered by 12 Volt batteries and 8-watt black-light tubes, killed with the help of ethyl acetate vapours, and mounted according to standard methods. The specimens and slides of their genitalia were deposited in the Insect and Mite Collection of Ahvaz (IMCA), Plant Protection Department, Shahid Chamran University of Ahvaz. Genitalia slides of the specimens were prepared following Fibiger (1997). Identifications of the species were made according to available literature such as Hacker et al. (2002), Fibiger et al. (2009), Lödl et al. (2012), and by studying museum materials at the Hungarian Natural History Museum, Budapest and Museum of Natural History, Vienna by the second author. Systematics and nomenclature followed Rajaei et al. (2023a). Data on distribution for each species followed Ebert and Hacker (2002), Wieser and Stangelmeier (2005), Lehman et al. (2009), and Rajaei et al. (2023a), wherever provided.

RESULTS

A total of 30 Noctuidae taxa belonging to 13 genera and six subfamilies, namely, Acronictinae, Amphipyrae, Heliiothinae, Condicinae, Bryophilinae, and Noctuinae, were identified and presented here. Among them, there are 12 new provincial records from Kerman. The species *Amphipyra kitti* Gaal-Haszler, Lödl, Ronkay, Ronkay & Varga, 2012 is newly reported for the fauna of Iran from Kerman province. Studied materials are listed here, together with provincial distribution for each taxon, as well as adult and genitalia illustrations of *A. kitti*.

Taxonomic hierarchy

Class Insecta Linnaeus, 1785

Order Lepidoptera Linnaeus, 1785

Family Noctuidae Latreille, 1809

Subfamily Acronictinae Heinemann, 1859

Genus *Acronicta* Ochsenheimer, 1816

***Acronicta aceris* (Linnaeus, 1758)**

Distribution in Iran. Gilan, Golestan, Kerman (new record), Khorasan-e Razavi, Khorasan-e Shomali, Mazandaran, Tehran, and Zanjan.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 14.vi.2015.

***Acronicta pasiphaea* (Draudt, 1936)**

Distribution in Iran. Esfahan, Fars, Hamedan, Kerman, Kermanshah, Khuzestan, Kohgiluyeh va Boyer-Ahmad, Kordestan, and Lorestan.

Material examined. Kerman province, Baft, Khabr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 2♀, 27.v.2015 & 20.vii.2015.

***Acronicta dentinosa* Freyer, 1839**

Distribution in Iran. Azerbaijan-e Sharghi, Esfahan, Fars, Gilan, Golestan, Hamedan, Kerman, Kermanshah, Mazandaran, Sistan va Baluchestan, Tehran, and Yazd.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 2♂, 15.v.2015.

***Acronicta nervosa lactea* (Hacker & Kautt, 1999)**

Distribution in Iran. Ardabil, Esfahan, Fars (Type locality), Kerman, Semnan, and Sistan va Baluchestan.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 2♂, 23.iv.2015 & 24.iv.2015.

***Acronicta rumicis* (Linnaeus, 1758)**

Distribution in Iran. Fars, Gilan, Golestan, Kerman, Lorestan, Mazandaran, and Tehran.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 23.iv.2015, Sangdan, 2966 m, 29°06'06"N, 57°33'12"E, 1♀, 29.iv.2015.

Subfamily Amphipyrinae Guenée, 1837**Genus *Amphipyra* Ochsheimer, 1816*****Amphipyra tragopoginis turcomana* Staudinger, 1888**

Distribution in Iran. Fars, Golestan, Hormozgan, Kerman, Kohgiluyeh va Boyer-Ahmad, Khuzestan, Kurdistan, Lorestan, Khorasan-e Shomali, and Tehran.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♀, 29.vii.2016.

***Amphipyra stix* Herrich-Schäffer, 1850**

Distribution in Iran. Azerbaijan-e Sharqi, Chahar Mahaal va Bakhtiari, Esfahan, Fars, Hamadan, Kerman (new record), Kohgiluyeh va Boyer-Ahmad, Tehran, and Zanjan.

Material examined. Kerman province, Baft, Khabr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 1♀, 1♂, 20.vii.2015.

***Amphipyra kitti* Gaal-Haszler, Lödl, Ronkay, Ronkay & Varga, 2012**

Amphipyra kitti Gaal-Haszler et al., 2012, in Gaal-Haszler, S., Lödl, M., Ronkay, G., Ronkay, L. & Varga, Z., *Fibigeriana* 1: 123–130. Type locality: Afghanistan, Prov. Kadaghan, Salang pass. N slope, 2400 m. Holotype: NHMW. male ♂. 11–12.vii.1971. legit Vartian. slide no. RL10461m.

Identification. (Fig. 1A), male (33 mm wingspan): forewings greyish brown, head, thorax, legs, abdomen and hindwings have a lighter brownish hue, hindwings a little lighter basally. All lines, streaks and stigmata are absent. Underside of wings light greyish. *Amphipyra kitti* is closely related to *A. tetra pallida* Staudinger, 1901 and *A. micra* Gyulai & Ronkay, 2008 which both of them occur in Iran,

but not yet recorded in Kerman province (Lödl et al., 2012; Rajaei et al., 2023a). Habitus of *A. kitti* differs from *A. tetra pallida* by having the smaller average wingspan and uniformly paler coloration of wings. Delicate pale terminal line of *A. kitti* was missed in *A. tetra pallida*. The average wingspan is larger in *A. kitti* than *A. micra*, body is more robust and pale terminal line is sinuous in *A. kitti* vs. straight in *A. micra*. Female (37 mm wingspan) similar to male, but larger (Fig. 1C).

Male genitalia. (Fig. 1B), uncus broad, spatulate, broadened and rounded apically, subapical section narrower; vinculum broad; scaphium membranous; valvae short and rounded, posterior-ventrally arched; clavus sclerotised; juxta large. Aedeagus sclerotised basally, ventral and around apex; vesica with a strong basal and sub-basal cornuti.

Female genitalia (Fig. 1D). This is the first depiction and description of female genitalia. Ovipositor slightly sclerotised; postvaginal plate without crests; ductus bursae membranous, very long; basal half of corpus bursae narrow, cylindrical; distal half oval; appendix bursae small, arises on the right side.

Bionomics. The adult insects of this species were active in this study in high mountainous areas with shrub vegetation and rangeland plants (Fig. 2). The moth flies in summer and attracts light. The early stages and food plants are unknown.

Distribution. It has been recorded from central and eastern Afghanistan and Pakistanian Himalayas (Lödl et al., 2012). This taxon is new to the Iranian fauna.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♀, 2♂, 30.vii.2015, 1♀, 28.vi.2015, 1♂, 08.vii.2015; Jiroft, Sangdan, 2966 m, 29°06'06"N, 57°33'12"E, 2♀, 1♂, 3.ix.2015; Orzuiyeh, Dehsard, Sohan Darreh, 1937 m, 28°39'19"N, 56°26'46"E, 1♂, 3.ix.2015.

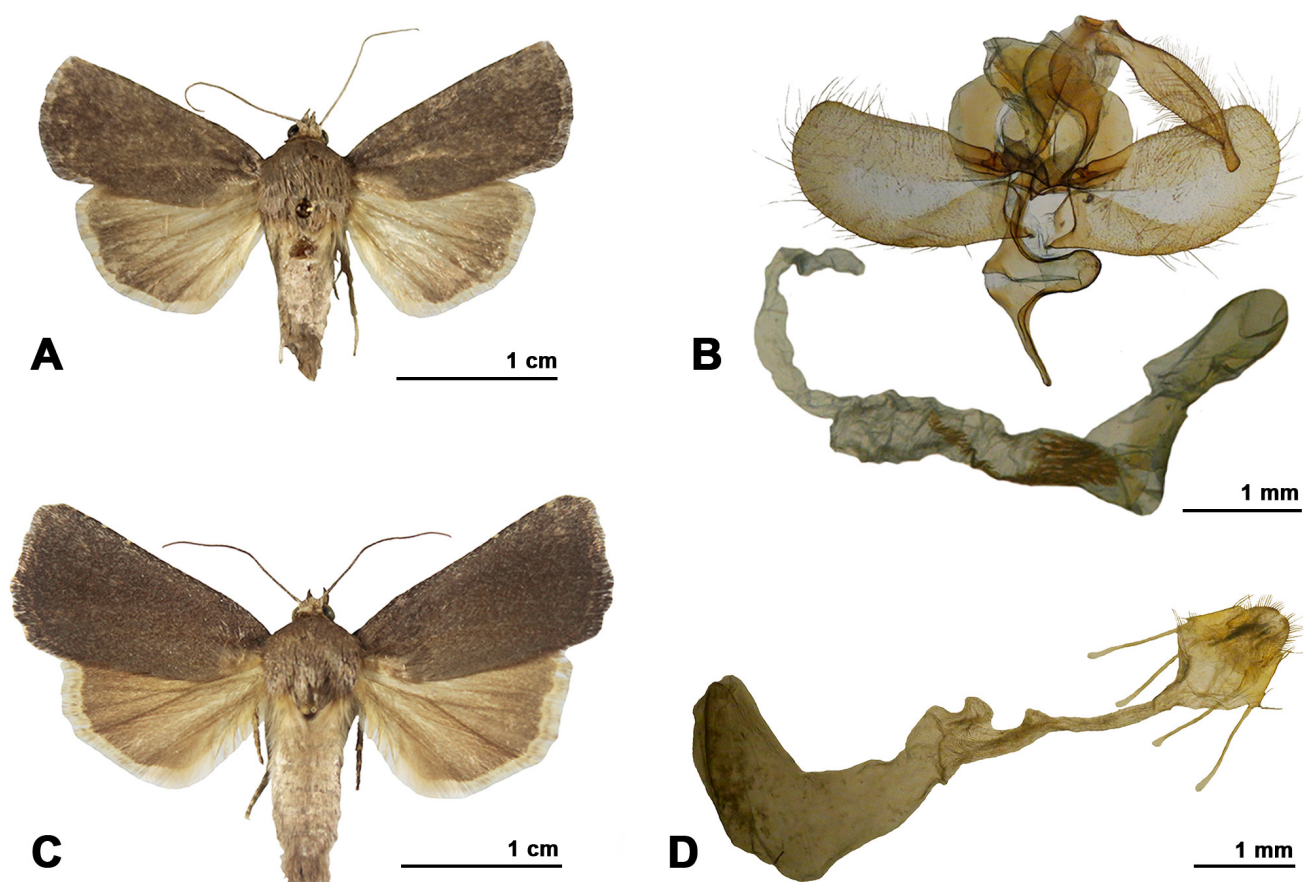


Figure 1. Adults of *Amphipyra kitti*, wing patterns and genitalia. **A. & B.** Male; **C. & D.** Female (B. Male genitalia, armature (up) and aedeagus with everted vesica (down)).



Figure 2. Habitat of *Amphipyra kitti*, Jiroft (Omrudoieh) in Kerman province, southeast Iran.

Subfamily Heliiothinae Boisduval, 1828

Genus *Heliothis* Ochsenheimer, 1816

Heliothis nubigera Herrich-Schäffer, 1851

Distribution in Iran. Ardabil, Azerbaijan-e Gharbi, Azerbaijan-e Sharghi, Bushehr, Esfahan, Fars, Gilan, Golestan, Hamedan, Hormozgan, Kerman, Kermanshah, Khorasan-e Razavi, Khorasan-e Shomali, Khuzestan, Kohgiluyeh va Boyer-Ahmad, Kordestan, Lorestan, Markazi, Mazandaran, Qazvin, Qom, Semnan, Sistan va Baluchestan, Tehran, Yazd, and Zanjan.

Material examined. Kerman province, Jiroft, Sangdan, 2966 m, 29°06'06"N, 57°33'12"E, 1♂, 3.ix.2015.

Genus *Helicoverpa* Hardwick, 1965

Helicoverpa armigera (Hübner, 1808)

Distribution in Iran. Ardabil, Azerbaijan-e Gharbi, Azerbaijan-e Sharghi, Bushehr, Esfahan, Fars, Gilan, Golestan, Hamedan, Hormozgan, Ilam, Kerman, Kermanshah, Khorasan-e Razavi, Khorasan-e Shomali, Kohgiluyeh va Boyer-Ahmad, Kordesta, Lorestan, Markazi, Mazandaran, Qazvin, Qom, Semnan, Sistan va Baluchestan, Tehran, Yazd, and Zanjan.

Material examined. Kerman province, Jiroft, Hishin, 1341 m, 28°38'23"N, 57°56'43"E, 2♂, 1♂, 23.ix.2015; Jiroft, 659 m., 28°39'11"N, 57°45'50"E, 1♀, 15.vi.2015; Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 24.iv.2015.

Subfamily Condicinae Poole, 1995**Genus *Dysmilichia* Speiser, 1902*****Dysmilichia bicyclica* (Staudinger, 1888)**

Distribution in Iran. Alborz, Bushehr, Esfahan, Fars, Hormozgan, Kerman, Lorestan, Markazi, Qom, Semnan, Sistan va Baluchestan, and Tehran,

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 28.vi.2015; Baft, Khahr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 1♀, 14.vii.2015; Jiroft, Mohammad Abad, 2495 m, 28°59'48"N, 57°43'20"E, 1♀, 2.vii.2015.

***Dysmilichia erastrionides* Brandt, 1938**

Distribution in Iran. Bushehr, Fars (Type locality), Hormozgan, Ilam, Kerman, Kohgiluyeh va Boyer-Ahmad, and Sistan va Baluchestan.

Material examined. Kerman province, Jiroft, Hishin, 1341 m, 28°38'23"N, 57°56'43"E, 1♀, 1♂, 24.ii.2016.

Subfamily Bryophilinae Guenée, 1852**Genus *Bryophila* Treitschke, 1825*****Bryophila eucharista* (Boursin, 1960)**

Distribution in Iran. Alborz, Esfahan, Fars (Type locality), Kermanshah, Kordestan, Lorestan, Kerman, Tehran, and Yazd.

Material examined. Kerman province, Baft, Khahr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 2♀, 20.viii.2015.

***Bryophila* sp.**

Material examined. Kerman province, Baft, Khahr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 1♀, 2♂, 27.v.2015.

***Bryophila raptricula* (Denis & Schiffermüller, 1775)**

Distribution in Iran. Azerbaijan-e Sharghi, Esfahan, Fars, Golestan, Hamedan, Kerman, Kermanshah, Khorasan-e Razavi, Kohgiluyeh va Boyer-Ahmad, Kordestan, Lorestan, Markazi, Mazandaran, Semnan, and Tehran.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 11.ix.2015.

***Bryophila felina* (Eversmann, 1852)**

Distribution in Iran. Kerman (new record), Khorasan-e Razavi, Semnan, Sistan va Baluchestan, and Tehran.

Material examined. Kerman province, Baft, Khahr National Park, 1920 m, 28°3'43"N, 56°26'50"E, 1♀, 20.viii.2015.

Genus *Cryphia* Hübner, 1818***Cryphia receptricula* (Hübner, 1803)**

Distribution in Iran. Chahar Mahaal va Bakhtiari, Azerbaijan-e Shahghi, Esfahan, Fars, Kerman (new record), Khorasan-e Razavi, Khorasan-e Shomali, Kordestan, Lorestan, and Tehran.

Material examined. Kerman province, Baft, Khahr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 1♀, 20.vii.2015.

***Cryphia* sp.**

Material examined. Kerman province, Baft, Khahr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 1♂, 20.vii.2015.

Subfamily Noctuidae Latreille, 1809**Genus *Hadena* Schrank, 1802*****Hadena compta kashgaia* (Brandt, 1947)**

Distribution in Iran. Esfahan, Fars (Type locality), Kerman (new record), and Khuzestan.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 18.vi.2015; 1♀, 28.vi.2015.

***Hadena elbursica* Hacker, 1996**

Distribution in Iran. Alborz, Kerman (new record), Khorasan-e Razavi, and Tehran (Type locality).

Material examined. Kerman province, Jiroft, Mohammad Abad, 2495 m, 28°59'48"N, 57°43'20"E, 1♀, 2.vii.2015; Dochar, 3223 m, 29°04'40"N, 57°37'01"E, 1♀, 10.ix.2015.

***Hadena syriaca imitaria* (Brandt, 1947)**

Distribution in Iran. Fars (Type locality), and Kerman (new record).

Material examined. Kerman province, Jiroft, Sangdan, 2966 m, 29°06'06"N, 57°33'12"E, 2♂, 29.iv.2015; 1♂ 5.xi.2015.

Genus *Enterpia* Guenée, 1850***Enterpia roseocandida* Hacker, 1996**

Distribution in Iran. Alborz, Fars, Hamedan, Kerman (new record), and Tehran.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 18.vi.2015; 1♂, 28.vi.2015.

***Enterpia picturata persa* Gyulai & Hacker, 2013**

Distribution in Iran. Esfahan, Fars, Kerman, Kohgiluyeh va Boyer-Ahmad, Sistan va Baluchestan, Zanjan, and Yazd (Type locality).

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 18.vi.2015; 1♀, 8.vii.2015.

Genus *Nezomycta* Varga & Ronkay, 1991***Nezomycta pusilla* (Püngeler, 1900)**

Distribution in Iran. Fars, Gilan, Kerman (New record), Semnan, Tehran, and Yazd.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♀, 23.iv.2015.

Genus *Conisania* Hampson, 1905***Conisania capsivora* (Draudt, 1933)**

Distribution in Iran. Alborz, Fars, Hamedan, Mazandaran, and Tehran.

Material examined. Kerman province, Jiroft, Omrudoieh, 2971 m, 29°05'55"N, 57°33'13"E, 1♂, 14.v.2016.

Genus *Mythimna* Ochsenheimer, 1816***Mythimna vitellina* (Hübner, 1808)**

Distribution in Iran. Ardabil, Esfahan, Fars, Gilan, Golestan, Hamedan, Kerman (new record), Khorasan-e Razavi, Khorasan-e Shomali, Lorestan, Mazandaran, Semnan, and Tehran.

Material examined. Kerman province, Baft, Khabr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 1♂, 27.v.2015.

***Mythimna l-album* (Linnaeus, 1767)**

Distribution in Iran. Alborz, Ardabil, Azerbaijan-e Gharbi, Esfahan, Fars, Gilan, Golestan, Hamedan, Kerman, Khorasan-e Razavi, Khorasan-e Shomali, Kordestan, Lorestan, Mazandaran, Semnan, Sistan va Baluchestan, and Tehran.

Material examined. Kerman province, Jiroft, Hishin, 1341 m, 28°38'23"N, 57°56'43"E, 4♂, 24.ii.2016.

Genus *Leucania* Ochsenheimer, 1816***Leucania punctosa* (Treitschke, 1825)**

Distribution in Iran. Gilan, Fars, Kerman (new record), Khorasan-e Razavi, and Tehran.

Material examined. Kerman province, Baft, Dehsard, 1811 m, 28°40'39"N, 56°33'02"E, 1♀, 15.x.2015.

***Leucania putrescens* (Hübner, 1824)**

Distribution in Iran. Ardabil, Hormozgan, and Kerman (new record).

Material examined. Kerman province, Baft, Khabr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 1♀, 27.v.2015; Dehsard, 1811 m, 28°40'39"N, 56°33'02"E, 1♀, 16.x.2015.

***Leucania loreyi* (Duponchel, 1827)**

Distribution in Iran. Azerbaijan-e Gharbi, Bushehr, Fars, Gilan, Golestan, Hormozgan, Kerman, Kermanshah, Khorasan-e Razavi, Khorasan-e Shomali, Kordestan, Lorestan, Mazandaran, Sistan va Baluchestan, and Tehran.

Material examined. Kerman province, Baft, Khabr National Park, 1920 m, 28°39'43"N, 56°26'50"E, 1♀, 29.x.2015.

DISCUSSION

When the number of species recorded from the vast Kerman province is considered in comparison with those recorded in the whole Iran, according to Rajaei et al. (2023a), it seems that this province shares and includes the least species numbers even compared to those recorded from the neighbouring provinces. By considering the recent classification proposed by Keegan et al. (2021), the number of recorded species from Kerman province in the current study with those recorded in Rajaei et al. (2023a) from the whole of Iran for subfamilies studied here were as follows, Acronictinae (5 vs 18), Amphipyrynae (3 vs 24), Heliotinae (2 vs 18), Condicinae (2 vs 11), Bryophilinae (6 vs 26) and Noctuinae (12 vs 690). It is worth mentioning that we only treated so-called Hadeninae in this study under Noctuinae. Results on other Noctuinae were published in other studies (Shahreyari-Nejad et al., 2018).

Amphipyra kitti is the 14th taxa of the genera *Amphipyra* in Iran. The most recent *Amphipyra* record for Iran was *Amphipyra kautti* Hacker, 2002 which was recorded from Kakan village in Kohgiluyeh-va-Boyerahmad province (Esfandiari & Rabieh, 2022). We previously reported species of the genera *Asteroscopus*, *Ostheldera*, *Valeria* and *Allophytes* as members of the subfamily Psaphidinae (Shahreyari-Nejad et al., 2020), which is currently downgraded to the tribe Psaphidini of subfamily Amphipyrynae (Rajaei et al., 2023a). Some of the groups and species need taxonomic revision, such as *Cryphia* and *Bryophila*. We had two unidentified species from these two genera. *Hadena compta kashgaia* also needs a taxonomic revision, according to Rajaei et al. (2023a).

Southeast parts of Iran are biogeographically under the influence of the Oriental region and Kerman fauna shows similarities with eastern countries of Iran (Shirvani, 2012b). For example, Shahreyari-Nejad et al. (2020) reported *Oncocnemis rhodophaea* Ebert, 1978 from Kerman for the first time for Iranian fauna. This species has a type locality from Afghanistan. In this paper, we recorded *A. kitti* for the first time from Iran, which has a type locality in Afghanistan as well. Diverse climate

conditions in Iran provided a rich faunal assemblage with more than 360 Noctuidae s.l. Species with Iranian-type locality (Shirvani, 2012b; Rajaei et al., 2023a). In the present research, 7 out of 30 recorded species had an Iranian-type locality. Of the 4,812 valid lepidopteran species in Iran, 892 species were recorded as endemic to this country, corresponding to an endemism rate of 19.7% (Rajaei et al., 2023b). Over 70% of the endemic species have been collected at altitudes between 1,000 and 3,000 m (Rajaei et al., 2023b). As Europe has the best-known Lepidoptera fauna in the world, Rajaei et al. (2023b), by comparing the Iranian diversity of certain well-known groups with the European diversity of those same groups, estimated 4,509 Lepidoptera species are waiting to be discovered in Iran. According to the present study, it can be concluded that despite the vast area of Kerman province and its variable climate, it seems that its fauna has been less explored compared to some of its neighbouring provinces.

AUTHOR'S CONTRIBUTION

The authors confirm their contribution in the paper as follows: S. Shahreyari-Nejad: field survey, collecting the specimens and photographing the specimens; M. Esfandiari: Identifying the specimens, writing the early draft of the manuscript and correspondence; A. Rasekh: helped supervise the project and commented on the manuscript; M.S. Mossadegh: participated in designing the study and commented on the manuscript; and A. Shirvani: revising the manuscript. All authors read and approved the final version of the manuscript.

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AVAILABILITY OF DATA AND MATERIAL

The specimens listed in this study are deposited in the Insect and Mite Collection of Ahvaz (IMCA), Plant Protection Department, Shahid Chamran University of Ahvaz, and are available from the curator upon request.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

CONSENT FOR PUBLICATION

Not applicable.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this paper.

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مطالعات بیشتر روی فون بال پولکداران خانواده Noctuidae (Lepidoptera) استان کرمان، جنوب شرقی ایران

سعیده شهریاری نژاد^۱، مهدی اسفندیاری^{۱*}، آرش راسخ^۱، محمد سعید مصدق^۱ و اصغر شیروانی^۲

۱ گروه گیاه پزشکی، دانشکده کشاورزی، دانشگاه شهید چمران اهواز، اهواز، ایران.
۲ گروه گیاه پزشکی، دانشکده کشاورزی، دانشگاه شهید باهنر کرمان، کرمان، ایران.

* پست الکترونیک نویسنده مسئول مکاتبه: esfandiari@scu.ac.ir

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چکیده: مقاله حاضر بخشی از مطالعات طولانی مدت ما روی فون Noctuidae در استان کرمان است. در این مقاله گونه‌هایی که در سالهای ۱۳۹۴-۱۳۹۵ در جنوب این استان جمع‌آوری و شناسایی شده گزارش می‌شود. در مجموع، ۳۰ آرایه از ۱۳ جنس و ۶ زیرخانواده در خانواده‌ی Noctuidae و زیرخانواده‌های زیر شناسایی شده‌اند: Acronictinae (پنج آرایه)، Amphipyrae (سه آرایه)، Heliiothinae (دو آرایه)، Condidinae (دو آرایه)، Bryophilinae (شش آرایه) و Noctuinae (۱۲ آرایه). در بین این آرایه‌ها ۱۲ گزارش جدید از استان کرمان وجود دارد. گونه *Amphipyra kitti* Gaal-Haszler, Lödl, Ronkay, Ronkay & Varga به‌عنوان گونه‌ای جدید برای فون ایران از استان کرمان گزارش می‌شود. نمونه‌های مطالعه شده به همراه پراکنش استانی برای هر آرایه فهرست شده و تصاویر حشرات بالغ و اندام‌های تناسلی برای *A. kitti* آرایه شد. اندام تناسلی ماده این گونه برای اولین بار توصیف شد. بر اساس اطلاعات آرایه شده، می‌توان نتیجه گرفت که علی‌رغم وسعت استان کرمان، فون آن نسبت به برخی از استان‌های مجاورش کمتر مورد کاوش قرار گرفته است. پیشنهاد می‌شود مناطق مرتفع‌تر در استان کرمان مورد مطالعه و نمونه‌برداری قرار گیرند.

واژگان کلیدی: *Amphipyra kitti*، پراکنش، جیرفت، فون، شب‌پره‌های جغدی