

General patterns of the Lepidoptera fauna of Iran*

Authors: Rajaei, Hossein, Noori, Sajad, Karsholt, Ole, and Zahiri, Reza

Source: Integrative Systematics: Stuttgart Contributions to Natural History, 6(Sp1) : 69-81

Published By: Stuttgart State Museum of Natural History

URL: <https://doi.org/10.18476/2023.997558.4>

The BioOne Digital Library (<https://bioone.org/>) provides worldwide distribution for more than 580 journals and eBooks from BioOne's community of over 150 nonprofit societies, research institutions, and university presses in the biological, ecological, and environmental sciences. The BioOne Digital Library encompasses the flagship aggregation BioOne Complete (<https://bioone.org/subscribe>), the BioOne Complete Archive (<https://bioone.org/archive>), and the BioOne eBooks program offerings ESA eBook Collection (<https://bioone.org/esa-ebooks>) and CSIRO Publishing BioSelect Collection (<https://bioone.org/csiro-ebooks>).

Your use of this PDF, the BioOne Digital Library, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Digital Library content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne is an innovative nonprofit that sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

CHAPTER 4

General patterns of the Lepidoptera fauna of Iran*

HOSSEIN RAJAEI¹, SAJAD NOORI¹, OLE KARSHOLT² & REZA ZAHIRI³

The main purpose of this catalogue was to improve our knowledge of the Lepidoptera fauna of Iran and acquire a better knowledge of the patterns of distribution of this large insect order within the country. These patterns not only show the large-scale structure of the faunal elements of this order in Iran, but also highlight research gaps and other needs in Iranian lepidopterology, which should be addressed before we lose more habitats and species.

This chapter addresses questions such as: How many lepidopteran species are reported from Iran? How many of them are truly present in Iran? I.e., how many need further confirmation and how many have been erroneously reported? How many of the reported species are regarded as synonyms today? How are they systematically distributed (e.g., how many species are known per family)? How are they geographically distributed, both horizontally and vertically? Which taxonomic groups are especially in need of additional sampling efforts and taxonomic revisions? Finally, how many are endemic to Iran?

Species diversity

In total, 6,191 species-level names are listed in this catalogue as reported from Iran in the literature or for the first time in the present catalogue. Of these, 1,262 are regarded as junior synonyms and 117 as erroneously reported, although 24 are considered likely to occur in the country (see Appendix 1). Of the 4,812 remaining valid species, 4,517 are regarded as definitely resident in Iran, whereas 295 need further confirmation [see Fig. 1 and notes in RAJAEI et al. (2023)].

In total, we list 892 endemic species for Iran, corresponding to an endemism rate of 19.7% (Appendix 2). As can be observed in Fig. 2, over 70% of the endemic species have been collected at altitudes between 1,000 and 3,000 m. Isolation, by reducing gene flow, is an important driver of speciation, and higher per-species speciation rates caused by increasing isolation with elevation are assumed to be one of the most plausible explanations for the globally consistent pattern of higher endemism at

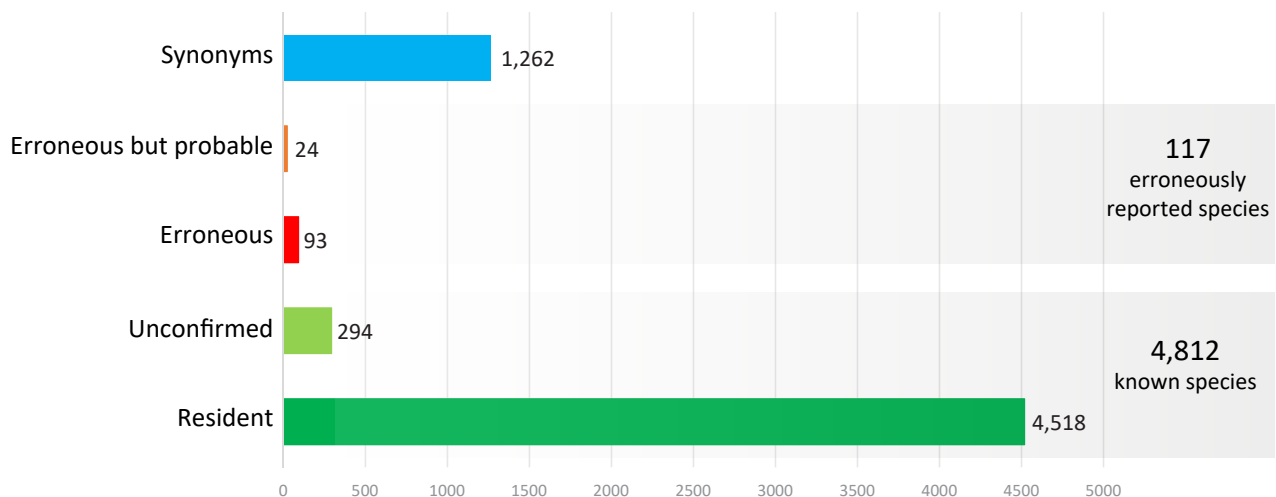


Fig. 1. Summary of the statuses in Iran of the lepidopteran species listed in this catalogue.

* In: RAJAEI, H. & KARSHOLT, O. (eds.): *Lepidoptera Iranica*. – Integrative Systematics 6 (Special Issue): 69–81.

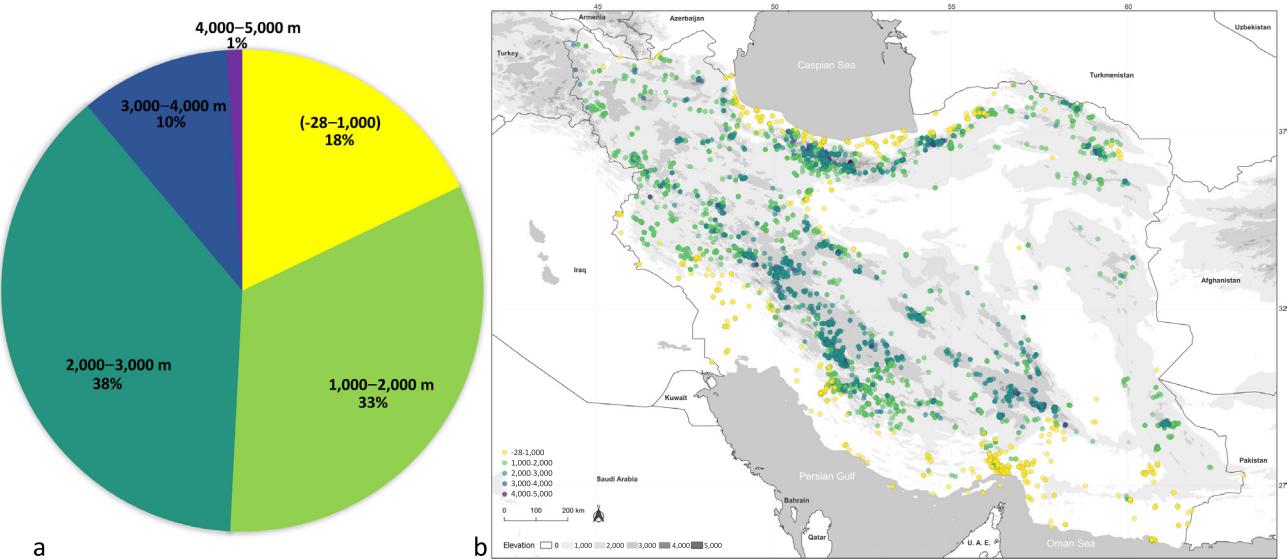
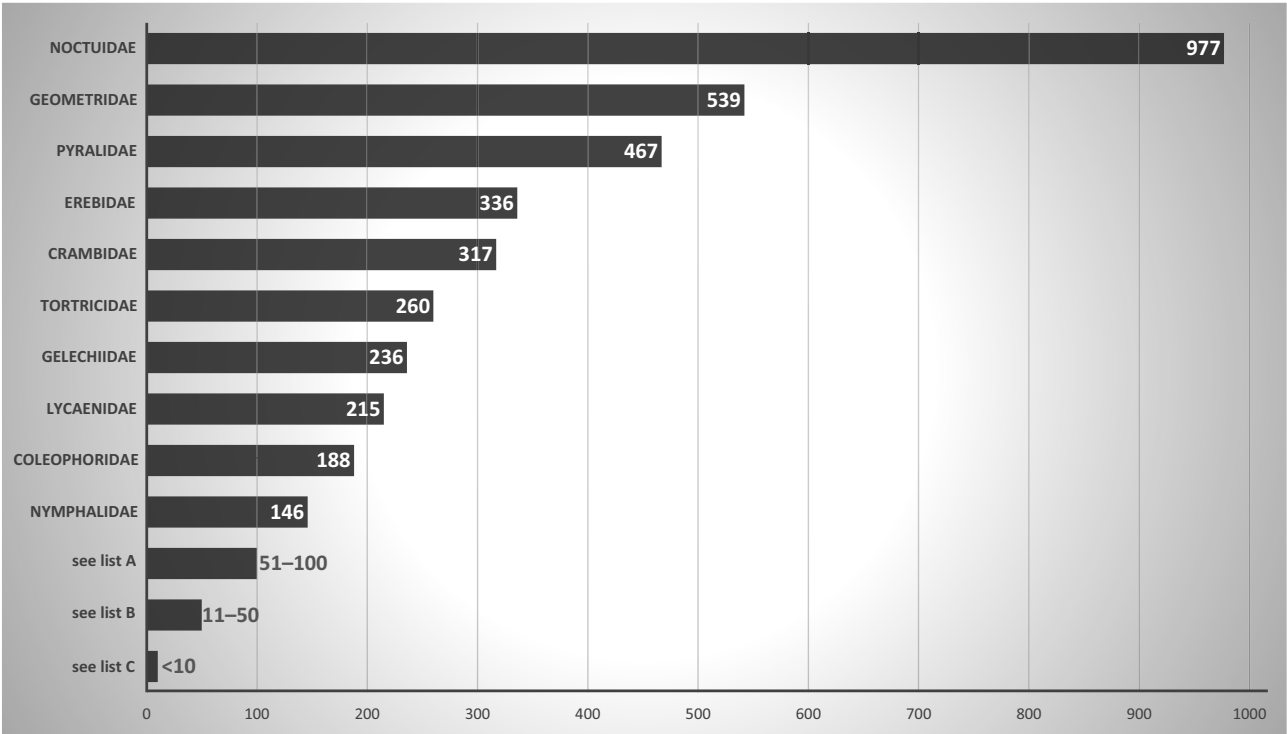


Fig. 2. Elevational diversity gradients of the endemic Lepidoptera species of Iran. In (b), each dot represents a species record.



List A: AUTOSTICHIDAE, COSSIDAE, DEPRESSARIIDAE, GRACILLARIIDAE, PIERIDAE, PTEROPHORIDAE, SESIIDAE, TINEIDAE, ZYGAENIDAE.

List B: ALUCITIDAE, AUTOSTICHIDAE, BRACHODIDAE, BUCCULATRICIDAE, COSMOPTERIGIDAE, COSSIDAE, DEPRESSARIIDAE, ELACHISTIDAE, GRACILLARIIDAE, HESPERIIDAE, LASIOCAMPIDAE, MEESSIIDAE, NEPTICULIDAE, NOLIDAE, NOTODONTIDAE, OECOPHORIDAE, PAPILIONIDAE, PIERIDAE, PSYCHIDAE, PTEROPHORIDAE, SCYTHRIDIDAE, SESIIDAE, SPHINGIDAE, TINEIDAE, YPSOLOPHIDAE, ZYGAENIDAE.

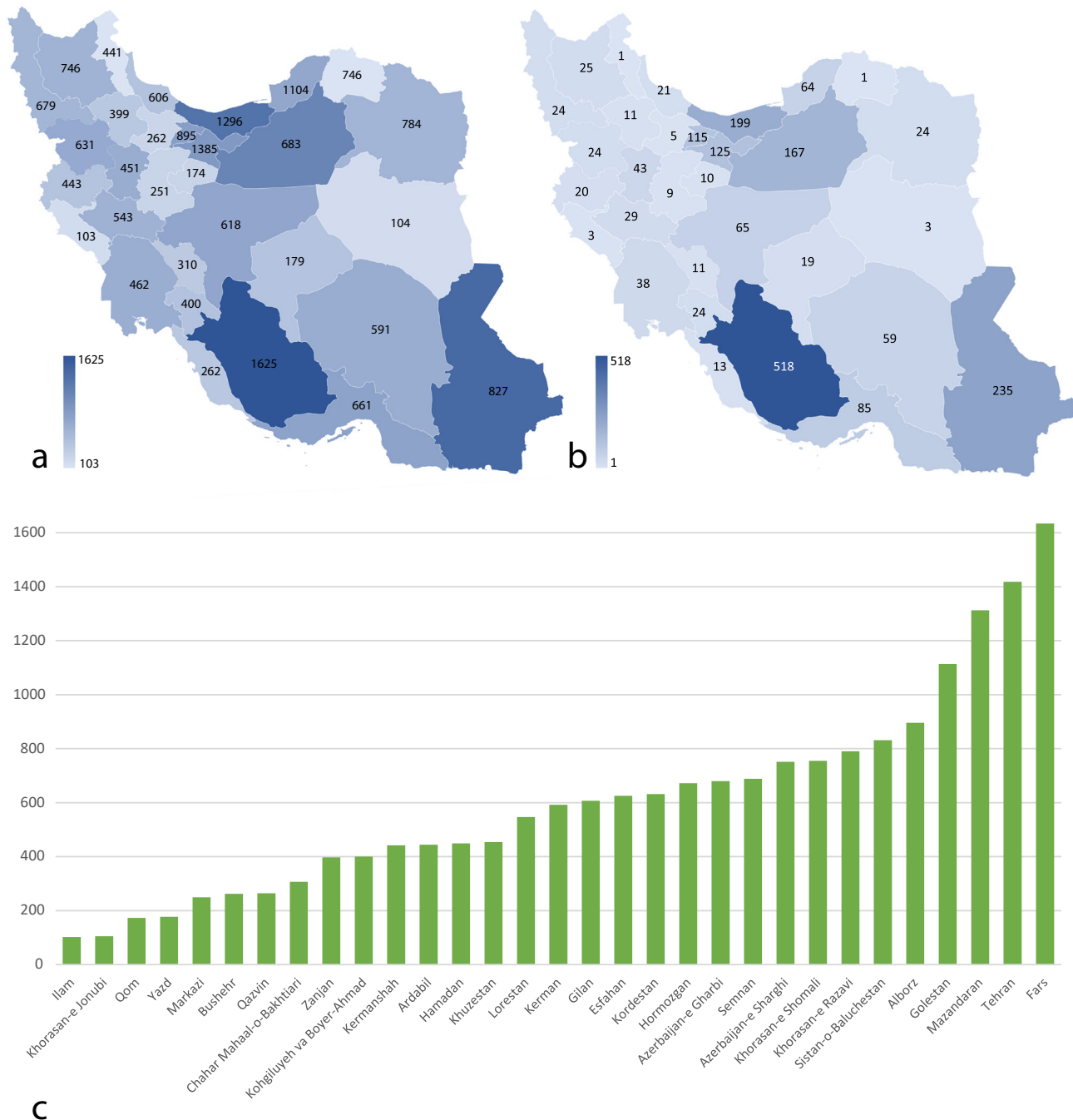
List C: ADELIDAE, ARGYRESTHIDAE, BATRACHEDRIDAE, BEDELLIIDAE, BLASTOBASIDAE, BOMBYCIDAE, BRAHMAEIDAE, CARPOSINIDAE, CHOREUTIDAE, CIMELIIDAE, DOUGLASIIDAE, DREPANIDAE, EPERMENIIDAE, EPIPYROPIDAE, ERIOCOTTIDAE, EUTELIIDAE, GALACTICIDAE, GLYPHPTERIGIDAE, HELIODINIDAE, HELIOZELIDAE, HEPIALIDAE, LECITHOCERIDAE, LIMACODIDAE, LYONETIIDAE, LYPUSIDAE, MICROPTERIGIDAE, MOMPHEIDAE, PLUTELLIDAE, PTEROLONCHIDAE, SATURNIIDAE, STATHMOPODIDAE, TISCHERIIDAE, USTYURTIIDAE, YPONOMEUTIDAE.

Fig. 3. Number of known Lepidoptera species per family in Iran.

higher elevations (STEINBAUER et al. 2016). Phylogenetic evidence indicates that many high-elevation endemics across the globe are phylogenetically young taxa resulting from recent rapid diversification, e.g., in the New Zealand Alps (WINKWORTH et al. 2005), the Andes (HUTTER et al. 2013) and East Malaysia (MERCKX et al. 2015). These localized areas (i.e., type localities) can be used as a reference for future conservation initiatives.

Distribution of species within families

As can be observed in Appendix 1, some families are more species-rich than others. However, this pattern could simply be an artefact due to some taxonomic groups being less studied (e.g., the microlepidopteran families) when compared to other parts of the world (e.g., Europe or North America). In contrast, some families (e.g., Zygaenidae, Cos-



sidae and nearly all Papilionoidea) are much better known. Fig. 3 shows the number of species per family in Iran.

Horizontal and vertical distribution of Lepidoptera species in Iran

Not only have some lepidopteran lineages been incompletely studied in Iran (e.g., most microlepidopteran families), but some provinces have been insufficiently explored overall. The number of recorded species per province is shown in Appendix 3 and Fig. 4, where it is clear that several provinces (e.g., Ilam and Khorasan-e Jonubi) have been largely neglected in past taxonomic surveys. Of note, the Ilam province is located in a transitional zone between the Zagros Mts. and the desert plains of Iraq, and potentially contains a rich Lepidoptera fauna. Some other provinces (e.g., Ardabil and Khorasan-e Shomali), although much better studied, show a low number of type localities (Fig. 4b), which could be explained by intensive taxonomic studies on the other side of the national borders of Iran, e.g., in the Kopet-Dagh Mts. (Turkmenistan) and Azerbaijan Mts. (Azerbaijan).

Most lepidopterous larvae feed on living plants, many of them on a single plant species (monophagous) or a few related species (oligophagous), and their distribution is therefore dependent on the distribution of their host plants. Areas with a high diversity of plants have, in most cases, a correlatively high diversity of Lepidoptera. In some families of Lepidoptera (e.g., Gracillariidae, Tortricidae and Geometridae), the larvae of a majority of species feed on the leaves of deciduous trees. These families are thus most diverse in forested areas such as mountains and north-facing hills. The larvae of many species of Gelechiidae, Pyralidae and Noctuidae feed on low plants, often in dry areas, and these families are most diverse in steppes and semi-deserts.

References

- HUTTER, C. R., GUAYASAMIN, J. M. & WIENS, J. J. (2013): Explaining Andean megadiversity: the evolutionary and ecological causes of glassfrog elevational richness patterns. – *Ecology Letters* **16**: 1135–1144.
<https://doi.org/10.1111/ele.12148>
- MERCKX, V. S. F. T., HENDRIKS, K. P., BEENTJES, K. K., MENNES, C. B., BECKING, L. E., PEIJNENBURG, K. T. C. A., AFENDY, A., ARUMUGAM, N., BOER, H. DE, BIUN, A., BUANG, M. M., CHEN, P.-P., CHUNG, A. Y. C., DOW, R., FEIJEN, F. A. A., FEIJEN, H., FEIJEN-VAN SOEST, C., GEML, J., GEURTS, R., GRAVENDEEL, B., HOVENKAMP, P., IMBUN, P., IPOR, I., JANSSENS, S. B., JOCQUÉ, M., KAPPES, H., KHOO, E., KOOMEN, P., LENS, F., MAJAPUN, R. J., MORGADO, L. N., NEUPANE, S., NIESER, N., PEREIRA, J. T., RAHMAN, H., SABRAN, S., SAWANG, A., SCHWALLIER, R. M., SHIM, P.-S., SMIT, H., SOL, N., SPAIT, M., STECH, M., STOKVIS, F., SUGAU, J. B., SULEIMAN, M., SUMAIL, S., THOMAS, D. C., TOL, J. VAN, TUH, F. Y. Y., YAHYA, B. E., NAIJ, J., REPIN, R., LAKIM, M. & SCHILTHUIZEN, M. (2015): Evolution of endemism on a young tropical mountain. – *Nature* **524**: 347–350.
<https://doi.org/10.1038/nature14949>
- RAJAEI, H., AARVIK, L., ARNSCHIED, W. R., BALDIZZONE, G., BARTSCH, D., BENGTTSSON, B. Å., BIDZILYA, O., BUCHNER, P., BUCHSBAUM, U., BUSZKO, J., DUBATOLOV, V. V., ERLACHER, S., ESFANDIARI, M., FREINA, J. J. DE, GAEDIKE, R., GYULAI, P., HAUSMANN, A., HAXAIRE, J., HOBERN, D., HOFMANN, A., IGNATEV, N., KAILA, L., KALLIES, A., KEIL, T., KISS, Á., KITCHING, I. J., KUN, A., LÁSZLÓ, G. M., LERAUT, G., MALLY, R., MATOV, A., MEINEKE, J.-U., MELICHAR, T., MEY, W., MIRONOV, V., MÜLLER, B., NADERI, A., NÄSSIG, W. A., NAUMANN, S., NAZARI, V., NIEUKERKEN, E. J. VAN, NUSS, M., PÖLL, N., PROZOROV, A. M., RABIEH, M. M., RÁKOSY, L., RINDOŠ, M., ROTA, J., ROUGERIE, R., SCHINTLMMEISTER, A., SHIRVANI, A., SIHVONEN, P., SIMONSEN, T. J., SINEV, S. YU., SKOU, P., SOBCZYK, T., SOHN, J.-C., TABELL, J., TARMANN, G., TOKÁR, Z., TRUSCH, R., VARGA, Z., VOLYNKIN, A. V., WANKE, D., YAKOVLEV, R. V., ZAHIRI, R., ZEHAZAD, P., ZELLER, H. C., ZOLOTUHN, V. V. & KARSHOLT, O. (2023a): Catalogue of the Lepidoptera of Iran. – In: RAJAEI, H. & KARSHOLT, O. (eds.): *Lepidoptera Iranica*. – *Integrative Systematics* **6** (Special Issue): 121–459.
<https://doi.org/10.18476/2023.997558.7>
- STEINBAUER, M. J., FIELD, R., GRYTNES, J.-A., TRIGAS, P., AH-PENG, C., ATTORRE, F., BIRKS, H. J. B., BORGES, P. A. V., CARDOSO, P., CHOU, C.-H., DE SANCTIS, M., SEQUEIRA, M. M. DE, DUARTE, M. C., ELIAS, R. B., FERNÁNDEZ-PALACIOS, J. M., GABRIEL, R., GEREAU, R. E., GILLESPIE, R. G., GREIMLER, J., HARTER, D. E. V., HUANG, T.-J., IRL, S. D. H., JEANMONOD, D., JENTSCH, A., JUMP, A. S., KUEFFER, C., NOGUÉ, S., OTTO, R., PRICE, J., ROMEIRAS, M. M., STRASBERG, D., STUESSY, T., SVENNING, J.-C., VETAAS, O. R. & BEIERKUHNLEIN, C. (2016): Topography-driven isolation, speciation and a global increase of endemism with elevation. – *Global Ecology and Biogeography* **25**: 1097–1107.
<https://doi.org/10.1111/geb.12469>
- WINKWORTH, R. C., WAGSTAFF, S. J., GLENNY, D. & LOCKHART, P. J. (2005): Evolution of the New Zealand mountain flora: origins, diversification and dispersal. – *Organisms Diversity & Evolution* **5**: 237–247.
<https://doi.org/10.1016/j.ode.2004.12.001>

Authors' addresses:

¹State Museum of Natural History Stuttgart, Rosenstein 1, D-70191 Stuttgart, Germany;
e-mails: hossein.rajaei@smns-bw.de (HR, corresponding author), sajad.noori@smns-bw.de (SN);
 <https://orcid.org/0000-0002-3940-3734> (HR),  <https://orcid.org/0000-0002-9933-6713> (SN)

²Zoological Museum, Natural History Museum of Denmark, Universitetsparken 15, DK-2100 Copenhagen, Denmark;
e-mail: okarsholt@snm.ku.dk;  <https://orcid.org/0000-0002-6969-2549>

³Canadian Food Inspection Agency, Ottawa Plant Laboratory, Entomology Laboratory, 960 Carling Ave., Ottawa K1A 0C6, Ontario, Canada; e-mail: Reza.Zahiri@inspection.gc.ca;  <https://orcid.org/0000-0001-6274-6973>

ZooBank registration: <https://zoobank.org/References/FE9D2120-CD95-4ACC-B2B5-0583C5242D39>

Manuscript received: 11.X.2022; accepted: 10.I.2023.

Appendix 1. Number of resident species (R) within each Lepidoptera family in Iran. Species requiring further confirmation (U) are also listed, together with erroneously reported species (E) and species erroneously reported but possibly occurring in the country (EP). Endemic species are listed in the last column.

Nr.	Family	R	U	E	EP	Endemic
1	Micropterigidae	2	-	-	-	-
2	Hepialidae	1	-	-	-	-
3	Nepticulidae	33	2	-	1	-
4	Heliozelidae	-	1	-	-	-
5	Adelidae	4	-	-	-	-
6	Tischeriidae	4	1	-	-	-
7	Meessiidae	11	-	-	-	4
8	Psychidae	14	1	1	-	7
9	Eriocottidae	1	-	-	1	-
10	Tineidae	66	7	-	1	9
11	Bucculatricidae	12	2	1	-	1
12	Gracillariidae	57	1	-	-	4
13	Bedelliidae	2	-	-	-	-
14	Heliodinidae	1	-	-	-	-
15	Lyonetiidae	3	-	-	-	1
16	Argyresthiidae	5	1	-	-	1
17	Yponomeutidae	4	-	-	-	-
18	Ypsolophidae	12	1	-	1	3
19	Plutellidae	5	1	-	-	3
20	Glyphipterigidae	4	-	-	-	-
21	Douglasiidae	6	-	-	-	-
22	Ustyurtiidae	1	-	-	-	1
23	Choreutidae	5	2	-	-	-
24	Galacticidae	2	-	-	-	1
25	Tortricidae	211	49	2	1	30
26	Cossidae	82	-	3	1	15
27	Sesiidae	55	4	4	-	12
28	Brachodidae	12	2	-	-	3
29	Zygaenidae	74	-	2	-	38
30	Limacodidae	2	-	-	-	-
31	Epipyropidae	1	-	-	-	1
32	Lecithoceridae	3	-	-	-	1
33	Autostichidae	59	1	1	-	36
34	Oecophoridae	9	8	-	-	5
35	Lypusidae	-	2	-	-	-
36	Depressariidae	65	10	-	1	8

Nr.	Family	R	U	E	EP	Endemic
37	Cosmopterigidae	32	1	-	-	4
38	Gelechiidae	209	27	2	-	25
39	Pterolonchidae	1	-	-	-	-
40	Elachistidae	12	-	1	-	5
41	Coleophoridae	181	7	-	-	35
42	Batrachedridae	1	-	-	-	-
43	Scythrididae	32	7	2	1	7
44	Stathmopodidae	5	-	-	-	1
45	Blastobasidae	1	-	-	-	-
46	Momphidae	1	1	-	-	-
47	Alucidae	11	1	-	-	2
48	Pterophoridae	93	2	1	1	5
49	Carposinidae	2	1	1	-	2
50	Epermeniidae	7	-	-	-	-
51	Hesperiidae	41	1	3	-	-
52	Papilionidae	10	1	-	-	2
53	Pieridae	53	2	4	1	6
54	Lycaenidae	208	7	10	2	61
55	Nymphalidae	140	6	7	-	13
56	Pyrilidae	455	12	3	-	130
57	Crambidae	315	2	4	1	66
58	Cimeliidae	1	-	-	-	-
59	Drepanidae	7	-	2	-	-
60	Lasiocampidae	38	1	4	-	8
61	Brahmaeidae	4	1	-	-	1
62	Bombycidae	1	-	-	-	-
63	Saturniidae	4	3	-	-	-
64	Sphingidae	33	-	1	-	-
65	Geometridae	474	65	9	4	114
66	Notodontidae	24	1	7	1	3
67	Erebidae	324	12	6	4	55
68	Euteliidae	2	-	-	-	-
69	Nolidae	26	2	-	-	1
70	Noctuidae	941	36	12	2	161
	Totals	4,517	295	93	24	891

Appendix 2. List of endemic Lepidoptera species in Iran, sorted by family.

MEESSIIDAE (4) <i>Infurcitinea fasciella</i> Gaedike, 1983 <i>Infurcitinea megalopterella</i> Petersen, 1964 <i>Infurcitinea obscuroides</i> Gaedike, 1983 <i>Infurcitinea teheranensis</i> Petersen, 1971	<i>Cydia persica</i> (Kuznetsov, 1968) <i>Diceratura keredjana</i> Razowski, 1963 <i>Diceratura teheranica</i> Razowski, 1970 <i>Dichrorampha iranica</i> Danilevsky & Kuznetsov, 1968 <i>Epinotia safidana</i> Razowski, 1963 <i>Eucosma persiae</i> Razowski, 1963 <i>Gypsonoma ochrotona</i> Razowski, 1963 <i>Hedya tritofa</i> Alipanah & Baixeras, 2011 <i>Pammene caliginosa</i> Kuznetsov, 1972 <i>Pammene festiva</i> Kuznetsov, 1972 <i>Phtheochroa purissima</i> (Osthelder, 1938) <i>Thiodia confusana</i> Kuznetsov, 1972 <i>Thiodia elbursica</i> Kuznetsov, 1972 <i>Zeiraphera smaragdina</i> Razowski, 1963 <i>Zelotheres conscia</i> (Razowski, 1981)
PSYCHIDAE (7) <i>Amicta davarica</i> (Solyanikov, 2002) <i>Amicta lutensis</i> Arnscheid, Rajaei & Sobczyk, 2021 <i>Kalliesia irana</i> Sobczyk, 2004 <i>Oiketicoides schahkuhensis</i> (Heylaerts, 1885) <i>Oiketicoides villosa</i> (Brandt, 1938) <i>Placodoma eberti</i> Arnscheid, 2020 <i>Placodoma sobczyk</i> Arnscheid, 2020	COSSIDAE (15) <i>Barchaniella mus</i> (Grum-Grshimailo, 1902) <i>Cossulus irani</i> (Daniel, 1937) <i>Cossulus kopetdaghensis</i> Yakovlev & Alipanah, 2021 <i>Cossulus zoroastres</i> (Grum-Grshimailo, 1902) <i>Dyspessa alipanahae</i> Yakovlev, 2008 <i>Dyspessa ariadne</i> Yakovlev, 2008 <i>Dyspessa derbenti</i> Daniel, 1964 <i>Dyspessa elbursensis</i> Daniel, 1964 <i>Dyspessa serica</i> Brandt, 1938 <i>Dyspessa zurvan</i> Yakovlev, 2008 <i>Holcocerus witti</i> Yakovlev, Saldaitis & Ivinskis, 2007 <i>Isoceras teheranica</i> Daniel, 1971 <i>Meharia avicenna</i> Yakovlev, 2011 <i>Meharia baluchestana</i> Alipanah & Yakovlev, 2021 <i>Meharia tancredii</i> Sutton, 1963
TINEIDAE (9) <i>Anomalotinea iranica</i> (Petersen & Gaedike, 1984) <i>Ateliotum confusum</i> Petersen, 1966 <i>Edosa xerxes</i> (Petersen & Gaedike, 1984) <i>Euplocamus schaeferi</i> Amsel, 1959 <i>Kermania pistaciella</i> Amsel, 1964 <i>Neurothaumasia brandti</i> Petersen, 1966 <i>Neurothaumasia maculata</i> Petersen & Gaedike, 1996 <i>Perissomastix falcata</i> Petersen, 1988 <i>Perissomastix laticola</i> Gaedike, 2019	SESIIDAE (12) <i>Bembecia molleti</i> Kallies & Špatenka, 2003 <i>Chamaesphesia adelpha</i> Le Cerf, 1946 <i>Chamaesphesia fredii</i> Le Cerf, 1938 <i>Chamaesphesia inexpectata</i> (Le Cerf, 1938) <i>Chamaesphesia keili</i> Kallies & Špatenka, 2003 <i>Chamaesphesia leucocnemis</i> Le Cerf, 1938 <i>Chamaesphesia leucoparea</i> (Lederer, 1853) <i>Chamaesphesia sefid</i> Le Cerf, 1938 <i>Chamaesphesia thomyris</i> Le Cerf, 1938 <i>Chamaesphesia xantho</i> Le Cerf, 1937 <i>Dipchasphecia consobrina</i> (Le Cerf, 1938) <i>Tinthia mianjangalica</i> Lastuvka, 1995
BUCCULATRICIDAE (1) <i>Bucculatrix iranica</i> Deschka, 1981	BRACHODIDAE (3) <i>Brachodes formosa</i> (Amsel, 1953) <i>Brachodes monotona</i> (Amsel, 1953) <i>Brachodes rhagensis</i> (Lederer, 1870)
GRACILLARIIDAE (4) <i>Acrocercops iraniana</i> Triberti, 1989 <i>Aspilapteryx magna</i> Triberti, 1985 <i>Phyllonorycter iranica</i> Deschka, 1979 <i>Polymitia laristana</i> Triberti, 1986	ZYGAENIDAE (38) <i>Jordanita christinae</i> Keil, 1998 <i>Jordanita rietzschii</i> Keil, 2016 <i>Rhagades brandti</i> (Alberti, 1938) <i>Rhagades tarmanni</i> Keil, 1999 <i>Zygaena aisha</i> Naumann & Naumann, 1980 <i>Zygaena bakhtiyari</i> Hofmann & Tremewan, 2005 <i>Zygaena cacuminum</i> Christoph, 1877 <i>Zygaena chirazica</i> Reiss, 1938 <i>Zygaena christa</i> Reiss & Schulte, 1967 <i>Zygaena ecki</i> Christoph, 1882 <i>Zygaena essenii</i> Blom, 1973 <i>Zygaena fredii</i> Reiss, 1938 <i>Zygaena fusca</i> Hofmann, 2000 <i>Zygaena ginnereissi</i> Hofmann, 2000 <i>Zygaena kermanensis</i> Tremewan, 1975 <i>Zygaena manlia</i> Lederer, 1870 <i>Zygaena mirzayansi</i> Hofmann & Keil, 2011 <i>Zygaena naumannii</i> Hille & Keil, 1999 <i>Zygaena nocturna</i> Ebert, 1974 <i>Zygaena pseudorubicundus</i> Klir & Naumann, 2002
LYONETHIIDAE (1) <i>Phyllobrostis farsensis</i> Mey, 2006	
ARGYRESTHIIDAE (1) <i>Argyresthia mirabiella</i> Toll, 1948	
YPSOLOPHIDAE (3) <i>Ochsenheimeria chorasana</i> Zagulajev, 1988 <i>Ypsolopha kotzschii</i> (Toll, 1948) <i>Ypsolopha nervosellum</i> (Zerny, 1940)	
PLUTELLIDAE (3) <i>Baerenschenkia lamasi</i> Mey, 2022 <i>Deryaxenistis nekrutenkoi</i> Mey, 2022 <i>Paraxenistis ammolofon</i> Mey, 2022	
USTYURTIIDAE (1) <i>Karwandania chimabacchella</i> Amsel, 1959	
GALACTICIDAE (1) <i>Zarcinia</i> sp.	
TORTRICIDAE (30) <i>Aethes destituta</i> Razowski, 1983 <i>Aethes eberti</i> Sutter & Karisch, 2004 <i>Aethes kandovana</i> Alipanah, 2009 <i>Aethes luteopictana</i> (Kennel, 1900) <i>Aethes persica</i> Razowski, 1963 <i>Aethes shakibai</i> Huemer & Wieser, 2004 <i>Argyroploce rhetorica</i> Meyrick, 1920 <i>Argyroploce vandarbana</i> Osthelder, 1938 <i>Choristoneura jecorana</i> (Kennel, 1899) <i>Cnephasia razowskii</i> Alipanah, 2019 <i>Cochylimorpha brandti</i> (Razowski, 1963) <i>Cochylimorpha elegans</i> (Razowski, 1963) <i>Cochylimorpha pirizana</i> (Razowski, 1963) <i>Cochylimorpha scrophulana</i> (Razowski, 1963) <i>Cochylimorpha wiltshirei</i> (Razowski, 1963)	

<i>Zygaena seitzi</i> Reiss, 1938 <i>Zygaena sengana</i> Holik & Sheljuzhko, 1956 <i>Zygaena speciosa</i> Reiss, 1937 <i>Zygaena tenhagenova</i> Hofmann, 2005 <i>Zygaenoprocris duskei</i> (Grum-Grshimailo, 1902) <i>Zygaenoprocris efetovi</i> Mollet & Tarmann, 2007 <i>Zygaenoprocris fredii</i> (Alberti, 1939) <i>Zygaenoprocris hasarani</i> Keil, 2020 <i>Zygaenoprocris hofmanni</i> Mollet & Tarmann, 2007 <i>Zygaenoprocris khorassana</i> (Alberti, 1939) <i>Zygaenoprocris kliri</i> Keil, 2002 <i>Zygaenoprocris molleti</i> Keil, 2020 <i>Zygaenoprocris persepolis</i> (Alberti, 1938) <i>Zygaenoprocris puschni</i> Keil, 2020 <i>Zygaenoprocris rjabovi</i> (Alberti, 1938) <i>Zygaenoprocris schahdadiani</i> Keil, 2020 <i>Zygaenoprocris taftana</i> (Alberti, 1939) <i>Zygaenoprocris valii</i> Keil, 2020	<i>Ethmia alba</i> (Amsel, 1949) <i>Ethmia derbendella</i> Sattler, 1967 <i>Ethmia persica</i> Kun, 2007 <i>Ethmia sattleri</i> Kun, 2007
EPIPYROPIDAE (1) <i>Epimesophantia dlabolai</i> Krampfl, 1983	COSMOPTERIGIDAE (4) <i>Ascalenia imbellia</i> Kasy, 1974 <i>Ascalenia sirjanella</i> Kasy, 1975 <i>Pseudascalenia abbasella</i> Kasy, 1974 <i>Vulcaniella schultzei</i> (Amsel, 1959)
LECITHOCERIDAE (1) <i>Lecithocera persica</i> Gozmány, 1978	GELECHIIDAE (25) <i>Agnippe separatella</i> Bidzilya & Li, 2010 <i>Anarsia belutschistanella</i> (Amsel, 1959) <i>Deltophora beatrix</i> Sattler, 1979 <i>Filatima armata</i> Bidzilya & Huemer, 2022 <i>Gnorimoschema elbursicum</i> Povolny, 1984 <i>Megacraspedus goletanicus</i> Huemer & Karsholt, 2018 <i>Microlechia iranica</i> (Povolný, 1976) <i>Ornativalva plicella</i> Sattler, 1976 <i>Ornativalva roseosuffusella</i> Sattler, 1967 <i>Ornativalva rufipuncta</i> Sattler, 1976 <i>Scrobipalpa albostrata</i> Povolný, 1977 <i>Scrobipalpa cryptica</i> Povolný, 1969 <i>Scrobipalpa helmuti</i> Povolny, 1977 <i>Scrobipalpa kasyvartianella</i> Povolný, 1967 <i>Scrobipalpa laisina</i> Povolný, 1976 <i>Scrobipalpa nigromaculata</i> (Povolný, 2002) <i>Scrobipalpa optima</i> Povolný, 1969 <i>Scrobipalpa oregata</i> Povolný, 1972 <i>Scrobipalpa scrobipalpulina</i> Povolný, 1967 <i>Spiniphallus eberti</i> Bidzilya & Karsholt, 2019 <i>Stomopteryx pallidella</i> Amsel, 1959 <i>Struempelia renatella</i> Amsel, 1977 <i>Telphusa pistaciae</i> Sattler, 1982 <i>Tricerophora acutivalva</i> Bidzilya & Mey, 2018 <i>Vladimirea stepicola</i> Povolný, 1976
AUTOSTICHIDAE (36) <i>Acrosyntaxis anagramma</i> Gozmány, 2008 <i>Acrosyntaxis cyclacantha</i> Gozmány, 2008 <i>Acrosyntaxis micracantha</i> Gozmány, 2008 <i>Acrosyntaxis pilatus</i> (Gozmány, 1963) <i>Acrosyntaxis rhyparastis</i> Gozmány, 2008 <i>Amselina adornata</i> Gozmány, 2008 <i>Amselina odynera</i> Gozmány, 2008 <i>Amselina stagonophora</i> Gozmány, 2008 <i>Concordaxis convergens</i> Gozmány, 2008 <i>Cyllaraxis cambyses</i> Gozmány, 2000 <i>Cyllaraxis cyrus</i> Gozmány, 2000 <i>Dyspastus mucronatus</i> Gozmány, 2008 <i>Orpecacantha multispina</i> Gozmány, 2008 <i>Orpecacantha pardalis</i> Gozmány, 2008 <i>Orpecovalva effendi</i> (Dozmány, 1963) <i>Orpecovalva eremita</i> (Gozmány, 1963) <i>Orpecovalva singularis</i> Gozmány, 2008 <i>Orpecovalva wiltshirei</i> (Gozmány, 1963) <i>Symmoca capnistis</i> Gozmány, 2008 <i>Symmoca euxantha</i> Gozmány, 2008 <i>Symmoca forsteri</i> (Gozmány, 1963) <i>Symmoca maga</i> (Gozmány, 1963) <i>Symmoca megalomera</i> Gozmány, 2008 <i>Symmoca mithra</i> (Gozmány, 1963) <i>Symmoca mithridates</i> (Gozmány, 1963) <i>Symmoca multigrassa</i> Gozmány, 2008 <i>Symmoca persica</i> (Gozmány, 1963) <i>Symmoca sahname</i> (Gozmány, 1963) <i>Symmoca satrapa</i> (Gozmány, 1963) <i>Symmoca sefidica</i> Gozmány, 2008 <i>Symmoca shahriar</i> Gozmány, 2008 <i>Symmoca sheherezade</i> (Gozmány, 1963) <i>Symmoca sindbad</i> (Gozmány, 1963) <i>Symmoca squalida</i> Gozmány, 2008 <i>Symmoca striolatella</i> Gozmány, 1963 <i>Symmoca vojitsi</i> Gozmány, 2008	ELACHISTIDAE (5) <i>Elachista aeruginosa</i> Parenti, 1981 <i>Elachista cornuta</i> Parenti, 1981 <i>Elachista derbendi</i> Parenti, 1981 <i>Elachista semnani</i> Parenti, 1981 <i>Haplochromis sinevi</i> (Baldizzzone, 1993)
OECOPHORIDAE (5) <i>Pleurota delattinia</i> Back, 1973 <i>Pleurota gnathella</i> Back, 1973 <i>Pleurota lineata</i> Toll, 1947 <i>Pleurota media</i> Back, 1973 <i>Pleurota persica</i> Back, 1973	COLEOPHORIDAE (35) <i>Coleophora accadica</i> Baldizzzone, 1994 <i>Coleophora aculeata</i> Baldizzzone, 1994 <i>Coleophora amphorella</i> Baldizzzone, 1994 <i>Coleophora aporiella</i> Baldizzzone, 1989 <i>Coleophora carmaniae</i> Baldizzzone, 1994 <i>Coleophora coronata</i> Baldizzzone, 1994 <i>Coleophora darica</i> Baldizzzone, 1994 <i>Coleophora decoratella</i> Toll, 1959 <i>Coleophora elamita</i> Baldizzzone, 1994 <i>Coleophora elbursella</i> Baldizzzone, 1994 <i>Coleophora eumorphella</i> Baldizzzone, 1994 <i>Coleophora flabelligerella</i> Rebel, 1919 <i>Coleophora flammea</i> Baldizzzone, 1994 <i>Coleophora fusca</i> Toll, 1952 <i>Coleophora ganglionella</i> Baldizzzone, 1994 <i>Coleophora hatamae</i> Toll, 1959 <i>Coleophora hieratica</i> Baldizzzone, 1994 <i>Coleophora inclita</i> Baldizzzone, 1994 <i>Coleophora inopinata</i> Baldizzzone, 1994 <i>Coleophora kandevanella</i> Toll, 1952 <i>Coleophora kitella</i> Baldizzzone, 1994 <i>Coleophora kotalensis</i> Baldizzzone, 1994 <i>Coleophora makuensis</i> Baldizzzone, 1994 <i>Coleophora minutula</i> Baldizzzone, 1994 <i>Coleophora monstrosa</i> Baldizzzone, 1994 <i>Coleophora namakella</i> Amsel, 1977 <i>Coleophora ovata</i> Baldizzzone, 1994 <i>Coleophora parthica</i> Baldizzzone, 1994 <i>Coleophora persana</i> Baldizzzone, 1990
DEPRESSARIIDAE (8) <i>Agonopterix bakriella</i> Amsel, 1958 <i>Agonopterix demissella</i> Hannemann, 1958 <i>Agonopterix elbursella</i> Hannemann, 1976 <i>Agonopterix miyanella</i> Amsel, 1972	

<i>Coleophora rostrata</i> Baldizzzone, 1994 <i>Coleophora schaeuffeleella</i> Toll, 1959 <i>Coleophora schahkuhensis</i> Toll, 1952 <i>Coleophora simplex</i> Baldizzzone, 1994 <i>Coleophora sivandella</i> Toll, 1959 <i>Coleophora sobria</i> Baldizzzone, 1994	<i>Polyommatus femininoides</i> (Eckweiler, 1987) <i>Polyommatus forsteri</i> (Pfeiffer, 1938) <i>Polyommatus hamadanensis</i> (de Lesse, 1959) <i>Polyommatus kashani</i> Eckweiler, 2013 <i>Polyommatus kendevari</i> (Forster, 1956) <i>Polyommatus kermansis</i> (de Lesse, 1963) <i>Polyommatus klaussschuriani</i> ten Hagen, 1999 <i>Polyommatus lorestanus</i> Eckweiler, 1997 <i>Polyommatus lori</i> Eckweiler, 2013 <i>Polyommatus luna</i> Eckweiler, 2002 <i>Polyommatus masulensis</i> ten Hagen & Schurian, 2000 <i>Polyommatus mofidii</i> (de Lesse, 1963) <i>Polyommatus morgani</i> (Le Cerf, 1909) <i>Polyommatus musa</i> Koçak & Hosseinpour, 1996 <i>Polyommatus paulae</i> Wiemers & De Prins, 2004 <i>Polyommatus peilei</i> Bethune-Baker, 1921 <i>Polyommatus pfeifferi</i> (Brandt, 1938) <i>Polyommatus posthumus</i> (Christoph, 1877) <i>Polyommatus pseudoxerxes</i> (Forster, 1960) <i>Polyommatus sennanensis</i> (de Lesse, 1959) <i>Polyommatus sephidarensis</i> Karbalaye, 2008 <i>Polyommatus shahkuhensis</i> Lukhtanov et al., 2008 <i>Polyommatus shahrami</i> Skala, 2001 <i>Polyommatus shirkuhensis</i> ten Hagen & Eckweiler, 2001 <i>Polyommatus sorkhensis</i> Eckweiler, 2003 <i>Polyommatus stemppferi</i> (Brandt, 1938) <i>Polyommatus tenhageni</i> Schurian & Eckweiler, 1999 <i>Polyommatus urmiaensis</i> Schurian & ten Hagen, 2003 <i>Polyommatus xerxes</i> (Staudinger, 1899) <i>Polyommatus zarathustra</i> Eckweiler, 1997 <i>Polyommatus zardensis</i> Schurian & ten Hagen 2001 <i>Satyrrium persepolis</i> Eckweiler & ten Hagen, 2003 <i>Satyrrium sassanides</i> (Kollar, [1849])
SCYTHRIDIDAE (7) <i>Scythris alborzensis</i> Passerin d'Entrèves & Roggero, 2011 <i>Scythris ampullella</i> Passerin d'Entrèves & Roggero, 2012 <i>Scythris bifasciella</i> Passerin d'Entrèves & Roggero, 2011 <i>Scythris elburzi</i> Passerin d'Entrèves & Roggero, 2008 <i>Scythris ethmiella</i> Amsel, 1974 <i>Scythris farsi</i> Passerin d'Entrèves, 2009 <i>Scythris tridentata</i> Passerin d'Entrèves & Roggero, 2012	
STATHMOPODIDAE (1) <i>Tortilia pallidella</i> Kasy, 1973	
ALUCITIDAE (2) <i>Alucita iranensis</i> Scholz & Jäckh, 1994 <i>Tephroniopsis geometridalis</i> Amsel, 1961	
PTEROPHORIDAE (5) <i>Agdistis iranica</i> Alipanah & Ustjuzhanin, 2007 <i>Calyciphora golestonica</i> Alipanah & Ustjuzhanin, 2005 <i>Marasmarcha iranica</i> Arenberger, 1999 <i>Merrifieldia farsi</i> (Arenberger, 1981) <i>Tabulaephorus djebeli</i> (Arenberger, 1981)	
CARPOSINIDAE (2) <i>Carposina ekbatana</i> Amsel, 1978 <i>Carposina roesleri</i> Amsel, 1977	
PAPILIONIDAE (2) <i>Allancastris louristana</i> (Le Cerf, 1908) <i>Archon bostanchii</i> de Freina & Naderi, 2003	
PIERIDAE (6) <i>Anthocharis carolinae</i> Back, 2005 <i>Colias sagartia</i> Lederer, 1869 <i>Euchloe lessei</i> Bernardi, 1957 <i>Euchloe persica</i> Verity, 1908 <i>Euchloe ziyani</i> Leestmans & Back, 2001 <i>Pieris persis</i> Verity, 1922	
LYCAENIDAE (61) <i>Agriades aegagrus</i> (Christoph, 1874) <i>Callophrys farsica</i> ten Hagen, 2009 <i>Callophrys mystaphioides</i> Krupitsky & Kolesnichenko, 2013 <i>Callophrys naderii</i> ten Hagen, 2008 <i>Glaucoopsyche hazerii</i> Karbalaye & Harandi, 2007 <i>Lycaena lamponides</i> (Staudinger, 1901) <i>Neolysandra corona</i> (Verity, 1936) <i>Neolysandra fereiduna</i> Skala, 2002 <i>Plebejus afshar</i> Eckweiler, 1998 <i>Plebejus alizadehorum</i> Bálint & Karbalaye, 2020 <i>Plebejus ardashir</i> (Eckweiler, 1998) <i>Plebejus callaghani</i> (Carbonell & Naderi, 2007) <i>Plebejus montetaftanus</i> (ten Hagen & Schurian, 2001) <i>Plebejus vaneki</i> (Weidenhoffer & Klir 2000) <i>Polyommatus achaemenes</i> Skala, 2002 <i>Polyommatus aereus</i> Eckweiler, 1998 <i>Polyommatus ahmadi</i> (Carbonell, 2001) <i>Polyommatus ardschira</i> (Brandt, 1938) <i>Polyommatus baltazardi</i> (de Lesse, 1963) <i>Polyommatus barmifiruze</i> (Carbonell, 2000) <i>Polyommatus birunii</i> Eckweiler & ten Hagen, 1998 <i>Polyommatus caerulea</i> (Staudinger, 1871) <i>Polyommatus darius</i> Eckweiler & ten Hagen, 1998 <i>Polyommatus demavendi</i> (Pfeiffer, 1938) <i>Polyommatus dizinensis</i> (Schurian, 1982) <i>Polyommatus eckweileri</i> ten Hagen, 1998 <i>Polyommatus esfahensis</i> (Carbonell, 2000) <i>Polyommatus faramarzii</i> (Skala, 2001)	NYMPHALIDAE (13) <i>Chazara mortezai</i> Carbonell & Leestmans, 2000 <i>Hyponephele shirazica</i> Carbonell, 1997 <i>Melanargia evartianae</i> Wagens, 1976 <i>Melitaea abbas</i> Gross & Ebert, 1975 <i>Melitaea casta</i> Kollar, [1849] <i>Melitaea consulis</i> Wiltshire, 1941 <i>Melitaea eberti</i> Koçak, 1980 <i>Melitaea jitka</i> D. Weiss & Major, 2000 <i>Melitaea sarvistana</i> Wiltshire, 1941 <i>Melitaea saxatilis</i> Christoph, 1874 <i>Melitaea semiconsulis</i> Coutsis, van Oorschot & Naderi, 2014 <i>Melitaea shahvarica</i> Kolesnichenko & Kotlobay, 2022 <i>Satyrus astyages</i> Skala, 2003
	PYRALIDAE (130) <i>Acrobasis bouchirella</i> (Amsel, 1951) <i>Acrobasis mirabiella</i> (Toll, 1948) <i>Acrobasis persicella</i> (Amsel, 1951) <i>Acrobasis zamartha</i> (Roesler, 1987) <i>Acteniopsis gambroensis</i> Alipanah & Asselbergs, 2018 <i>Aglossa simplicialis</i> Christoph, 1893 <i>Amechedia herlina</i> Roesler, 1989 <i>Ancylosis canella</i> Roesler, 1973 <i>Ancylosis decentella</i> (Ragonot, 1887) <i>Ancylosis externella</i> Roesler, 1973 <i>Ancylosis iranella</i> Ragonot, 1887 <i>Ancylosis kazerunella</i> Roesler, 1973 <i>Ancylosis persicella</i> (Amsel, 1961) <i>Anemmalocera flavescens</i> Amsel, 1961 <i>Anerastia infumella</i> Ragonot, 1887 <i>Ardekanopsis griseella</i> Amsel, 1954 <i>Arsenaria indistinctalis</i> (Amsel, 1949) <i>Arsenaria strictalis</i> (Amsel, 1949) <i>Arsissa firusella</i> (Amsel, 1961) <i>Asalebria alida</i> Roesler, 1988 <i>Asalebria pallidesignata</i> (Toll, 1948) <i>Asaluria reisseri</i> Amsel, 1958 <i>Asclerobia tchahabarella</i> (Amsel, 1950) <i>Benderia talhouki</i> Amsel, 1949 <i>Bostra bifascialis</i> Amsel, 1950

Bostra farsalis Amsel, 1950
Bostra fuscella Amsel, 1959
Bostra pseudospaniella Amsel, 1951
Coleocornutia ecbataniella Amsel, 1961
Coleocornutia shirazella Amsel, 1961
Dalakia uniformella Amsel, 1961
Dentitegumia dhana Roesler, 1989
Dentitegumia sirjana Roesler, 1989
Dioryctria stenopterella Amsel, 1961
Ecbatania alvandella Amsel, 1961
Elegia kharazii Alipanah & Slamka, 2021
Ematheudes persicella (Amsel, 1961)
Epiparthia constituta Roesler, 1989
Epischnia unicornutella Amsel, 1961
Eurhodope hyrcanella Amsel, 1954
Eurhodope mira Amsel, 1954
Euzophera comeella Roesler, 1973
Euzophera derbendicola Roesler, 1973
Euzophera eburnella Amsel, 1954
Euzophera flagella (Lederer, 1869)
Faveria tchourouma (Amsel, 1961)
Gymnancyla iranella Alipanah & Asselbergs, 2014
Homoeosoma obatricostella Ragonot, 1887
Hypotia brandti (Amsel, 1949)
Hypotia colchicaloides (Amsel, 1949)
Hypotia infascialis (Amsel, 1949)
Hypotia metasialis (Amsel, 1954)
Hypotia mimicalis (Amsel, 1951)
Hypotia povolnyi (Amsel, 1975)
Hypotia rectangula (Amsel, 1954)
Keradere geminella (Amsel, 1954)
Khachia albicostella Amsel, 1961
Khuzistania richteri Amsel, 1959
Laristania iranella (Amsel, 1954)
Laristania khorassanella (Amsel, 1950)
Laristania sardzella Amsel, 1951
Laristania taftanella (Amsel, 1954)
Lepidogma hyrcanalis Amsel, 1961
Loryma bilinealis (Amsel, 1961)
Makrania belutschistanella Amsel, 1959
Makrania benderella Amsel, 1961
Morosaphycita cornutella (Amsel, 1951)
Myelois conformella Amsel, 1951
Myelois demawendella Zerny, 1939
Myelois paucipunctella Zerny, 1939
Myrllaea pittionii (Amsel, 1950)
Nephopterix macrocirtensis Amsel, 1954
Nephopterix minimella Amsel, 1954
Nephopterix oxybiella Amsel, 1950
Neurotoma belutschistanella (Amsel, 1961)
Ocrisiodes antiopa Roesler, 1988
Ocrisiodes bamella (Amsel, 1958)
Ocrisiodes keredjella Amsel, 1961
Ocrisiodes occulta Roesler, 1990
Ocrisiodes polyptychella (Ragonot, 1887)
Ocrisiodes senganella (Amsel, 1961)
Ocrisiodes sesamella Roesler, 1988
Ormudzia cameratella Amsel, 1954
Palpusopsis roseella Amsel, 1959
Paraemporia monotona Amsel, 1951
Parasefidia benderella Amsel, 1950
Parasefidia comeella (Amsel, 1951)
Pempelia caspiella (Amsel, 1959)
Pempelia pallidella (Toll, 1948)
Pempelia tarella (Zerny, 1939)
Peoria costella Amsel, 1954
Peoria ematheudella Amsel, 1954
Phycita ardekanella Amsel, 1950
Phycita balutchistanella Amsel, 1950
Phycita comeella Amsel, 1950
Phycita hyrcanella Amsel, 1961
Phycita mianella Amsel, 1950
Phycita persarum (Toll, 1948)
Phycita pirizanella Amsel, 1954

Phycita taftanella Amsel, 1950
Phycitodes binaloudella (Amsel, 1961)
Pima keredjella (Amsel, 1954)
Pima milka (Roesler, 1990)
Pirizania salebrosella Amsel, 1954
Pirizanodes farsella Amsel, 1961
Polyochodes albidiscella (Amsel, 1954)
Polyochodes farsella (Amsel, 1951)
Polyochodes sefidella (Amsel, 1954)
Praerhinaphe monotona Amsel, 1954
Pristocercella solskyi (Christoph, 1877)
Prorophora senganella (Amsel, 1951)
Psorosa elbursella Amsel, 1954
Psorosa mechedella Amsel, 1954
Psorosodes dalakiella Amsel, 1954
Salebriodes ephestiella Amsel, 1950
Sareptania rectangulella (Amsel, 1950)
Sclerobiodes persica Amsel, 1951
Scotomera comealis (Amsel, 1951)
Scotomera kirmanialis (Amsel, 1961)
Scotomera laristanalis (Amsel, 1961)
Scotomera luteocostalis (Amsel, 1950)
Scotomera shirazalis (Amsel, 1961)
Sefidia persica Amsel, 1950
Selagia disclusella Ragonot, 1887
Shirazia monotona Amsel, 1954
Stemmatophora persica (Amsel, 1949)
Stemmatophora schwingenschussi Zerny, 1939
Synaphe unifascialis (Amsel, 1961)
Tenellopsis microphycita Amsel, 1961
Zitha mira (Amsel, 1951)

CRAMBIDAE (66)

Aeschremon belutschistanalis Amsel, 1959
Aeschremon tenalis Amsel, 1961
Agriphila bleszynskiella Amsel, 1961
Agriphila microselasella Bleszyński, 1959
Anania rudalis (Zerny, 1939)
Anarpia iranella (Zerny, 1939)
Aporodes pygmaealis Amsel, 1961
Catoptria pfeifferi (Osthelder, 1938)
Cybalomia dentilinealis Amsel, 1961
Elbursia stocki Amsel, 1950
Ephelis belutschistanalis (Amsel, 1961)
Ephelis mirabilis (Amsel, 1959) (Emprepes)
Ephelis palealis (Amsel, 1949) (Emprepes)
Epimetasia abbasalis Amsel, 1974
Euchromius keredjella (Amsel, 1949)
Euchromius malekalis Amsel, 1961
Evergestis affinis Amsel, 1951
Evergestis comealis Amsel, 1961
Evergestis elbursalis Amsel, 1961
Evergestis laristanalis Amsel, 1961
Evergestis petasalis Zerny, 1939
Evergestis shirazalis Amsel, 1954
Evergestis tenuiscriptalis Rebel, 1903
Fredia tchahbaharia Amsel, 1961
Glyphodes interruptalis (Amsel, 1950)
Herpetogramma fascinalis (Amsel, 1950)
Iranarpia albalis (Amsel, 1961)
Iranarpia silacealis (Amsel, 1951)
Iranomecyna dimorphalis (Amsel, 1961)
Krombia minimella Amsel, 1961
Loxostege alticolalis (Christoph, 1877)
Loxostege mira Amsel, 1951
Loxostege nissalis (Amsel, 1961)
Loxostege shirazalis Amsel, 1961
Margaretania superba Amsel, 1961
Mecyna albalis Amsel, 1961
Mecyna grisealis Amsel, 1961
Mecyna indistinctalis Amsel, 1961
Mecyna sefidalis (Amsel, 1950)
Mesolia alborzella Bassi, 2013
Metasia alvandalis Amsel, 1961
Metasia belutschistanalis Amsel, 1961

<i>Metasia comealis</i> Amsel, 1961 <i>Metasia farsalis</i> Amsel, 1961 <i>Metasia laristanalis</i> Amsel, 1961 <i>Metasia sefidalis</i> Amsel, 1961 <i>Metaxmeste elbursana</i> (Amsel, 1961) <i>Metaxmeste staudingeri</i> (Christoph, 1872) <i>Mukia nigroanalis</i> Amsel, 1954 <i>Palpita persicalis</i> (Amsel, 1951) <i>Pyrausta laristanalis</i> Amsel, 1961 <i>Pyrausta nanalis</i> (Christoph, 1888) <i>Pyrausta pionalis</i> Toll, 1948 <i>Pyrausta taftanalis</i> Amsel, 1961 <i>Scoparia saerdabella</i> Osthelder, 1938 <i>Sitochroa urmiensis</i> Alipanah, 2020 <i>Syrianarpia elburzalis</i> Alipanah & Gianti, 2017 <i>Syrianarpia kasyi</i> Leraut, 1984 <i>Tegostoma marginalis</i> Amsel, 1961 <i>Titanio ecbataniella</i> Amsel, 1958 <i>Titanio hyrcanella</i> Amsel, 1950 <i>Tulaya margelana</i> (Bethune-Baker, 1893) <i>Tulaya staudingeri</i> (Bethune-Baker, 1893) <i>Udea ardekanalis</i> Amsel, 1961 <i>Udea mechedalis</i> (Amsel, 1950) <i>Udea pyraustiformis</i> (Toll, 1948)	<i>Eupithecia elbursi</i> Vojnits, 1988 <i>Eupithecia elbursiata</i> Schütze, 1960 <i>Eupithecia forsterata</i> Schütze, 1960 <i>Eupithecia frontosa</i> Brandt, 1941 <i>Eupithecia fuscopunctata</i> Brandt, 1938 <i>Eupithecia harenosa</i> Brandt, 1938 <i>Eupithecia husseini</i> Brandt, 1938 <i>Eupithecia inexcitata</i> Vojnits, 1982 <i>Eupithecia keredjana</i> Brandt, 1938 <i>Eupithecia laterata</i> Dietze, 1904 <i>Eupithecia mahomedana</i> Brandt, 1938 <i>Eupithecia montanata</i> Brandt, 1938 <i>Eupithecia persidis</i> Mironov & Ratzel, 2012 <i>Eupithecia pfeifferata</i> Schütze, 1960 <i>Eupithecia problematicata</i> Schütze, 1960 <i>Eupithecia prouti</i> Bytinski-Salz & Brandt, 1937 <i>Eupithecia ridiculata</i> Brandt, 1938 <i>Eupithecia sectila</i> Brandt, 1938 <i>Eupithecia siata</i> Brandt, 1938 <i>Eupithecia tarensis</i> Schwingenschuss, 1939 <i>Eupithecia truschi</i> Mironov & Ratzel, 2012 <i>Eupithecia undulifera</i> Schwingenschuss, 1939 <i>Eupithecia zagrosata</i> Mironov & Ratzel, 2012 <i>Gnopharmia kasrunensis</i> Wehrli, 1939 <i>Gnophosema palumba</i> Brandt, 1938 <i>Heterobapta plumellata</i> Wiltshire, 1943 <i>Heteroculpinia pasargades</i> (Brandt, 1938) <i>Heteroculpinia prouti</i> (Brandt, 1938) <i>Idaea persica</i> (Brandt, 1941) <i>Idaea persidis</i> (Wiltshire, 1966) <i>Idaea wiltshirei</i> (Brandt, 1938) <i>Isturgia sengana</i> (Brandt, 1940) <i>Isturgia suleiman</i> (Wehrli, 1936) <i>Isturgia tengistanica</i> (Brandt, 1938) <i>Isturgia wehrlii</i> (Brandt, 1940) <i>Lithostege buxtoni</i> Prout, 1920 <i>Lithostege kiabii</i> Rajaei, 2011 <i>Lithostege samandooki</i> Rajaei, 2011 <i>Lithostege stadii</i> Lehmann, 2011 <i>Nebula longipennis</i> (Brandt, 1941) <i>Nebula reclamata</i> (Prout, 1914) <i>Nebula saidabadi</i> (Brandt, 1941) <i>Nebula vartianata</i> (Wiltshire, 1970) <i>Neognopharmia horhammeri</i> (Brandt, 1838) <i>Nychiodes admirabila</i> Brandt, 1938 <i>Nychiodes farinosa</i> Brandt, 1938 <i>Nychiodes leviata</i> Brandt, 1938 <i>Nychiodes mirzayansi</i> Wanke, Hausmann & Rajaei, 2020 <i>Nychiodes subfusca</i> Brandt, 1938 <i>Nychiodes subvirida</i> Brandt, 1938 <i>Nyssiodes rhodopolitis</i> Wehrli, 1939 <i>Ourapteryx meinekei</i> Rajaei & Kollhorst, 2021 <i>Pasiphila palaeartica</i> (Brandt, 1938) <i>Photoscotisia antitypa</i> Brandt, 1941 <i>Protorhoe tangaba</i> (Wiltshire, 1952) <i>Rhodostrophia iranica</i> Schwingenschuss, 1939 <i>Rhodostrophia nesam</i> Brandt, 1938 <i>Rhodostrophia tabestana</i> Trusch & Hausmann, 2007 <i>Rhodostrophia tumulosa</i> Brandt, 1938 <i>Rhodostrophia vahabzadehi</i> Rajaei, Hausmann & Trusch, 2022 <i>Sabzia graminaria</i> (Kollar, 1850) <i>Scodionista gyulai</i> Weisert, 2009 <i>Scopula benigna</i> (Brandt, 1941) <i>Scopula bullata</i> (Vojnits, 1986) <i>Scopula chalcographata</i> (Brandt, 1938) <i>Scopula gracilis</i> (Brandt, 1941) <i>Scopula hoerhammeri</i> Brandt, 1941 <i>Scopula iranaria</i> Bytinski-Salz & Brandt, 1937 <i>Scopula lactarioides</i> Brandt, 1941 <i>Scopula orbeorum</i> (Hausmann, 1996) <i>Scopula origalis</i> (Brandt, 1941) <i>Scotopteryx decolor</i> (Schwingenschuss, 1939) <i>Scotopteryx fuscofasciata</i> (Brandt, 1938) <i>Scotopteryx kurmanjiana</i> Rajaei & László, 2014 <i>Scotopteryx sterilis</i> (Prout, 1938)
LASIOCAMPIDAE (8) <i>Chilena laristana</i> Daniel, 1949 <i>Chondrostega darius</i> Wiltshire, 1952 <i>Giselea pistaciae</i> (Wiltshire, 1952) <i>Pachygastris herzi</i> (Christoph, 1888) <i>Pachypasa hausmanni</i> Prozorov et al., 2022 <i>Phyllodesma farahae</i> Lajonquière, 1963 <i>Poecilocampa neka</i> Zolotuhin & Zahiri, 2010 <i>Sena cuneata</i> (Brandt, 1938) (Chilena)	
BRAHMAEIDAE (1) <i>Lemonia tamara</i> Antoshin & Zolotuhin, 2013	
GEOMETRIDAE (114) <i>Abraxas wehrlii</i> Bytinski-Salz & Brandt, 1937 <i>Alcis fredii</i> (Wehrli, 1941) <i>Charissa ali</i> (Brandt, 1938) <i>Charissa argillata</i> (Brandt, 1938) <i>Charissa asymmetra</i> (Wehrli, 1936) <i>Charissa pelengi</i> (Brandt, 1938) <i>Charissa subtila</i> (Brandt, 1938) <i>Charissa taftana</i> (Brandt, 1941) <i>Crocallis mirabica</i> Brandt, 1941 <i>Dicrognophos anophaea</i> (Wehrli, 1939) <i>Dicrognophos culminata</i> (Brandt, 1938) <i>Dicrognophos elahi</i> (Brandt, 1938) <i>Dicrognophos eurytiches</i> (Brandt, 1941) <i>Dicrognophos gorgata</i> (Brandt, 1938) <i>Dicrognophos snelleni</i> (Christoph, 1887) <i>Docirava palumbata</i> Mentzer, 1981 <i>Ecleora brandti</i> (Wehrli, 1941) <i>Ennomos fraxineti</i> Wiltshire, 1947 <i>Ennomos vartianae</i> László, 2018 <i>Ennomos zandi</i> Wiltshire, 1947 <i>Entephria catochra</i> (Prout, 1939) <i>Epitherina rhodopoleos</i> Wehrli, 1938 <i>Erannis caspica</i> Laszlo, 2003 <i>Euphyia chalusata</i> Wiltshire, 1970 <i>Euphyia farsica</i> Brandt, 1941 <i>Euphyia khorassana</i> (Brandt, 1941) <i>Euphyia obvallata</i> (Lederer, [1871]) <i>Euphyia scopulata</i> Brandt, 1938 <i>Eupithecia aduncata</i> Brandt, 1938 <i>Eupithecia aequabila</i> Brandt, 1938 <i>Eupithecia aradjouna</i> Brandt, 1938 <i>Eupithecia asperata</i> Brandt, 1938 <i>Eupithecia basurmanca</i> Mironov & Ratzel, 2012 <i>Eupithecia brandti</i> Mironov & Ratzel, 2012 <i>Eupithecia cheituna</i> Brandt, 1938 <i>Eupithecia edaphopteryx</i> Vojnits, 1988	

<i>Selidosema jowzakensis</i> Weisert, 2009 <i>Synopsisia centralis</i> (Wiltshire, 1966) <i>Thetidia recta</i> (Brandt, 1941)	<i>Actebia opisoleuca</i> (Staudinger, 1881) <i>Aegle porphyrinoides</i> Gaal-Haszler et al., 2012 <i>Agrotis psammocharis</i> Boursin, 1950 <i>Agrotis sardzeana</i> Brandt, 1941 <i>Allophytes renalis</i> (Wiltshire, 1941) <i>Amphipoea maryamae</i> Zahiri & Fibiger, 2006 <i>Amphipyra micra</i> Gyulai & Ronkay, 2008 <i>Anagnorisma chamrani</i> Gyulai et al., 2013 <i>Anarta halophila</i> (Gyulai & Ronkay, 2008) <i>Anchoscelis elbursica</i> (Ronkay & Gyulai, 2006) <i>Anchoscelis fuscomixta</i> (Ronkay & Gyulai, 2006) <i>Apamea minoc</i> Babics & Benedek, 2011 <i>Armada gelida</i> (Brandt, 1939) <i>Armada maritima</i> Brandt, 1939 <i>Atethmia sinuata</i> Ronkay & Gyulai, 2006 <i>Benshirachia paradoxa</i> Gyulai, Varga & Ronkay, 2002 <i>Boursinia ferdovsi</i> (Brandt, 1941) <i>Boursinia oxygramma</i> Brandt, 1938 <i>Brachygalea kamalii</i> Shirvani, Ronkay & Talebi, 2008 <i>Brachygalea miskoi</i> Ronkay, 1996 <i>Brandtina albonigra</i> Bytinski-Salz & Brandt, 1937 <i>Bryomima avajensis</i> Gyulai, 2022 <i>Bryomima rosea</i> Brandt, 1941 <i>Bryomima vartianorum</i> Gaal-Haszler et al., 2012 <i>Bryophila argentacea</i> Bytinski-Salz & Brandt, 1937 <i>Bryophila eucharista</i> (Boursin, 1960) <i>Bryophila petricolor</i> Lederer, 1870 <i>Bryophila salomonis</i> (Boursin, 1954) <i>Bryophila thamanaea</i> Hampson, 1908 <i>Bryophila thamanaea</i> Hampson, 1908 <i>Calamia metamorpha</i> (Boursin, 1960) <i>Caradrina altissima</i> Hacker, 2004 <i>Caradrina boursini</i> (F. Wagner, 1936) <i>Caradrina inopinata</i> Hacker, 2004 <i>Caradrina isfahana</i> Hacker, 2004 <i>Caradrina khorassana</i> (Boursin, 1942) <i>Caradrina panurgia</i> (Boursin, 1939) <i>Caradrina parthica</i> Hacker, 2004 <i>Caradrina phanosciera</i> (Boursin, 1939) <i>Caradrina poecila</i> (Boursin, 1939) <i>Caradrina pseudalbina</i> (Boursin, 1942) <i>Caradrina pulvis</i> (Boursin, 1939) <i>Caradrina sarhadica</i> (Boursin, 1942) <i>Caradrina stenoptera</i> (Boursin, 1939) <i>Caradrina zagrobia</i> Hacker, 2004 <i>Caradrina zandi</i> Wiltshire, 1952 <i>Cardepia halophila</i> Hacker, 1998 <i>Cardepia oleagina</i> Hacker, 1998 <i>Chersotis binaloudi</i> Brandt, 1941 <i>Chersotis cryptographa</i> Varga & Gyulai, 2002 <i>Chersotis hoppei</i> Varga et al., 2013 <i>Chersotis lehmanni</i> Varga et al., 2013 <i>Chersotis nitens</i> Brandt, 1941 <i>Chersotis sterilis</i> (Brandt, 1938) <i>Chersotis zaghros</i> Gyulai & Varga, 2006 <i>Chloantha elbursica</i> (Boursin, 1968) <i>Ctenoceratoda lupa</i> (Christoph, 1893) <i>Cucullia khorassana</i> Brandt, 1941 <i>Dasyptolia mazandarana</i> Benedek et al., 2014 <i>Deltote iranica</i> (Kotzch, 1940) <i>Diadochia sacimima</i> Shirvani & Ronkay, 2012 <i>Dichagyris gyulaiivani</i> Gyulai & Varga, 2002 <i>Dichagyris haczi</i> Ronkay & Gyulai, 2009 <i>Dichagyris ilseae</i> Stangelmaier & Fibiger, 2003 <i>Dichagyris lupinus</i> (Brandt, 1941) <i>Dichagyris paisa</i> (Brandt, 1938) <i>Dichagyris taftana</i> Brandt, 1941 <i>Dichagyris zagroica</i> Hacker & Ebert, 2002 <i>Discalera discalis</i> (Brandt, 1938) <i>Drasteriodes leprosa</i> (Brandt, 1938) <i>Dryobotodes glaucus</i> Ronkay & Gyulai, 2006 <i>Dysmilichia gigantea</i> Brandt, 1941 <i>Eremohadena afzalipouri</i> Shirvani, Sheykhnjad & Shoghali, 2012 <i>Eremohadena toerpexa</i> Ronkay & Gyulai, 2006
NOTODONTIDAE (3) <i>Cerura kautti</i> Schintlmeister, 2008 <i>Furcula turbida</i> (Brandt, 1938) <i>Ptilophora</i> sp. n.	
EREBIDAE (55) <i>Amata aserbeidjana</i> (de Freina, 1982) <i>Amata beluchistana</i> de Freina, 2008 <i>Amata dinara</i> de Freina 2010 <i>Amata harandii</i> de Freina & Naderi, 2008 <i>Amata hyrcana</i> (Bang-Haas, 1912) <i>Amata kamarana</i> de Freina, 2010 <i>Amata kordestana</i> de Freina & ten Hagen, 2003 <i>Amata naderii</i> de Freina, 2010 <i>Amata persica</i> (Kollar, 1849) <i>Anydraphila banghaasi</i> Brandt, 1939 <i>Anydraphila distincta</i> Brandt, 1939 <i>Anydraphila hoerhammeri</i> Brandt, 1939 <i>Autophila cinnamomea</i> Ronkay, 1989 <i>Autophila clara</i> Wiltshire, 1952 <i>Autophila deleta</i> Benedek & Ronkay, 2001 <i>Autophila eurytaenia</i> Boursin, 1963 <i>Autophila iranica</i> Ronkay, 1989 <i>Autophila plattneri</i> Boursin, 1955 <i>Autophila sinesafida</i> Wiltshire, 1952 <i>Autophila umbrifera</i> (Kollar, 1848) <i>Catephia cana</i> (Brandt, 1939) <i>Catocala fredii</i> Bytinski-Salz & Brandt, 1937 <i>Catocala luscini</i> Brandt, 1938 <i>Chionoxantha margarita</i> Brandt, 1938 <i>Chionoxantha minutissima</i> Hacker & Ebert, 2002 <i>Chionoxantha nobilis</i> Hacker & Ebert, 2002 <i>Clytie devissima</i> Hacker & Gyulai, 2013 <i>Ebertarctia nordstroemi</i> (Brandt, 1947) <i>Eublemma aftob</i> (Brandt, 1938) <i>Eublemma agnella</i> (Brandt, 1938) <i>Eublemma argenteanea</i> Hacker, 2019 <i>Eublemma caelestis</i> (Brandt, 1938) <i>Eublemma fugitiva</i> (Christoph, 1877) <i>Eublemma jocularis</i> (Christoph, 1877) <i>Eublemma microptera</i> (Brandt, 1939) <i>Eublemma murati</i> (Brandt, 1939) <i>Eublemma nives</i> (Brandt, 1938) <i>Eublemma popovi</i> (Wiltshire, 1953) <i>Eublemma pseudepistota</i> (Brandt, 1938) <i>Eublemma pseudoviridis</i> (Brandt, 1939) <i>Eublemma taftana</i> (Brandt, 1941) <i>Hyrcalypena schwingenschussi</i> Wagner, 1937 <i>Lygephila fereidun</i> Wiltshire, 1961 <i>Micronola irani</i> Fibiger, 2011 <i>Micronola zahirii</i> Fibiger, 2011 <i>Ocnerygia pasargadae</i> de Freina, 2012 <i>Odice keyserlingi</i> (Bienert, 1869) <i>Parocneria audeoudi</i> Brandt, 1938 <i>Parocneria insolita</i> Brandt, 1938 <i>Pelosia uniformis</i> Rothschild, 1921 <i>Zanclostathme elbursalis</i> Draudt, 1937 <i>Zethes brandti</i> Janson, 1977 <i>Zethes narghisa</i> Brandt, 1938 <i>Zethes nemea</i> Brandt, 1938 <i>Zethes zahedanica</i> Gyulai, 2022	
NOLIDAE (1) <i>Nola venusta</i> (Brandt, 1938)	
NOCTUIDAE (162) <i>Abrostola hyrcanica</i> Hacker, 2002 <i>Acrobyla draudti</i> (Brandt, 1939) <i>Acronicta saadi</i> Brandt, 1938 <i>Acronicta solimana</i> (Draudt, 1938) <i>Actebia damnata</i> (Draudt, 1937)	

Euchalcia chalcophanes Dufay, 1963
Euchalcia hyrcaniae Dufay, 1963
Euchalcia incredibilis Hacker & Ebert, 2002
Euchalcia stilpna Dufay, 1969
Euloastra bryophiloides Brandt, 1938
Euxoa abualisinai Varga & Gyulai, 2002
Euxoa adjemi Brandt, 1941
Euxoa aneucta Brandt, 1938
Euxoa dsheiron Brandt, 1938
Euxoa ebadhadiani Gyulai & Varga, 2002
Euxoa emamrezai Gyulai & Ronkay, 2006
Euxoa inclusa Corti, 1931
Euxoa mustelina (Christoph, 1877)
Euxoa perierga Brandt, 1938
Euxoa shahabbasi Gyulai & Varga, 2002
Evisa reisseri Wiltshire, 1952
Frivaldszkyola elami (Ronkay, 2001)
Gortyna golesanensis Fibiger & Zahiri, 2006
Griposia jahannamah (Fibiger et al., 2008)
Hada persa (Alphéraky, 1897)
Hadena cimelia (Brandt, 1938)
Hadena drangiana Gyulai & Hacker, 2013
Hadena haczi Gyulai & Hacker, 2013
Hadena mediana Gyulai & Hacker, 2013
Hadena mesolampira (Brandt, 1938)
Hadena montana (Brandt, 1941)
Hadena phaeoscripta Gyulai & Hacker, 2013
Hadena pyrrhotatos Gyulai & Hacker, 2013
Hadena thecaphaga (Draudt, 1937)
Hadena vulpecula (Brandt, 1938)
Iranada venusta (Brandt, 1939)
Iranada versicolor Brandt, 1939
Karmanica bandarabbassa Hacker & Ebert, 2002
Karmanica chosroes (Brandt, 1938)
Karmanica cyros Hacker & Ebert, 2002
Karmanica magnifica Hacker & Ebert, 2002
Lasionhada draudti Wagner, 1936
Leptologia malaqai Esfandiari, Gyulai, Shahreyari-Nejad & Rabieh, 2022
Lophoterges mariannae Fibiger, 2000
Luperina farsiensis Fibiger & Zahiri, 2005
Margelana brunnea Fibiger, Zahiri & Kononenko, 2007
Masalia philbyi (Brandt, 1941)

Metopoceras solituda (Brandt, 1938)
Metopodicha leily Gyulai & Ronkay, 2008
Metopoplus boursini Brandt, 1938
Mniotype fabulosa Benedek & Ronkay, 2002
Oligia suleiman Rezbanyai-Reser, 1997
Oligia vandarban Rezbanyai-Reser, 1997
Omphalophana serrulata Ronkay & Gyulai, 2006
Opigena khorassana Varga et al., 2015
Orthosia habeleri Wiesmair, Shirvani & Ronkay, 2020
Oxytripia stephania Sutton, 1964
Ozarba tamsina (Brandt, 1947)
Paracentropus cyrus (Brandt, 1938)
Perigrapha mithras (Wiltshire, 1941)
Perigrapha benedeki Ronkay et al., 2010
Photedes macroductus Gyulai, 2020
Polymixis alborsa Babics & Benedek, 2011
Polymixis dubiosa (Brandt, 1938)
Polymixis fibrillata Ronkay & Gyulai, 2006
Polymixis hedygramma (Brandt, 1941)
Polymixis pirkadatka Ronkay & Gyulai, 2006
Polymixis scrophulariae (Wiltshire, 1952)
Polymixis zagrobia (Wiltshire, 1941)
Pseudohadena magnitudinis Hacker & Ebert, 2002
Pseudohadena zahedana Shirvani & Ronkay, 2009
Pseudoligia lucifer Ronkay & Gyulai, 2006
Rezahiria marmota Ronkay, Ronkay & Gyulai, 2014
Rhodocatera rhodocharis (Brandt, 1938)
Shargacucullia faucicola (Wiltshire, 1943)
Shargacucullia kasyi (Wiltshire, 1976)
Shargacucullia szeokekalmani Ronkay, Ronkay & Gyulai, 2011
Standfussiana benedeki Gyulai, 2021
Sympistis idioglypha Brandt, 1938
Synthymia dubiosa Brandt, 1938
Synthymia dubiosa Brandt, 1938
Thargelia attila Ronkay & Gyulai, 2006
Valeria wassalberti Gyulai, 2019
Valerietta forsteri Draudt, 1938
Victrix macrosema (Boursin, 1957)
Victrix sassanica Wiltshire, 1961
Wiltshireola disrupta (Wiltshire, 1952)
Xestia kecskerago Gyulai & Ronkay, 2006

Appendix 3. Numbers of recorded Lepidoptera species, per family, for each Iranian province.

[illegible]