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Crambinae of Iran (Lepidoptera: Pyraloidea, Crambidae)

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Abstract

The Iranian species of the subfamily Crambinae are listed. Earlier investigations on the subfamily are summarized and new data on their distribution in Iran together with distribution maps are provided. The genus *Friedlanderia* Agnew, 1987, and the species *Friedlanderia cicatricella* (Hübner, [1824]), *Agriphila tristella* ([Denis & Schiffermüller], 1775), *A. poliellus* (Treitschke, 1832), *Pediasia jucundellus* (Herrich-Schäffer, 1849), *P. ochristrigellus* (Hampson, 1896), *Calamotropha lupatus* (Meyrick, 1932), *Catoptria dimorphellus* (Staudinger, 1881) and *Talis renetae* Ganev & Hacker, 1984, are newly reported from Iran.
KEY WORDS: Lepidoptera, Pyraloidea, Crambidae, Crambinae, distribution maps, new records, Iran.

Crambinae de Irán
(Lepidoptera: Pyraloidea, Crambidae)

Resumen

Se presenta un listado de las especies iraníes de la subfamilia Crambinae. Recientes investigaciones sobre la subfamilia han aumentado y proporcionado nuevos datos sobre su distribución en Irán con nuevoas mapas de distribución. Se citan como nuevos para Irán el género *Friedlanderia* Agnew, 1987 y las especies *Friedlanderia cicatricella* (Hübner, [1824]), *Agriphila tristella* ([Denis & Schiffermüller], 1775), *A. poliellus* (Treitschke, 1832), *Pediasia jucundellus* (Herrich-Schäffer, 1849), *P. ochristrigellus* (Hampson, 1896), *Calamotropha lupatus* (Meyrick, 1932), *Catoptria dimorphellus* (Staudinger, 1881) y *Talis renetae* Ganev & Hacker, 1984.
PALABRAS CLAVE: Lepidoptera, Pyraloidea, Crambidae, Crambinae, mapas de distribución, nuevas citas, Irán.

Introduction

The subfamily Crambinae Latreille, 1810, is represented by almost 2000 known species in 174 genera, and is distributed throughout the world. This subfamily consists of seven tribes, viz. Argyriini Munroe, 1995, Chiloini Heinemann, 1865, Crambini Latreille, 1810, Diptychophorini Gaskin, 1972, Haimbachiini Landry, 1972, Myelobiini Minet, 1982 and Prionapterygini Landry, 1995 (NUSS *et al*., 2003-2015), of which 370 species in 49 genera have been reported from the Palaeartic Region (BŁESZYŃSKI, 1965).

The oldest records of the Crambinae fauna of Iran go back to 1869, when two species of the genus *Crambus*, viz. *C. saxonellus* Zincken (presently belonging to the genus *Xanthocrambus*) and *C. rostellus* La Harpe (a junior synonym of *C. perlella*) were newly reported from Iran, Astrabad (presently known as Gorgān) by LEDERER (1869).

Two years later, again, three additional species and two subspecies of the genus *Crambus* were reported from Astrabad by the same author (LEDERER, 1871). In 1888, *Crambus saxonellus* var. *carentellus* (its type specimen was collected in Hājiābād, Hormozgān Prov.), was described by CHRISTOPH (1888). Subsequently, three further *Crambus* species and one new subspecies were newly reported and described from Iran by ZERNY (1914).

Catoptria pfeifferi was described as a new species from Iran (Alborz Mt., Sardab valley) by OSTHELDER (1938), and one year later, *Crambus inquinatella elbursellus* was newly described from Iran (Alborz Mt.) by ZERNY (1939).

TOLL (1948) reported one *Eromene* species and three species and two subspecies of the genus *Crambus* from Iran. Of these, one species (*C. persellus,* considered presently to belong to the genus *Pediasia*) and one subspecies (*C. craterellus defessellus,* now belongings to the genus *Chrysocrambus*) were newly described.

In 1949, three species of genus *Eromene* (presently known as *Euchromius*) were reported from Iran by AMSEL (two newly described). In the same article, he described one species and one subspecies of genus *Talis* from Iran (Karaj) (AMSEL, 1949a). Two further *Eromene* species, one *Crambus*, and one *Ancylolomia* species were reported the same year in another article by him (AMSEL, 1949b).

Two species of genus *Ancylolomia*, *A. micropalpella* and *A. benderella* (synonym of *A. micropalpella*), were described by AMSEL (1951). Three years later another Crambinae species, *Surattha stroblei* (synonym of *S. strioliger* Rothschild) was newly described from Iran (Ahwaz) by him (AMSEL, 1954). *Ancylolomia westwoodi bitubirosella* was described as new from Iran (Iranshahr) by AMSEL (1959). Two Crambinae species, *Agriphila microselasella* and *Pediasia pseudopersella* were described from Iran by BŁESZYŃSKI (1959).

AMSEL (1961) reported 35 Crambinae species and one subspecies from Iran, among them two that were newly described. BŁESZYŃSKI (1965), in his study of the Crambinae of the Palaeartic Region, reported 49 Crambinae taxa (including 37 species and 12 subspecies) from Iran (three newly described; only one with an Iranian type locality). In 1970, three species of genus *Chilo* were newly reported from Iran (MIRZAYANS & KALALI, 1970). EBERT (1973) introduced *Chilo suppressalis* as a newly recorded species from Iran. In 2001, during the survey by Austrian entomologists of the Golestān National Park in north-east Iran, several species of this family were reported of which only one, *Catoptria pinella*, was considered as new for the fauna of Iran (WIESER *et al*., 2001) and *Euchromius viettei* was newly reported from Iran by ALIPANAH (2003); finally, *Mesolia alborzella* was described by BASSI (2013) as a new species from Iran.

Iran is a large country with a total surface of 1,648,000 km^2, the altitude ranging from 25 m a.s.l. along the Caspian Lowlands to 5,774 m a.s.l. on Mt. Damavand and including the newly added Province, Alborz Province, it consists of 31 Provinces (Fig. 1). The country extends over three phytogeographical regions, namely, the Euro-Siberian regions (Hyrcanian district), Irano-Turanian and Nubo-Sudanian (ZOHARY, 1963, 1973; FREY & PROBST, 1986), plus a small area in the west of Iran which belongs to the Saharo-Arabian Region (Fig. 17). EMELJANOV (1974) in his Palaearctic zoogeographic divisions, considered Iran to be in the Sethian Desert Region and revealed two subregions within it, viz. Saharo-Arabian and Irano-Turanian (which covers more than nine tenths of the land surface of Iran) (Fig. 17). This division was supported by KRYZHANOVSKY (2002) and KONSTANTINOV *et al*. (2009). The alpine area of Iran belongs to the Irano-Turanian region where the level of endemism is generally high (KLEIN, 1982, 1991).

According to available literature, as many as 64 species of Crambinae have been cited for a country that has a relatively diverse fauna and flora; however, many further species may be expected to occur in this territory.

In the present survey, specimens of subfamily Crambinae have been studied and the data of their distribution in Iran are summarized and illustrated in distribution maps. Although this study is based mostly on material preserved in the Hayk Mirzayans Insect Museum (HMIM) of the Iranian Research Institute of Plant Protection (IRIPP), collected over a period of more than 70 years, it still does not cover all parts of Iran and many regions remain unstudied.

Material and Methods

This study is based mainly on the material preserved in the Hayk Mirzayans Insect Museum,

Tehran. Morphological characters were examined using a stereomicroscope (maximum magnification x128). Photographs were taken using a digital still camera DSC-F717 and a Dino-Eye Microscope eye-piece camera. Some images are the result of combining multiple images using the software Combine ZP. Dissection and slide-mounting methods for genitalia were based on those described by CLARKE (1941) and ROBINSON (1976). Preparations were stained with Chlorazol black and mounted in Euparal. The terminology follows that of KRISTENSEN (2003). The distribution maps are based on the museum database of over 694 records collected over the last 70 years, of which the highest number refer to *Euchromius ocellea* (134 records). Maps were prepared using the software ArcGIS, Version 9.3 software, for all species regardless of their previously introduced subspecies.

The material examined for each species is briefly presented to avoid increasing the length of this paper.

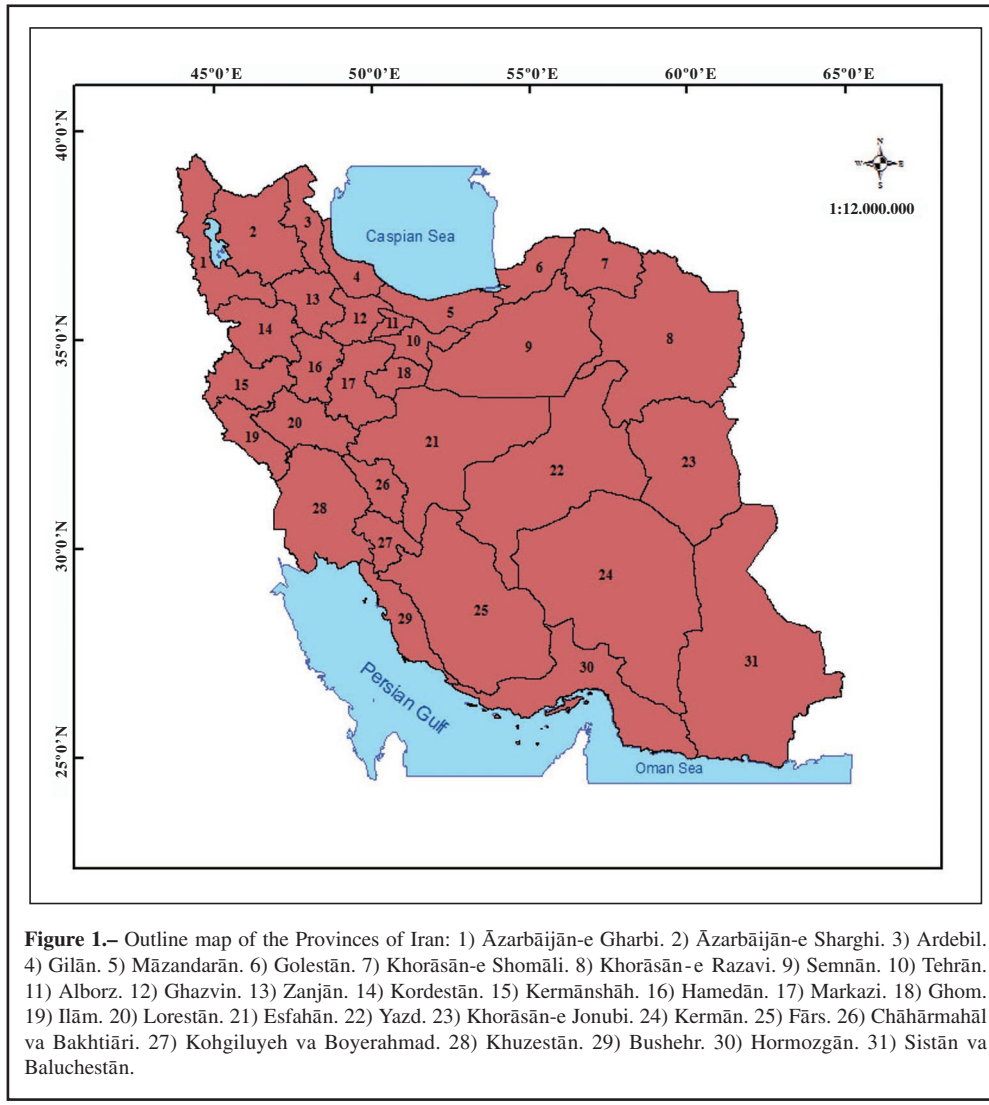

Figure 1.– Outline map of the Provinces of Iran: 1) Āzarbāijān-e Gharbi. 2) Āzarbāijān-e Sharghi. 3) Ardebil. 4) Gilān. 5) Māzandarān. 6) Golestān. 7) Khorāsān-e Shomāli. 8) Khorāsān-e Razavi. 9) Semnān. 10) Tehrān. 11) Alborz. 12) Ghazvin. 13) Zanjān. 14) Kordestān. 15) Kermānshāh. 16) Hamedān. 17) Markazi. 18) Ghom. 19) Ilām. 20) Lorestān. 21) Esfahān. 22) Yazd. 23) Khorāsān-e Jonubi. 24) Kermān. 25) Fārs. 26) Chāhārmahāl va Bakhtiāri. 27) Kohgiluyeh va Boyerahmad. 28) Khuzestān. 29) Bushehr. 30) Hormozgān. 31) Sistān va Baluchestān.

Systematics

Tribe Crambini Latreille, 1810

Genus *Agriphila* Hübner, [1825]

Agriphila bleszynskiella Amsel, 1961 (Fig. 7A)
Agriphila bleszynskiella Amsel, 1961: 326.

Material: Fārs Prov. 4 ♂♂: Shirāz, Neyriz, Fasā, Zāhedshar; Gilān Prov. 2 ♂♂: Amārlu; Kohgiluyeh va Boyerahmad Prov. 5 ♂♂: Nogol, Yāsuj; Khuzestān Prov. one specimen without abdomen: Minu Island; Lorestān Prov. 3 ♂♂: Aznā; Māzandarān Prov. 5 ♂♂, 2 ♀♀: Baladeh, Polur; Tehrān Prov. 1 ♀: Damāvand.

Distribution: Afghanistan; Iran: Pir-e Zan (it is located in Fārs Province; the type locality of the species), Sine Sefid; Turkey (AMSEL, 1961; BŁESZYŃSKI, 1965).

Phenology: The only specimen in Minu Island collected in the April at 10 m elevation; while the remaining specimens collected during the end of July to the early October between 1000-2300 m elevations.

Agriphila cyrenaicellus (Ragonot, 1887) (Fig. 7B)
Crambus cyrenaicellus Ragonot, 1887: 138.

Material: Bushehr Prov. 4 ♀♀: Bidkhun, Jam; Fārs Prov. 6 ♂♂, 6 ♀♀: Zāhed Shahr, Fasā, Ghāsem Ābād, Jahrom, Sarvestān; Golestān Prov. 1 ♂, 1 ♀: Gorgān; Kermān Prov. 1 ♂, 2 ♀♀: Jiroft, Narāb; Khorāsān-e Razavi Prov. 1 ♂: Mashhad; Māzandarān Prov. 4 ♂♂, 1 ♀: Polur.

Distribution: C. Asia; Middle East: Cyprus, Iran (Shiraz, Sarzeh), Iraq, Israel, Jordan, Libya, Syria; N. Africa: Egypt, Tunisia (the type locality of the species); S. Europe: Crete, Greece, Portugal, Sardinia, Sicily, Spain (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: Wingspan of the examined specimens, compared to those cited by BŁESZYŃSKI (1965) and FALKOVICH (1997), is slightly larger (20-25 mm) and the length ratio of the labial palpus to the horizontal diameter of the compound eye is 3.5-4.0 which, compared to that cited by BŁESZYŃSKI (1965) (3), is greater.

Phenology: The moth is collected during the August to the November between 600-2200 m elevations.

Agriphila dalmatinellus (Hampson, 1900) (Fig. 7C)
Crambus dalmatinellus Hampson, 1900: 369-370.

Material: Āzarbāijān-e Gharbi Prov. 1 ♀: Poldasht, Māku; Gilān Prov. 4 ♂♂, 2 ♀♀: Gardaneh-e Heyrān, Asālem, Bandar Anzali, Amārlu; Golestān Prov. one specimen without abdomen: Gorgān; Hormozgān Prov. 1 ♀: Bandar Khamir; Khorāsān-e Razavi Prov. 4 ♂♂: Neyshābur; Māzandarān Prov. 2 ♀♀: Chālak Rud.

Distribution: Europe: Baleares, Bosnia and Herzegovina, Bulgaria, Crete, Croatia, Dalmatia, Greece, Macedonia, S. Italy, Slovenia; Middle East: Cyprus, Iran (Karaj), Iraq (the type locality of the species), Syria; Samarkand (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: In 2012, *Agriphila beieri* Błeszyński was considered by LERAUT as a synonym of *A. dalmatinella* (LERAUT, 2012). This species firstly reported from Iran (Karaj) by AMSEL (1961) as *A. dalmatinella beieri* Błeszyński (BŁESZYŃSKI, 1965).

Phenology: The moth is collected during the September (in the North) to the October (in the South) between 20-1600 m elevations.

Agriphila deliella (Hübner, [1813]) (Fig. 7D)

Material: Golestān Prov. 5 ♂♂: Golestān National Park (Tang-e Gol, Golzār); Khorāsān-e Shomāli Prov. 14 ♂♂:Golestān National Park (Ālmeh, Sulgerd); Māzandarān Prov. 5 ♂♂: Gazanak.

Distribution: Afghanistan; Asia Minor; Europe (except British Islands and Greece); Iran; N. Africa; Transcaucasia; W. Siberian plain (BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: Wingspan of the examined specimens is considerably larger (28-37 mm) than that cited by BŁESZYŃSKI (1965) (25-29 mm). In all the examined material, the length ratio of labial palpus to the horizontal diameter of compound eye (4) is slightly less than that cited by BŁESZYŃSKI (1965) (4.0-4.5). So far three subspecies of this species have been described but only one of them, viz. *A. deliella asiaticus* (Caradja, 1910), is reported from Iran (BŁESZYŃSKI, 1965). There is slight variation in the forewing pattern of the examined males, even in those collected in the same locality. Some specimens are yellowish exactly like *A. deliella asiaticus* (Fig. 2A), and some are yellowish grey (Fig. 2B). In some of them a dark area is present at the upper angle of the median white line and other are without this dark area (Figs 2A).

Phenology: The moth is collected during the September to the October between 600-2400 m elevations.

Comment: According to NUSS *et al*. (2003-2015), the type locality of *A. deliella asiaticus* is NW. Afghanistan (Kuschk); however, as stated by BŁESZYŃSKI (1965), its type locality is Iran: Kuschk. Kuschk is the German spelling of Kushk. There are a number of villages with this name in Iran in the Alborz, Chāhārmahāl va Bakhtiāri, Āzarbāijān-e Sharghi, Fārs, Hormozgān, Esfahān, Kermān, Khuzestān, Kohgiluyeh va Boyerahmad, Lorestān, Ghazvin, Khorāsān-e Razavi, Khorāsān-e Jonubi, Semnān, Tehrān and Yazd Provinces. The examined material is collected in Golestān Province in NE. Iran, which is close to both Khorāsān-e Razavi and W. Afghanistan. It is obvious that *A. deliella asiaticus* is distributed in Iran, but if its type locality is Kushk in Afghanistan, this could be a new record for Iran.

Agriphila inquinatella ([Denis & Schiffermüller], 1775) (Fig. 7E)
Tinea inquinatella Denis & Schiffermüller, 1775: 134.

Material: Āzarbāijān-e Sharghi Prov. 1 ♂: Arasbārān forest (Āsheghlu); Fārs Prov. 1 ♂: Estahbān.

Distribution: Widely distributed in Europe (including Austria, the type locality of the species); Iran: Astrabad (presently known as Gorgān), Elburs Mt., Karaj, Polur, Shiraz; Near East; Transcaspia (LEDERER, 1871; AMSEL, 1961, BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: Three subspecies of *Agriphila inquinatella* have hitherto been described, of which only *A. inquinatella elbursellus* (Zerny, 1939) occurs in Iran, based on the type specimen (Iran, Elburs Mt., Pelur, 2000 m) and the specimens collected in Nissa and Chiraz (German spelling of Nesā and Shirāz, respectively) (AMSEL, 1961; BŁESZYŃSKI, 1965; NUSS *et al*., 2003-2015).

In the examined specimens the length ratio of labial palpus to the horizontal diameter of the compound eye is 2-3. Moreover, they have dark scattered spots on the underside of the forewing.

Phenology: This moth is collected in the September and the November between 500-1750 m elevations.

Agriphila microselasella Błeszyński, 1959
Agriphila microselasella Błeszyński, 1959: 112.

Material: No specimens were available for examination in this study.

Distribution: Iran: Elburs Mt., Fars, Hamedan (Soltan Abad) (the type locality of the species), Karaj, Nesa (AMSEL, 1961; BŁESZYŃSKI, 1965).

Agriphila poliellus (Treitschke, 1832) (Fig. 7F)
Chilo poliellus Treitschke, 1832: 113.

Material: Māzandarān Prov. 6 ♂♂: Gazanak.

Distribution: Europe: C. Europe (including Hungary; the type locality of the species), Balticum, Denmark, England, France, S. part of Scandinavia, Sardinia, Sicily, Ukraine; Kazakhstan; S. Siberia; Transcaucasia (BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: The wingspan of the examined specimens (25-30 mm) is larger than that cited by

BŁESZYŃSKI (1965) (19-26 mm) and the labial palpus is 4.0-4.5∞ the horizontal diameter of compound eye. The male genitalia of the examined specimens is similar to those illustrated by HANNEMANN (1964) and BŁESZYŃSKI (1965) except for the presence of two specified small thorns in the phallus which are positioned ventroapically (Fig. 3A). Furthermore, although according to FALKOVICH (1997), the costal arm has small dents externally, these are not clear in the genitalia of the examined males (Fig. 3B). This species is newly reported from Iran.

Phenology: The moth is collected in the mid-September at 2350 m elevation.

Agriphila tersellus (Lederer, 1855) (Fig. 8A)
Crambus tersellus Lederer, 1855: 220.

Material: Ardebil Prov. 1 ♀: Moghān; Āzarbāijān-e Gharbi Prov. 1 ♂: Māku; Fārs Prov. 1 ♂, 3 ♀♀: Kamfiruz, Mahārlu lake; Khuzestān Prov. 1 ♂: Ahwāz; Kohgiluyeh va Boyerahmad Prov. 2 ♂♂: Sisakht; Tehrān Prov. 1 ♂: Shahriār.

Distribution: Asia Minor; C. & S. Europe (Hungary, Romania and ?Austria); NW. Africa and Canary Islands; Middle East: Iran (Karaj and Pir-e Zan), Lebanon (the type locality of the species), Syria; S. Russia; Transcaucasia (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: Wingspan of examined specimens (26-34 mm) is distinctly greater than that cited by BŁESZYŃSKI (1965) (23-26 mm) and the length ratio of labial palpus to the horizontal diameter of the compound eye (3.0-5.5) is slightly less than cited by BŁESZYŃSKI (1965) (4). In the genitalia of the examined males, the gnathos is longer than the uncus.

Two subspecies of this species, viz. *A. tersellus tersellus* (Lederer, 1855) and *A. tersellus hungaricus* were introduced by BŁESZYŃSKI (1965) of which the former had been reported from Iran at that time. The latter subspecies was synonymized with *A. tersellus tersellus* by SLAMKA (2008) and this has also been confirmed by NUSS *et al*. (2003-2015).

Phenology: The moth is collected during the September to the October between 50-2200 m elevations.

Agriphila tristella ([Denis & Schiffermüller], 1775) (Fig. 8B)
Tinea tristella Denis & Schiffermüller, 1775: 134.

Material: Chāhārmahāl va Bakhtiāri Prov. 2 ♂♂: Gandomān; Gilān Prov. 2 ♀♀: Gardaneh-e Heyrān, Bandar Anzali; Golestān Prov. 1 ♂: Golestān National Park (Golzār); Khorasāne Shomāli Prov. 1 ♂: Golestān National Park (Ālmeh); Lorestān Prov. 3 ♂♂: Aznā, Oshtorānkuh; Māzandarān Prov. 2 ♂♂: Kordkuy; Tehrān Prov. 1 ♂: Shahriār.

Distribution: Asia Minor; C. Asia; ?China; Europe (including Austria, the type locality of the species); NW India; Transcaucasia; W. Siberian plain (BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: The length ratio of labial palpus of the examined specimens compared to the horizontal diameter of the compound eye is 3.0-4.5, which is slightly less than that cited by BŁESZYŃSKI (1965) (4-5). In the genitalia of the examined males the valvae is broad and slightly narrowed towards the rounded apex (Fig. 3C). In the genitalia of the examined females the bursa copulatrix is more elongated and the ductus bursa is slightly sclerotized in its posterior half with furrows and is narrow anteriorly (Fig. 3D). So far, two subspecies of this species have been described. This species is newly reported from Iran and is represented by the nominotypical subspecies.

Phenology: The moth is collected in the end of August to the early October between 50-1800 m elevations.

Genus *Amselia* Błeszyński, 1959

Amselia heringi (Amsel, 1935) (Fig. 8C)
Crambus heringi Amsel, 1935: 278-279.

Material: Bushehr Prov. 1 ♀: Fārur Island; Hormozgān Prov. 2 ♂♂, 7 ♀♀: Gheshm Island, Hormoz Island, Gruk, Khamir; Kermān Prov. 1 ♀: Jiroft.

Distribution: Middle East: Bahrain, Iran (Ahwaz, Baluchestan [Bandar-e Chabahar], Shiraz, Karaj, Taftan Mt., Sarzeh), Israel (the type locality of the species), Kuwait; Morocco (AMSEL, 1949b, 1961; BŁESZYŃSKI, 1965).

Remarks: There is a distinct variation in the forewing colour of the examined material.

Phenology: The moth is collected during the end of February to the mid-March from the sea level to an elevation of about 900 m; the only female specimen in Farur Island collected in the November.

Genus *Catoptria* Hübner, [1825]

Catoptria colchicellus (Lederer, 1870) (Fig. 8D)
Crambus colchicellus Lederer, 1870: 52.

Material: Āzarbāijān-e Gharbi Prov. 1 ♀, 1 ♀: Māku.

Distribution: Caucasus and Transcaucasia (the type locality of the species); Iran: Elburz Mt., Lar valley (AMSEL, 1961; BŁESZYŃSKI, 1965); Turkey (GANEV & HACKER, 1985; SLAMKA, 2008).

Remarks: The labial palpus of the examined specimens is 2.5∞ the horizontal diameter of compound eye. As we revealed, in the female genitalia of the studied material, the antrum is larger and sclerotized compared to that of *C. mytilella*; the ductus bursa is longer and sclerotized with longitudinal furrows and three twists throughout its length (Fig. 4A).

Phenology: The moth is collected in the end of July at 1910 m altitude.

Catoptria dimorphellus (Staudinger, 1881) (Fig. 8E)
Crambus dimorphellus Staudinger, 1881: 81-83.

Material: Alborz Prov. 1 ♂, 1 ♀: Karaj.

Distribution: Asia Minor (including Turkey, the type locality of the species); Middle East: Beirut, Cyprus, Syria; S. Europe: Crete, Greece, Sicily, Spain (BŁESZYŃSKI, 1965; SLAMKA, 2008; NUSS *et al*., 2003-2015).

Remarks: The examined specimens are larger (23-24 mm) than those examined by BŁESZYŃSKI (1965) (18-20 mm). In the genitalia of the examined female, the ductus bursa has two twists throughout its length, one of them in the middle and the other one close to junction with bursa copulatrix (Fig. 4B). This species is here newly reported from Iran.

Phenology: The moth is collected in the end of August at 2000 m altitude.

Catoptria incertellus (Herrich-Schäffer, 1848) (Fig. 8F)
Crambus incertellus Herrich-Schäffer, 1848: 165.

Material: Gilān Prov. 1 ♂: Āstārā; Golestān Prov. 1 ♀: Golestān National Park (Tang-e Gol); Khorāsān-e Shomāli Prov. 1 ♀: Golestān National Park (Sulgerd); Māzandarān Prov. 4 ♂♂, 1 ♀: Savādkuh, Kelārdasht, Toydarreh, Vandārbon, Tonekābon, Rāmsar.

Distribution: Armenia (the type locality of the species); ?Macedonia; NE. Turkey; NW. Iran: Karaj; S. Caucasus (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: The length ratio of the labial palpus to the horizontal diameter of the compound eye in the examined material (1.5-2.5) is clearly less than that cited by BŁESZYŃSKI (1965) (3). Generally the wing pattern of the examined specimens is darker than in those examined by FALKOVICH (1997) and BŁESZYŃSKI (1965). As stated by FAZEKAS (2002), three types of cornuti can be found among the *C. incertellus* populations: cornutus with long tail and triangular point, cornutus with conical thorn, and forked cornutus with a long tail. The last character is observed in the examined specimens. It should be noted that the specimens studied by FAZEKAS (2002) were collected in Iran (Māzandarān Province: Chālus).

Phenology: The moth is collected during the May to the September between 400-2100 m elevations.

Catoptria lythargyrella (Hübner, 1796)
Tinea lythargyrella Hübner, 1796: 30.

Material: No specimens were available for examination in this study.

Distribution: Asia Minor; C. Asia; Europe excluding northern and southernmost parts and SE. England (including Germany, the type locality of the species); Iran: Bandar-e Chabahar, Shiraz, Karaj; S. Siberia; Turkestan (BŁESZYŃSKI, 1965; AMSEL, 1961; SLAMKA, 2008).

Catoptria pfeifferi (Osthelder, 1938) (Fig. 9A)
Crambus pfeifferi Osthelder, 1938: 18-20.

Material: Māzandarān Prov. 1 ♂: Tonekābon; Tehrān Prov. 1 ♂: Shemshak; Alborz Prov. 1 ♀: Karaj.

Distribution: Iran (Elburs Mt.: Sardab valley [Vandarbon] and Takht-e Soleyman; the type locality of the species); Turkestan (OSTHELDER, 1938; BŁESZYŃSKI, 1965).

Remarks: Wingspan of the examined specimens is 22-25 mm, length of labial palpus twice that of the horizontal diameter of compound eye. Although the two species, viz. *C. pfeifferi* and *C. colchicellus*, are more or less similar in external appearance, they differ in the colour of the fringes of the forewings. In *C. pfeifferi* (Fig. 2C) they are bright cream, while in *C. colchicellus* they are darker (Fig. 2D). Moreover, in *C. pfeifferi* the proximal cell of the forewing is less elongated and its basal side is dentate (Fig. 2C), while in *C. colchicellus* the cell is clearly elongated and has a smooth basal side (Fig. 2D). Additionally, the lower margin of the forewing in *C. pfeifferi* fades away (Fig. 2C), while in *C. colchicellus* it is distinct (Fig. 2D).

Phenology: The moth is collected in the end of July to the end of August between 250-2700 m elevations.

Catoptria pinella (Linnaeus, 1758) (Fig. 9B)
Phalaena (*Tinea*) *pinella* Linnaeus, 1758: 539.

Material: Ardebil Prov. 1 ♂: Meshkin Shahr; Āzarbāijān-e Sharghi Prov. 1 ♂, 7 ♀♀: Āināl̄u (Arasbārān forest), Kaleybar, Moghān, Tāzehkand, Vināgh; Gilān Prov. 31 ♂♂, 27 ♀♀: Asālem, Āstārā, Bandar Anzali, Deylamān, Fuman, Hashtpar, Khārjegil, Parehsar, Punel, Pisāson, Rahim Ābād, Rasht, Shaft, Tālesh; Golestān Prov. 7 ♂♂, 6 ♀♀: Golestān National Park (Tang-e Gol, Koylar, Ghush Cheshmeh, Mazārli), Gorgān, Ali Ābād; Māzandarān Prov. 19 ♂♂, 21 ♀♀: Āmol, Amreh, Behak, Behshahr, Eshkatechāl, Kelārdasht, Polsefid, Rāmsar, Sāri, Tonekābon, Zirāb.

Distribution: Asia Minor; Europe excluding northernmost part; Lebanon; N. Africa; Russia to Japan (BŁESZYŃSKI, 1965; SLAMKA, 2008) and Iran: Golestan National Park (WIESER *et al*., 2001).

Remarks: Wingspan of the examined specimens nearly the same as that cited by BŁESZYŃSKI (1965) (18-24 mm) except for a single male that has a wingspan of 12 mm and is collected in Gilān Province (Asālem). The length ratio of labial palpus to the horizontal diameter of the compound eye (1.5-2.5) is less than that cited by BŁESZYŃSKI (1965) (3). As far as we know, four subspecies of this species have already been described (BŁESZYŃSKI, 1965). Although *C. pinella* has been reported from Iran by WIESER *et al*. (2001), the subspecies had not been defined at that time. Based on the present study the nominotypical subspecies is distributed throughout the country. As we revealed, in some specimens the subterminal line is just like that in *C. pinella siciliella* Błeszyński and extends to the margin of the tornus while in others it is extended only to the terminal patch, so, that this cannot be a differentiating character of these two subspecies. As stated by FALKOVICH (1997), in the male genitalia the uncus is shorter than the gnathos, but we did not find any significant difference among the examined material and this is in agreement with BŁESZYŃSKI (1965).

Phenology: The moth is collected during the June to the September between 90-2500 m elevations.

Genus *Chrysocramboides* Błeszyński, 1957

Chrysocramboides craterella (Scopoli, 1763) (Fig. 9C)
Phalaena craterella Scopoli, 1763: 246.

Material: Alborz Prov. 4 ♂♂: Āsārā, Karaj; Āzarbāijān-e Gharbi Prov. 9 ♂♂: Orumiyeh; Fārs Prov. 1 ♂: Kāzerun; Golestān Prov. 3 ♂♂ and one specimen without abdomen: Golestān National Park (Tang-e Gol), Shāhkuh; Kermānshāh Prov. 1 ♂: Eslām Ābād-e Gharb; Khorāsān-e Shomali Prov. 4 ♂♂, 1 ♀ and one specimen without abdomen: Golestān National Park (Sulgerd); Kohgilouyeh va Boyerahmad Prov. 1 ♂: Yāsuj; Tehrān Prov. 1 ♂: Evin.

Distribution: Asia Minor; C. and S. Europe (including Slovenia, the type locality of the species); also reported from Belgium and SE. England; Middle East: Cyprus, Iran (Gorgan), Jordan, Lebanon; Morocco; Primorye; Transcaucasia; Turkmenistan (LEDERER, 1871; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: This species was first reported from Iran by LEDERER (1871) as *Crambus rorellus* which later was synonymized with *C. craterella* (Scopoli) by BŁESZYŃSKI & COLLINS (1962) and presently is considered as a member of the genus *Chrysocramboides* (SLAMKA, 2008; NUSS *et al*., 2003-2015).

Although, as stated by BŁESZYŃSKI (1965), there is clear variation in the shape of the costal arm in the male genitalia, no such variation is noted in any of our observations. The type specimen of *C. craterellus defessellus* (Toll, 1947), one of the five known subspecies of this species (NUSS *et al*., 2003-2015), was collected in Iran (Mirabi Mt.) (BŁESZYŃSKI, 1965). Both dark brown and light brown forms (Figs 2E, F) are present among the studied material. These forms can be representatives of the two subspecies, *C. craterellus craterellus* and *C. craterellus defessellus* (Scopoli, 1763), respectively based on BŁESZYŃSKI (1965); however we believe that they can not be distinguished as two subspecies. According to BŁESZYŃSKI (1965), the type of *C. craterellus defessellus* was collected in Khorāsān Province. Having said this, the populations distributed in Golestān, Khorāsān-e Shomāli, Kermānshāh, Fārs and Kohgiluyeh va Boyerahmad Provinces are dark brown and hence referable to *C. craterellus craterellus* and those occurring in Alborz, Āzarbāijān-e Gharbi and Tehrān Provinces are similar to *C. craterellus defessellus*. The colour of the forewing seems to be an unreliable character to separate these two subspecies, and in the absence of enough specimens to check intraspecific variation, the subspecific concept just based on this character and/or such characters must be treated with caution.

Phenology: The moth is collected during the April to the end of June between 900-2150 m elevations.

Genus *Chrysocrambus* Błeszyński, 1957

Chrysocrambus linetella (Fabricius, 1781) (Fig. 9D)
Tinea linetella Fabricius, 1781: 291.

Material: Alborz Prov. 15 ♂♂, 2 ♀♀ and three specimens without abdomen: Karaj (Arengeh, Āzādbar, Chālus Rd., Kalvān), Tāleghān; Ardebil Prov. 24 ♂♂, 1 ♀: Khalkhāl, Sabalān, Sareyn; Āzarbāijān-e Gharbi Prov. 6 ♂♂, 3 ♀♀: Orumiyeh; Āzarbāijān-e Sharghi Prov. 3 ♂♂: Kaleybar, Moghān, Sahand; Chāhārmahāl va Bakhtiāri Prov. 1 ♂: Shalamzār; Esfahān Prov. 1 ♂: Khānsār; Gilān Prov. 10 ♂♂ and 5 ♂♂ and one specimen without abdomen: Asālem, Āstārā, Eshkevar, Rasht; Khorāsān-e Razavi Prov. 3 ♂♂: Kuh-e Sorkh, Zoshk; Markazi Prov. 1 ♂: Āshtiān; Khorāsān-e Shomāli Prov. 1 ♂, 1 ♀: Āshkhāneh, Bojnurd; Kordestān Prov. 1 ♂, 3 ♀♀: Bāneh, Marivān, Ravānsar, Sanandaj; Māzandarān Prov. 14 ♂♂, 4 ♀♀: Āmol, Behshahr, Kelārdasht, Polsefid, Rāmsar, Sāri, Tonekābon; Tehrān Prov. 6 ♂♂: Damāvand, Evin, Shahriār.

Distribution: Europe including Albania, Bosnia and Herzegovina, Bulgaria, Corsica, Crete; Croatia, England, France, Greece, Hungary, Italy (the type locality of the species), Macedonia, Montenegro, Rhodos, Romania, Serbia, Sicily, Slovenia, Switzerland; Middle East: Cyprus, Iran

(Hamedan, Karaj, Mirabi Mt., Pir-e Zan, Tehran, Sengan, Shiraz, Sine Sefid), Iraq, Jordan, Lebanon, Syria, Turkey; Transcaucasia; Turkestan; Uzbekistan (TOLL, 1948; AMSEL, 1961; BŁESZYŃSKI, 1965).

Remarks: According to BŁESZYŃSKI (1965) and NUSS *et al*. (2003-2015), *Crambus cassentinellus* Zeller, and *Chrysocrambus cassentinellus pseudocraterellus* Błeszyński, which were reported from Iran by TOLL (1948) and AMSEL (1961), respectively, are considered as synonyms of *Chrysocrambus linetella* (Fabricius) and *C. linetella pseudocraterellus* Błeszyński, correspondingly. SLAMKA (2008) considered *A. linetella* as a synonym of *Chrysocramboides craterellus*, while NUSS *et al*. (2003-2015) leave it at specific rank. However, decision about the taxonomic status of this species would be doubtful without a full study based on typical specimens and/or DNA studies.

Wingspan of the examined specimens is 17-26 mm and labial palpus 4.5-5.0∞ the horizontal diameter of compound eye. This species is represented by three subspecies, of which *C. linetella linetella* and *C. linetella pseudocraterellus*, have previously been reported from Iran (BŁESZYŃSKI, 1965). We found some minor variations among the studied populations, especially in the forewing colour and pattern, but this could not convince us to conclude that the mentioned subspecies in Iran are valid.

Phenology: The moth is collected during the mid-March to the second half of July and in October between 45-2700 m elevations.

Chrysocrambus syriellus (Zerny, 1934)
Crambus syriellus Zerny, 1934: 2–3.

Material: No specimens were available for examination in this study.

Distribution: Afghanistan; Middle East including Iran: Karaj (MIRZAYANS & KALAI, 1970), Iraq, Lebanon (the type locality of the species), Palestine, Syria and Turkey (BŁESZYŃSKI, 1965).

Genus *Chrysoteuchia* Hübner, [1825]

Chrysoteuchia culmella (Linnaeus, 1758) (Fig. 9E)
Phalaena (*Tinea*) *culmella* Linnaeus, 1758: 535.

Material: Zanjān Prov. 2 ♂♂: Māhneshān (Damirlu).

Distribution: Algeria; Europe including Fennoscandia (the type locality of the species probably); Iran; Japan; Kazakhstan; Mongolia; Russia; Transcaucasia; Uzbekistan (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: This species was reported from Iran (Hamedan) by AMSEL (1961) as *Crambus hortuellus* Hübner, the synonym of *Chrysoteuchia culmella* (BŁESZYŃSKI, 1965). Wingspan of the examined specimens is 17-18 mm and length ratio of labial palpus to the horizontal diameter of compound eye (3.0-3.5) are slightly smaller than those cited by BŁESZYŃSKI (1965) (16-24 mm and 4, respectively). Four subspecies of this species have been described but only one, *C. culmella culmella* (Linnaeus), is reported from Iran (BŁESZYŃSKI, 1965).

Phenology: The moth is collected in the June at 2212 m altitude.

Genus *Crambus* Fabricius, 1798

Crambus heringiellus Herrich-Schäffer, 1848
Crambus heringiellus Herrich-Schäffer, 1848: 54.

Material: No specimens were available for examination in this study.

Distribution: C. Asia; Europe: N. and S. Europe (including N. Italy, Sardinia and Sicily), and rare in C. Europe (N. Germany is the type locality of the species); Russia (BŁESZYŃSKI, 1965; SLAMKA, 2008); Iran: Sengan (AMSEL, 1961).

Crambus perlella (Scopoli, 1763) (Fig. 9F)
Phalaena perlella Scopoli, 1763: 243-244.

Material: Ghom Prov. 3 ♂♂, 1 ♀: Vesf; Gilān Prov. 2 ♀♀: Māsāl; Hamedān Prov. 2 ♂♂: Barāt, Tārik Darreh; Kermān Prov. 2 ♂♂: Jiroft; Khorāsān-e Razavi Prov. 1 ♀: Mashhad; Māzandarān Prov. 4 ♂♂: Rāmsar, Siāhbisheh.

Distribution: Armenia; Asia Minor; Europe; Iran: Elburs Mt., Gorgan; N. America; NW. Africa; Russia; N. China to Japan; Hindu Kush Mts; Pamir Mts (LEDERER, 1869, 1871; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: This species was first reported from Iran by LEDERER (1869) as *Crambus rostellus* La Harpe. In 1871, *C. perlellus* var. *warringtonellus* Stainton and *C. perlellus* var. *rostellus* La Harpe were reported from Iran by LEDERER, of which the former was synonymized with *Crambus perlella* (Scopoli) by BŁESZYŃSKI & COLLINS (1962). *Crambus perlellus* var. *rostellus* was first synonymized with *Crambus monochromella* Herrich-Schäffer by BŁESZYŃSKI (1965), and later was considered as a subspecies of *C. perlella* (KARSHOLT & RAZOWSKI, 1996; NUSS *et al*., 2003-2015).

Eleven subspecies of this species are described worldwide (NUSS *et al*., 2003-2015) but only one, namely, *C. perlella aurellus* Zerny, is reported from Iran, the type specimen having been collected in Shahkuh in north-east Iran (ZERNY, 1914). This subspecies is also reported from Kuh-i Mirabi (same as Mirābi Mt.) by TOLL (1948) and Kuh-i Binaloud (same as Binālud Mt.), Shiraz, Dasht-Arjan, Cohmer (same as Komehr)-Kakan road, Come (same as Komehr), Elburs Mts., Kuh-i Osman, Nissa (the latter four localities are different spelling of Alburz Mt., Osmān Mt. and Nesā, respectively) by AMSEL (1961).

The labial palpus of examined specimens is 3.0-4.5∞ the horizontal diameter of compound eye. The specimens collected in Mashhad (Khorāsān-e Razavi Province) have a white labial palpus spotted with brown.

Phenology: The moth is collected during the mid-June to the early August between 2000-2600 m elevations.

Genus *Euchromius* Guenée, 1845

Euchromius bella (Hübner, 1796) (Fig. 10A)
Tinea bella Hübner, 1796: 29.

Material: Alborz Prov. 1 ♂, 1 ♀: Tāleghān; Āzarbāijān-e Sharghi Prov. 1 ♂: Marāgheh; Chāhārmahāl va Bakhtiāri Prov. 1 ♂: Shahr-e Kord; Fārs Prov. 2 ♂♂ and three specimens without abdomen: Bamu, Dehbid, Mamasani, Shirāz, Sivand; Ghazvin Prov. 1 ♂: Chingher; Kermānshāh Prov. 12 ♂♂, 6 ♀♀: Eslam Ābād-e Gharb, Govāvar, Kermānshāh, Māhidasht; Kordestān Prov. 1 ♂, 1 ♀ and one specimen without abdomen: Ravānsar, Sanandaj; Tehrān Prov. 3 ♂♂, 1 ♀ and one specimen without abdomen: Evin; Zanjān Prov. 1 ♀: Bijār.

Distribution: Asia Minor; E. Europe: Bulgaria, Crimea, Macedonia, Serbia Romania; C. Europe (including Hungary, the type locality of the species); S. Europe: Bosnia and Herzegovina, France, Greece, Italy, Montenegro, Spain; Middle East: Iran (Karaj), Iraq, Israel, Jordan, Lebanon, Palestine, Syria; Morrocco; Russia; Transcaucasia; Tadzhikistan (AMSEL, 1961; BŁESZYŃSKI, 1965; SCHOUTEN, 1992; SLAMKA, 2008).

Remarks: Wingspan of the examined specimens (15-22 mm) is slightly larger than that cited by BŁESZYŃSKI (1965) (16-19 mm) and their labial palpus is 1.0-2.5∞ the horizontal diameter of compound eye. According to FAZEKAS (2011) the frons has a small pointed apex, a character that was not observed in the material examined by us.

Phenology: The moth is collected during the May to the August between 1300-2200 m elevations.

Euchromius cambridgei (Zeller, 1867) (Fig. 10B)
Eromene cambridgei Zeller, 1867: 463.

Material: Āzarbāijān-e Gharbi Prov. 1 ♀ and one specimen without abdomen: Māku, Tabriz;

Bushehr Prov. 1 ♂, 1 ♀ and one specimen without abdomen: Ahram, Kangān; Chāhārmahāl va Bakhtiāri Prov. 1 ♀: Sarkhun; Golestān Prov. 1 ♀: Gorgān; Hormozgān Prov. 4 ♂♂, 6 ♀♀ and four specimens without abdomen: Bandar Abbās, Isin, Jāsk, Lārak Island, Mināb, Sirik; Khorāsān-e Razavi Prov. 1 ♀: Gonābād; Khuzestān Prov. 1 ♂: Minu Island; Sistān va Baluchestān Prov. 4 ♀♀ and one specimen without abdomen: Chābāhr.

Distribution: Afghanistan; Africa (including Egypt, the type locality of the species) and Canary Islands; Europe: Baltic Islands, Bosnia and Herzegovina, Corsica, Croatia, Dalmatia, Italy, Macedonia, Montenegro, S. France, Sardinia, Serbia, Slovenia, Spain; Middle East: Bahrein, Iran (Bandar-e Chabahar), Israel, Jordan, Oman, S. Yemen, Saudi Arabia; NW. Pakistan (AMSEL, 1961; BŁESZYŃSKI, 1965; SCHOUTEN, 1992; SLAMKA, 2008).

Remarks: In the genitalia of the examined males the phallus has cornuti and in the females the ductus bursae has furrows.

Phenology: The moth is collected during the March to the June and in the September to the December from the sea level to an elevation of about 1550 m.

Euchromius gratiosella (Caradja, 1910)
Eromene ramburiellus Caradja, 1910: 116.

Material: No specimens were available for examination during this study.

Distribution: Algeria; Armenia; C. Asia (including E. Turkmenistan, the type locality of the species); Europe: Corsica, Crimea, France, Livorno, Spain; Iran (Shahkuh); Lebanon; Mongolia; S. Russia; Turkey; Tuva region (BŁESZYŃSKI, 1965; SCHOUTEN, 1992; SLAMKA, 2008; NUSS *et al*., 2003-2015).

Euchromius jaxartella (Erschoff, 1874) (Fig. 10C)
Eromene jaxartella Erschoff, 1874: 82.

Material: Āzarbāijān-e Gharbi Prov. 1 ♂, 1 ♀ and one specimen without abdomen: Orumiyeh, Takāb; Āzarbāijān-e Sharghi Prov. 1 ♂: Aras dam; Sistān va Baluchestān Prov. 2 ♂♂: Sarāvān; Golestān Prov. 2 ♂♂, 1 ♀: Gorgān; Khorāsān-e Razavi Prov. 1 ♀ and one specimen without abdomen: Āstān-e Ghods farm, Sabzevār; Zanjān Prov. 1 ♂, 5 ♀♀: Darām.

Distribution: C. Asia (including Turkmenistan, the type locality of the species); China; E. Caucasus region; Iran; Mongolia; Tuva region; Urlask; Transcaucasia; S. Pakistan (BŁESZYŃSKI, 1965; SCHOUTEN, 1992; SLAMKA, 2008).

Remarks: The labial palpus of examined specimens is 1.5-2.5∞ the horizontal diameter of compound eye.

Phenology: The moth is collected during the April to the July and in the September from the sea level to an elevation of about 1550 m.

Euchromius keredjella (Amsel, 1949) (Fig. 10D)
Eromene keredjella Amsel, 1949a: 233.

Material: Alborz Prov. 2 ♀♀: Tāleghān; Chāhārmahāl va Bakhtiāri Prov. 1 ♂: Lordegān; Hormozgān Prov. 4 ♂♂ and one specimen without abdomen. Bandar Abbās, Rudān; Kermān Prov. one specimen without abdomen: Bāft; Kermānshāh Prov. one specimen without abdomen: Kangāvar.

Distribution: Afghanistan; Armenia; Iran: Elburs Mt., Karaj (the type locality of the species), Shiraz; Turkey (AMSEL, 1949a, 1961; BŁESZYŃSKI, 1965; SCHOUTEN, 1992; NUSS *et al*., 2003-2015).

Remarks: Wingspan of the examined specimens is 12-21 mm and the labial palpus is 2∞ the horizontal diameter of compound eye. Forewing pattern similar to that described by BŁESZYŃSKI (1965), except that the median line of the examined material is slightly curved at the junction of the costal margin (Fig. 2G). The latter was also noted by AMSEL (1949a).

Phenology: The moth is collected during the early March to the end of August between 150-1750 m elevations.

Euchromius malekalis Amsel, 1961 (Fig. 10E)
Euchromius malekalis Amsel, 1961: 330.

Material: Hormozgān Prov. 1 ♂: Bastak, Hājiābād; Sistān va Baluchestān Prov. one specimen without abdomen: Khāsh.

Distribution: Iran: Baluchestan: Takht-e Malek (the type locality of the species); Jordan (AMSEL, 1961; BŁESZYŃSKI, 1965; SCHOUTEN, 1992).

Remarks: Wingspan of the examined specimens is 18-24 mm; the labial palpus is 2.5∞ the horizontal diameter of compound eye. In the forewing of the examined specimens, the lateral sides of the median line are not as described by BŁESZYŃSKI (1965) but are wavy and not smooth (Fig. 2H).

Phenology: The moth is collected in the February, May and the October between 400-1300 m elevations.

Euchromius ocellea (Haworth, 1811) (Fig. 10F)
Palparia ocellea Haworth, 1811: 486-487.

Material: Tehrān Prov. 13 ♂♂, 18 ♀♀ and 17 specimens without abdomen: Damāvand, Evin, Varāmin; Alborz Prov. 4 ♂♂, 2 ♀♀ and one specimen without abdomen: Dizin, Karaj, Kahrizak, Shahriār; Ghom Prov. 1 ♂, 1 ♀: Ghom lake; Māzandarān Prov. 1 ♂, 1 ♀: Chālus, Harāz; Gilān Prov. two specimens without abdomen: Bandar Anzali, Hashtpar; Golestān Prov. 2 ♀♀: Dāshliborun, Gorgān; Zanjān Prov. 1 ♂, 2 ♀♀: Tārom, Soltāniyeh; Semnān Prov. 1 ♂, 1 ♀ and one specimen without abdomen: Shāhrud, Shahmirzād; Esfahān Prov. 5 ♂♂, 6 ♀♀ and one specimen without abdomen: Ardestān, Esfahān, Golpāygān, Kāshān, Natanz, Shahr-e Kord, Shahrezā; Kermān Prov. 3 ♂♂, 3 ♀♀ and three specimens without abdomen: Shahr-e Bābak, Sarcheshmeh, Bam, Jiroft; Ardebil Prov. 16 ♂♂, 10 ♀♀ and one specimen without abdomen: Khalkhāl, Pārs ābād; Āzarbāijān-e Gharbi Prov. 11 ♂♂, 2 ♀♀ and two specimens without abdomen: Orumiyeh, Poldasht; Āzarbāijān-e Sharghi Prov. 1 ♂: Aras dam; Khorāsān-e Razavi Prov. 6 ♂♂, 8 ♀♀ and three specimens without abdomen: Āstān-e Ghods farm, Bājgirān, Ghuchān, Mashhad, Neyshābur, Sarakhs; Khorāsān-e Shomali Prov. 7 ♂♂, 5 ♀♀: Khosraviyeh, Ashkhaneh, Sarāni, Akhlamad, Daregaz; Khorāsān-e Razavi Prov. 1 ♂: Fadiheh; Yazd prov. 1 ♀: Ashkzar; Hamedān Prov. 1 ♂, 2 ♀♀: Arzanfut, Asad Ābād, Kabudrāhang; Fārs Prov. 29 ♂♂, 21 ♀♀: Dārāb, Eghlid, Estahbān, Fasā, Farāshband, Firuz Ābād, Jahrom, Kāzerun, Kuhmareh, Lār- Jahrom Rd., Mahārlu lake, Saādat Shahr, Tang-e Chogān; Lorestān Prov. 3 ♂♂, 2 ♀♀ and four specimens without abdomen: Aznā, Dorud, Sarāb-e Doreh; Kermānshāh Prov. 2 ♂♂, 2 ♀♀: Ghasr-e Shirin, Kermānshāh, Māhi Dasht; Sistān va Baluchestān Prov. 23 ♂♂, 22 ♀♀ and one specimen without abdomen: Bampur, Chābahār, Khāsh, Pishin, Rāsk, Sarāvān, Taftān Mt., Zāhedān; Kohgiluyeh va Boyerahmad Prov. 2 ♂♂, 2 ♀♀ and two specimens without abdomen: Noghol, Yāsuj; Khuzestān Prov. 7 ♂♂, 6 ♀♀ and two specimens without abdomen: Ābādān, Ahwāz, Albāji, Andimeshk, Dezful, Izeh, Malāvi, Minu Island and, Susangerd; Hormozgān Prov. 14 ♂♂, 6 ♀♀ and four specimens without abdomen: Bandar Abbās, Fin, Isin, Geno Mt., Gohreh, Gurband, Hājiābād, Mināb, Sirik; Bushehr Prov. 4 ♂♂, 2 ♀♀ and one specimen without abdomen: Ahram, Bandar Tāheri, Bushehr, Kangān Khormoj.

Distribution: Africa; America; Asia Minor; Australia; C. Asia; C. N. and S. Europe (including England, the type locality of the species); E. Europe: Bulgaria, Crimea, Romania; Canary and Maderia Islands; Middle East: Iran (Ahwaz, Ardekan [presently known as Sepidān], Chabahar, Jahrom, Karaj, Mirabi Mt., Nesa, Pir-e Zan, Shiraz and Taftan Mt.), Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Saudi Arabia, Syria, Yemen; Tian-Shan Mts; Transcaucasia; Turkestan; South Asia: Hawaii, India, Myanmar, Nepal, W. Pakistan (TOLL, 1948; AMSEL, 1949b, 1961; BŁESZYŃSKI, 1965; SCHOUTEN, 1992; SLAMKA, 2008).

Remarks: The upper side of the valvae of the examined males has a serrated swelling (Fig. 4C). In the genitalia of the examined females the antrum is like that described by SCHOUTEN (1992), as a small mushroom-shaped or lip-shaped structure.

Phenology: The moth is collected throughout the year from the sea level to an elevation of about 2800 m.

Euchromius pulverosa (Christoph, 1887) (Fig. 11A)
Eromene pulverosa Christoph in Romanoff, 1887: 47.

Material: Alborz Prov. 1 ♂ and one specimen without abdomen: Āsārā; Esfahān Prov. 1 ♂: Semirom; Lorestān Prov. 1 ♀: Dorud; Kohgiluyeh va Boyerahmad Prov. 1 ♀: Yāsuj.

Distribution: Afghanistan; Middle East: Iran (Damavand, Darband, Karaj, Nesa, S. Elburs Mt., Sine Sefid, Shiraz and Tang Ab-e Firuzabad), Iraq, Israel, Lebanon, Syria, Turkey; Transcaucasia (including Ordubad, the type locality of the species) (AMSEL, 1949a, 1961; BŁESZYŃSKI, 1965; SCHOUTEN, 1992).

Remarks: Some of the examined specimens are larger (18-26 mm) than those described by BŁESZYŃSKI (1965) (18-21 mm) and their labial palpus is 1.25-2.50∞ the horizontal diameter of compound eye. *Euchromius cochlearellus* (Amsel) was synonymized with *Euchromius pulverosus* by SCHOUTEN (1992).

Phenology: The moth is collected in the end of April to the May and in the September between 1550-2300 m elevations.

Euchromius ramburiellus (Duponchel, 1836) (Fig. 11B)
Crambus ramburiellus Duponchel, 1836: 83.

Material: Fārs Prov. one specimen without abdomen: Kāzerun; Sistān va Baluchestān Prov. 1 ♀: Zāhedān; Khuzestān Prov. 4 ♂♂, 11 ♀♀ and three specimens without abdomen: Ābādān, Ahwāz, Albāji, Dezful, Hamid, Hamidiyeh, Shushtar Minu Island; Hormozgān Prov. 1 ♂ and one specimen without abdomen: Bandar-e Chārak, Isin; Esfahān Prov. 2 ♀♀: Nāin; Bushehr Prov. 1 ♀ and one specimen without abdomen: Ahram, Dālaki.

Distribution: C. Asia; Europe including Albania, Bosnia and Herzegovina, Bulgaria, Corsica, Croatia, Greece, Italy, Macedonia, Montenegro, Portugal, Romania, S. France, Sardinia, Serbia, Sicily, Slovenia, Spain; Middle East: Cyprus, Iran (Karaj and Jahrom), Iraq, Israel, Jordan, Turkey, Saudi Arabia; N. Africa and Canary Islands (the type locality of the species); S. Russia (AMSEL, 1949a, 1961; BŁESZYŃSKI, 1965; SCHOUTEN, 1992; SLAMKA, 2008).

Remarks: *Eromene islamella* Amsel which was newly described form Iran (Jahrom) by AMSEL (1949a) is presently considered as a synonym of *Euchromius ramburiellus* (BŁESZYŃSKI, 1965). The studied specimens are slightly smaller (14-18 mm) than those described by BŁESZYŃSKI (1965) (11.5-20.0 mm).

Phenology: The moth is collected during the February to June and in November from the sea level to an elevation about 900 m.

Euchromius rayatella (Amsel, 1949) (Fig. 11C)
Eromene rayatella Amsel, 1949b: 278-279.

Material: Tehrān Prov. one specimen without abdomen: Evin, Varāmin; Zanjān Prov. 1 ♀: Tārom; Esfahān Prov. Kuhrang; Khorāsān-e Razavi Prov. 1 ♀ and one specimen without abdomen: Mashhad, Akhlamad.

Distribution: Armenia; Asia Minor; Europe including Bosnia and Herzegovina, Crete, Crimea, Croatia, E. Bulgaria, Greece, Italy, Macedonia, Montenegro, SE. Spain, Serbia, Slovenia; C. Asia; Middle East: Iran, Iraq (Kurdistan, Rayat), Israel, Jordan, Syria (the type locality of the species); S. Russia (BŁESZYŃSKI, 1965; SCHOUTEN, 1992; WIESER *et al*., 2001; SKLAMKA, 2008).

Remarks: The forewing of the examined specimens is brighter than that in *Echromius superbellus* and their wingspan is 12-15 mm.

Phenology: The moth is collected during the June and July between 1000-1650 m elevations.

Euchromius superbellus (Zeller, 1849) (Fig. 11D)
Crambus superbellus Zeller, 1849: 314.

Material: Golestān Prov. 1 ♀: Golestān National Park (Tang-e Gol); Khorāsān-e Shomāli Prov. 1 ♀: Shirvān; Khorāsān-e Razavi Prov. 3 ♂♂: Bājgirān.

Distribution: S. Europe (including Spain, the type locality of the species). Although it has been reported from Austria, Hungary and Slovenia (BŁESZYŃSKI, 1965; SCHOUTEN, 1992), but according to SLAMKA (2008), their distribution in C. Europe is problematic. It is also reported from Bulgaria and Ukraine; C. Asia; Iran (Elburs Mt.); Transcaspia; Transcaucasia; Turkey (ZERNY, 1939; BŁESZYŃSKI, 1965; SCHOUTEN, 1992; SLAMKA, 2008).

Phenology: The moth is collected in the June and September between 700-1750 m elevations.

Euchromius viettei Błeszyński, 1961 (Fig. 11E)
Euchromius viettei Błeszyński, 1961: 455-456.

Material: Hormozgān Prov. 5 ♂♂, 1 ♀ and one specimen without abdomen: Bandar-e Khamir, Bandar Abbās, Mināb.

Distribution: Iran: Hormozgan (ALIPANAH, 2003); Chad (Tibesti Mts); Saudi Arabia (the type locality of the species) (BŁESZYŃSKI, 1965; SCHOUTEN, 1992).

Remarks: Wingspan of the examined specimens is 12-14 mm and the labial palpus is 1.5-2.0∞ the horizontal diameter of compound eye. In all the examined specimens the frons is without a pointed apex.

Phenology: The moth is collected in the May and the November from the sea level to an elevation of about 50 m.

Euchromius vinculellus (Zeller, 1847) (Fig. 11F)
Crambus vinculellus Zeller, 1847a: 760.

Material: Kermān Prov. 2 ♂♂, 2 ♀♀ and one specimen without abdomen: Jiroft, Shahr-e Bābak; Khorāsān-e Razavi Prov. 1 ♂: Daregaz; Fārs Prov. 2 ♂♂, 1 ♀: Kāzerun, Tang-e Chogān; Sistān va Baluchestān Prov. 1 ♀ and one specimen without abdomen: Khāsh, Pishin; Khuzestān Prov. 2 ♂♂, 1 ♀: Andimeshk, Dezful; Bushehr Prov. 3 ♂♂ and one specimen without abdomen: Ahram, Jam, Kangān; Hormozgān Prov. 29 ♂♂, 20 ♀♀ and four specimens without abdomen: Bandar Abbās, Bandar Khamir, Bandar Lengeh, Bashāgerd, Dālaki, Fāriyāb, Gohreh, Gurband, Hāji Ābād, Isin, Lārak Island, Mināb.

Distribution: Afghanistan; Mediterranean area (including Sicily, the type locality of the species); Middle East: Dead Sea, Iran (Ahwaz, Bandar-e Chabahar, Dalaki bridge, Jahrom, Karaj, Sarzeh, Takht-e Malek and Tang Ab-e Firuzabad), Iraq, Israel, Jordan, Oman, Saudi Arabia and Yemen; NW. Africa; Canary Islands; Kenya; Niger; Transcaucasia (AMSEL, 1949b, 1961; BŁESZYŃSKI, 1965; SCHOUTEN, 1992; SLAMKA, 2008).

Remarks: Wingspan of the examined specimens is 14-20 mm and the labial palpus is 1-2∞ the horizontal diameter of compound eye. As stated by ALIPANAH (2003), in the male genitalia the sacculus has a sharply pointed, long apex, but this character was not observed in some of our examined specimens.

Phenology: The moth is collected during the January to the June, the August to the September an in the November from the sea level to an elevation of about 900 m.

Genus *Metacrambus* Błeszyński, 1957

Metacrambus carectellus (Zeller, 1847) (Fig. 12A)
Crambus carectellus Zeller, 1847b: 751.

Material: Āzarbāijān-e Gharbi Prov. 1 ♂, 1 ♀: Takāb; Fārs Prov. 3 ♂♂: Dasht-e Āghā, Kamfiruz; Ghazvin Prov. 1 ♀: Chinger; Gilān Prov. 2 ♀♀: Rasht; Golestān Prov. 2 ♀♀: Golestān National Park (Karkuli); Hamadān Prov. 1 ♂, 1 ♀: Tārikdarreh, Toyserkān; Kermān Prov. 1 ♂: Bam; Kermānshāh Prov. 1 ♂, 1 ♀: Kangāvar, Eslām Ābād-e Gharb; Khorāsān-e Shomāli Prov. 2 ♀♀: Ghuchān; Kohgiluyeh va Boyerahmad Prov. 1 ♂: Sisakht.

Distribution: Asia Minor; C. Asia; Caucasus; Middle East: Iran (Hamedan, Karaj, Pir-e Zan, Sepidan, Shiraz, Sine Sefid, Tehran), Lebanon, Palestine, Syria; S. Europe (including Sicily, the type

locality of the species) and southern part of C. Europe; Volga region (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: Wingspan of examined specimens is slightly larger (16-26 mm) than that cited by BŁESZYŃSKI (1965) (18-21 mm) and the length ratio of the labial palpus to the horizontal diameter of the compound eye (3.5-4.0) is slightly less than that cited by BŁESZYŃSKI (1965) (4.5).

Phenology: The moth is collected during the May to July and in the September from the sea level to an elevation of about 2550 m.

Metacrambus jugaraicae Błeszyński, 1965 (Fig. 12B)
Metacrambus jugaraicae Błeszyński, 1965: 332.

Material: Alborz Prov. 1 ♂: Sāvojbolāgh; Āzarbāijān-e Gharbi Prov. 1 ♀: Orumiyeh; Āzarbāijān-e Sharghi Prov. 1 ♂, 8 ♀♀: Kaleybar; Chāhārmahāl va Bakhtiāri Prov. 1 ♂: Khushāb; Ghom Prov. 1 ♀: Vesf; Khorāsān-e Razavi Prov. 1 ♂: Mashhad; Kordestān Prov. 1 ♀: Sanandaj; Lorestān Prov. 1 ♂: Aznā; Tehrān Prov. 2 ♂♂: Damāvand, Firuzkuh.

Distribution: Iran; S. Russia (W. Caucasus region); Turkmenia; W. Kazakhstan (the type locality of the species) (BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: The examined specimens are smaller than those of *M. carectellus* (wingspan = 15-22 mm). Moreover, the pointed apex of the forewing in *M. jugaraicae* (Fig. 5A) is more delicate than in the former species. In the examined specimens the labial palpus is 4-5∞ the horizontal diameter of compound eye. In the genitalia of the examined males the gnathos is broad ventrally and slightly longer than that in *M. carectellus*.

Phenology: The moth is collected in the April and during the June to the August between 340-2350 m elevations.

Metacrambus kurdistanellus (Amsel, 1959) (Fig. 12C)
Mesocrambus kurdistanellus Amsel, 1959b: 43-44.

Material: Āzarbāijān-e Gharbi Prov. 1 ♀: Ghushchi; Kermānshāh Prov. 1 ♀: Kermānshāh; Kordestān Prov. 3 ♀♀: S Bāneh, N. Marivān; Lorestān Prov. 1 ♀: Oshtorankuh; Markazi Prov. 1 ♂: Āshtiān.

Distribution: Iran: Barfkhaneh, Mian Kotal, Shiraz; Iraq: Haji Omran (the type locality of the species) (AMSEL, 1959a, 1961; BŁESZYŃSKI, 1965).

Remarks: Wingspan of the examined specimens is larger (25-34 mm) than that cited by BŁESZYŃSKI (1965) (27 mm), and the labial palpus is dark brown apically and its length is 3.0-3.5∞ the horizontal diameter of compound eye. The genitaliae of the examined males are more or less different from that described by BŁESZYŃSKI (1965) in that the cucullus of the valva has a clear pointed apex and is not rounded at the end (Fig. 4D). Additionally, in the female genitalia of the examined specimens the ductus bursa is broader and shorter than that described by BŁESZYŃSKI (1965) and the junction of the ductus bursae and corpus bursae is not clearly distinguishable (Fig. 6A).

Phenology: The moth is collected in the July between 250-2050 m elevations.

Genus *Pediasia* Hübner, [1825]

Pediasia alcmena Błeszyński, 1965 (Fig. 12D)
Pediasia alcmena Błeszyński, 1965: 362.

Material: Ardebil Prov. 29 ♂♂: Neur lake, Moghān; Āzarbāijān-e Gharbi Prov. 4 ♂♂: Bāzargān; Khorāsān-e Shomāli Prov. 4 ♂♂; Golestān National Park (Ālmeh); Semnān prov. 1 ♂: Shāhrud.

Distribution: N. Iran: Shahkuh-e Paeen, the type locality of the species which is located in Golestān Province (BŁESZYŃSKI, 1965).

Remarks: The wingspan of the examined specimens is smaller (16-27 mm) than that cited by

BŁESZYŃSKI (1965) (31 mm) and the labial palpus is 2.0-3.5∞ the horizontal diameter of compound eye.

Phenology: The moth collected in the end of May and from the July to the September between 45-2500 m elevations.

Pediasia contaminella (Hübner, 1796) (Fig. 12E)
Tinea contaminella Hübner, 1796: 24.

Material: Ardebil Prov. 1 ♂, 2 ♀♀: Pārsābād, Gardane-ye Heyrān, Moghān; Āzarbāijān-e Gharbi Prov. 2 ♂♂: Māku; Āzarbāijān-e Sharghi Prov. one specimen without abdomen: Tabriz; Gilān Prov. 1 ♂♂, 6 ♀♀ and two specimens without abdomen: Asālem, Amārlu, Fuman, Anzali, Rasht; Golestān Prov. 3 ♂♂ and one specimen without abdomen: Gorgān, Ali Ābād; Kermānshāh Prov. 1 ♂: Eslāmābād-e Gharb; Khorāsān-e Razavi Prov. 2 ♂♂: Daregaz; Māzandarān Prov. 6 ♂♂, 2 ♀♀: Tonekābon, Behshahr, Āmol, Nekā; Semnān Prov. 1 ♀: Shahmirzād; Tehran Prov. 28 ♂♂, 8 ♀♀ and two specimens without abdomen: Evin.

Distribution: Asia Minor; C. Asia; Europe (excluding northern part); Iran: Gorgan, Karaj, Kopet Dagh, Mirabi Mt., Shiraz, Tehran; Iraq; Krasnoyark region (ZERNY, 1914; TOLL, 1948; AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008; NUSS *et al*., 2003-2015).

Remarks: The examined specimens are slightly larger (20-27 mm) than that those examined by BŁESZYŃSKI (1965) (21-24 mm) and the length ratio of the labial palpus to the horizontal diameter of the compound eye is slightly shorter (2.75-3.50) than that cited by BŁESZYŃSKI (1965) (3.5-4.0). Although we observed no sexual dimorphism among the studied males and females, BŁESZYŃSKI (1965) stated that both sexes are dimorphic. According to BŁESZYŃSKI (1965) the phallus has a small cornutus and series of brush-like hairs present on its apico-ventral side. Based on the results of this study, the cornuti are of two types: a small, more or less elongated cornutus and a series of tiny thorns positioned longitudinally just next to the elongated cornutus (Fig. 6Ca), as noted by FALKOVICH (1997). Additionally we detected a series of relatively long brush-like spines on the apicoventral side of the phallus (Fig. 6Cb), but no hairs are observed in that area as stated by BŁESZYŃSKI (1965).

Phenology: The moth is collected in the January and during the May to the October from the sea level to an elevationof about 2100 m.

Pediasia desertellus (Lederer, 1855)
Crambus desertellus Lederer, 1855: 220.

Material: No specimens were available for examination during this study.

Distribution: Asia Minor; Europe: E. Roman, ?Portugal, Sicily; Middle East: Cyprus, Iran (Naft Shahr [which is located in Kermānshāh Prov.], Shiraz, Tang-Ab-e Firuzabad), Iraq, Israel, Jordan, Lebanon (the type locality of the species), Syria; N. Afriaca: Algeria, Mauritania (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Pediasia fascelinella (Hübner, [1813])
Tinea fascelinella Hübner, 1810-1813: pl. 54 fig. 268 [recte 368].

Material: No specimens were available for examination during this study.

Distribution: Asia Minor; C. Asia; Europe excluding Iberian Penninsula and part of N. Europe. Local in eastern part of C. Europe and westward more frequent; Iran (Shahkuh); Kasnoyark region; Republic of Buryatiya (ZERNY, 1914; SLAMKA, 2008).

Pediasia jucundellus (Herrich-Schäffer, 1849) (Fig. 12F)
Crambus jucundellus Herrich-Schäffer, (1847-) 1849 (-1855), vol. 4: 62.

Material: Āzarbāijān-e Gharbi Prov. 1 ♀: Khoy.

Distribution: C. Asia; Europe: Balkan Penninsula, Greece, Hungary (the type locality of the

species), Romania, Ukraine; Mongolia; S. Russia; S. Siberian plain; Transcaucasia (BŁESZYŃSKI, 1965; SLAMKA, 2008; NUSS *et al*., 2003-2015).

Remarks: The wingspan of the examined female is 19 mm and its labial palpus is 3.5∞ the horizontal diameter of compound eye. In the female genitalia, in contrast to that cited by BŁESZYŃSKI (1965), the corpus bursae is oval and not rounded and directed upwardly, which is similar to the Hungarian specimens examined by Graziano Bassi (personal correspondence with Graziano Bassi, 2013). This species is newly reported from Iran.

Phenology: The moth is collected in the August at 1825 m elevation.

Pediasia luteella ([Denis & Schiffermuller], 1775)
Tinea luteella Denis & Schiffermüller, 1775: 134.

Material: No specimens were available for examination during this study.

Distribution: Asia Minor; C. Asia; Europe excluding northern part, also not recorded from Spain, Great Britain, Ireland and The Netherlands; Mongolia; S. Siberia; S. Kazakhstan; Iran (Gorgan and Shahkuh) (LEDERER, 1869; ZERNY, 1914; SLAMKA, 2008).

Remark: This species was first reported from Iran (Astrabad) as *Crambus luteellus* (Lederer 1869), the synonym of *Pediasia luteella* (NUSS *et al*., 2003-2015).

Pediasia matricella (Treitschke, 1832) (Fig. 13A)
Phycis matricella Treitschke, 1832: 171-172.

Material: Ardebil Prov. 4 ♂♂: Khalkhāl, Meshkin Shahr; Āzarbāijān-e Gharbi Prov. 1 ♀: Māku; Golestān Prov. 5 ♂♂: Gorgān, Torkman Sahrā; Khorāsān-e Razavi Prov. 1 ♂: Mashhad; Lorestān Prov. 5 ♂♂: Aznā.

Distribution: Europe including ?Austria, Bulgaria, Crimea, Greece, Hungary (the type locality of the species), Macedonia, N. Italy, Portugal, Romania; Middle East: Iran (Kermanshah), Iraq, Jordan, Syria, Turkey; S. Russia; Turkmenistan; Transcaucasia; ?Zabaikalye (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Phenology: The moth is collected in the September and October from the sea level to an elevation of about 1750 m.

Pediasia numidellus (Rebel, 1903) (Fig. 13B)
Crambus numidellus Rebel, 1903: 406.

Material: Hormozgān Prov. 1 ♂: Mināb.

Distribution: Algeria: Ouargla-Ghard (the type locality of the species); Middle East including Bahrain, Egypt, Iran (Bandar-e Chabahar, Makran, Sine Sefid) and NE. Saudi Arabia (AMSEL, 1961; BŁESZYŃSKI, 1965).

Phenology: The moth is collected in the January at 19 m elevation.

Pediasia ochristrigellus (Hampson, 1896) (Fig. 13C)
Crambus ochristrigellus Hampson, 1896: 938-939.

Material: Hormozgān Prov. 2 ♀♀: Kish Island, Mināb.

Distribution: Pakistan: (the type locality of the species); S. Tunisia (BŁESZYŃSKI, 1965; NUSS *et al*., 2003-2015).

Remarks: The ductus bursae of the examined females are approximately 3∞ the length of corpus bursae. This species is newly reported from Iran.

Phenology: The moth is collected in the end of February and end of December between 30-50 m elevations.

Pediasia persellus (Toll, 1948) (Fig. 13D)
Crambus persellus Toll, 1948: 107.

Material: Ardebil Prov. 6 ♂♂ and two specimens without abdomen: Khalkhāl, Sareyn;

Āzarbāijān-e Gharbi Prov. 1 ♂, 1 ♀: Māku; Chāhārmahāl va Bakhtiāri Prov. 1 ♂: Zardkuh; Golestān Prov. 1 ♂, 2 ♀♀: Gorgān; Khorāsān-e Razavi Prov. 4 ♂♂: Bājgirān; Māzandarān Prov. 2 ♂♂: Rāmsar; Tehrān Prov. 1 ♂ and two specimens without abdomen: Lār.

Distribution: Crimea; Iran: Karaj, Lar valley, Mirabi Mt. (the type locality of the species), Polur, Shahkuh and Tehran); Kazakhstan; S. Russia (TOLL, 1948; AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: The labial palpus of the examined specimens is 3.0-4.5∞ the horizontal diameter of compound eye.

Phenology: The moth is collected during the June to the August between 550-2500 m elevations.

Pediasia pseudopersella Błeszyński, 1959 (Fig. 13E)
Pediasia pseudopersella Błeszyński, 1959: 112-114.

Material: Ardebil Prov. 1 ♂: Moghān.

Distribution: China (LI & LI, 2011); Iran: Elburs Mt., Karaj (the type locality of the species) (AMSEL, 1961; BŁESZYŃSKI, 1965).

Remarks: The wingspan of the examined male is 30 mm and the length ratio of the labial palpus to the horizontal diameter of the compound eye is distinctly less (2) than that cited by BŁESZYŃSKI (1965) (5).

Phenology: The moth is collected in the June at elevation of about 30 m.

Genus *Xanthocrambus* Błeszyński, 1957

Xanthocrambus saxonellus (Zincken, 1821) (Fig. 13F)
Chilo saxonellus Zincken, 1821: 254-255.

Material: Alborz Prov. 1 ♂ 1 ♀: Āsārā, Karaj; Āzarbāijān-e Gharbi Prov. 1 ♀: Khodāāfarin (Arasbārān forest); Khorāsān-e Shomāli Prov. 2 ♂♂, 4 ♀♀: Bājgirān, Ghuchān, Mehmānak; Semnān Prov. 1 ♂: Shāhrud; Tehrān Prov. 1 ♂: Lār.

Distribution: Armenia; Asia Minor; Europe: C. Europe (including Germany, the type locality of the species), Balkan Penninsula, Belgium, Italy, S. France, SW. Russia; Iran (Gorgan, Hajiabad, Karaj); Krasnoyarsk region; Transcaucasia (LEDERER, 1869; AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: This species was first reported from Iran by Lederer (1869) as *Crambus saxonellus* Zincken from north Iran (Gorgān) and *Crambus saxonellus* var. *carentellus* described by CHRISTOPH (1888) from south Iran (Hājiābād). All the examined specimens in this study are collected in the north of Iran which may not be referable to the above-mentioned variety. The wingspan of the examined specimens is 21-26 mm and the labial palpus is 2.5-4.5∞ the horizontal diameter of compound eye. As stated by HANNEMAN (1961), in the female genitalia the ductus bursae is very long, but we observed it is not so long, which also agrees with BŁESZYŃSKI (1965).

Phenology: The moth is collected during the June to the August between 800-2800 m elevations.

Tribe Chiloini Heinemann, 1865

Genus *Chilo* Zincken, 1817

Chilo christophi Błeszyński, 1965
Chilo christophi Błeszyński, 1965: 112.

Material: No specimens were available for examination during this study.

Distribution: Armenia; C. Asia; E. Asia: Amurland (the type locality of the species), Amur, N. China, S. Ural, Ussuri; Romania; W. Siberian plain (BŁESZYŃSKI, 1965; SLAMKA, 2008); Iran: Caspian Sea area (MIRZAYANS & KALALI, 1970).

Chilo luteellus (Motschulsky, 1866) (Fig. 14A)
Schoenobius luteellus Motschulsky, 1866: 199.

Material: Ardebil Prov. 3 ♀♀ and one specimen without abdomen: Pārs Ābād, Moghān; Āzarbāijān-e Gharbi Prov. one specimen without abdomen: Kaleybar; Gilān Prov. 2 ♂♂, 1 ♀ and two specimens without abdomen: Bandar Anzali, Lāhijān, Lākān Rd.; Kermānshāh Prov. 1 ♂: Ghasr-e Shirin; Khuzestān Prov. 7 ♀♀: Ābādān, Albāji, Dezful.

Distribution: E. and S. Europe including Bulgaria, Crimea, France, Greece, Romania, S. Italy, Sardinia, Spain; E. Asia: Amurland, Primorye, China, Japan, Korea (the type locality of the species); N. Africa: Algeria and N. Egypt; S. Russia and S. Uralsk region; Syria; Transcaspia; W. & E. Caucasus region (BŁESZYŃSKI, 1965; SLAMKA, 2008; NUSS *et al*., 2003-2015); Iran: Azarbaijan (MIRZAYANS & KALALI, 1970).

Remarks: The wingspan of the examined males and females are 21-36 mm and 34-42 mm, respectively.

Phenology: The moth collected during the March to the September and in the December from below the sea level to an elevation of about 400 m.

Chilo partellus (Swinhoe, 1885) (Fig. 14B)
Crambus partellus Swinhoe, 1886: 879.

Material: Sistān va Baluchestān Prov. 3 ♂♂, 2 ♀♀ and one specimen without abdomen: Bampur, Sarāvān.

Distribution: Afghanistan; Africa; Tropical Asia: India (the type locality of the species); W. Pakistan (BŁESZYŃSKI, 1965; NUSS *et al*., 2003-2015) and Iran: Baluchestan (MIRZAYANS & KALALI, 1970).

Phenology: The moth is collected in the mid-May and the early July between 490-1165 m elevations.

Chilo phragmitella (Hübner, [1810]) (Fig. 14C)
Tinea phragmitella Hübner, 1805–1810: pl. 43 figs 297–298.

Material: Gilān Prov. 1 ♀: Bandar Anzali.

Distribution: C. Asia; Europe excluding some Balkan countries and Mediterranean Islands; Iraq; Japan; N. China; ?Primorye; W. Siberian plain (BŁESZYŃSKI, 1965; SLAMKA, 2008) and Iran: Caspian Sea area (EBERT, 1973).

Remarks: The length ratio of the labial palpus to the horizontal diameter of the compound eye is considerably greater (6.5) than that cited by BŁESZYŃSKI (1965) (5).

Phenology: The moth is collected in the early August at 250 m altitude.

Chilo suppressalis (Walker, 1863) (Fig. 14D)
Crambus suppressalis Walker, 1863: 166.

Material: Gilān Prov. 5 ♀♀ and one specimen without abdomen: Lāhijān; Golestān Prov. 5 ♂♂, 3 ♀♀: Gorgān; Khuzestān Prov. 1 ♀ and one specimen without abdomen: Safi Ābād; Māzandarān Prov. 1 ♂, 10 ♀♀ and two specimens without abdomen: Mahmud Ābād, Nur, Tonekābon; Sistān va Baluchestān Prov. 1 ♀: Sarāvān.

Distribution: E. Asia: Amurland, China (the type locality of the species), Japan, Korea, Primorye; Europe: Corsica, N. Hungary, Portugal, S. France, Spain; Hawaii; Tropical Asia: India; Indochina, Malaya, Taiwan; W. Siberian plain (BŁESZYŃSKI, 1965; SLAMKA, 2008); Iran: Gilan, Gorgan and Mazandaran (EBERT, 1973).

Remarks: The length ratio of the labial palpus to the horizontal diameter of the compound eye is 2.0-3.5.

Phenology: The moth is collected during the April to the October from below the sea level to an elevation of about 500 m.

Tribe Haimbachiini Gaskin, 1972

Genus *Pseudobissetia* Błeszyński, 1959

Pseudobissetia terrestrellus (Christoph, 1885) (Fig. 14E)
Chilo terrestrellus Christoph, 1885: 151.

Material: Fārs Prov. 1 ♀: Shirāz.

Distribution: E. and S. Europe including Bulgaria, Greece, Romania, S. Italy, Sicily and Spain; E. Caucasus region; Middle East: Iran (Bandar-e Chabahar and Sine Sefid), Jordan, Syria; Primorye; Transcaspia (including Turkmenistan, the type locality of the species); Transcaucasia; Tunisa (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008; NUSS *et al*., 2003-2015).

Remarks: The wingspan of the examined female is 30 mm and its labial palpus is 4.5∞ the horizontal diameter of compound eye.

Phenology: The moth is collected in the mid-May at 1150 m altitude.

Genus *Friedlanderia* Agnew, 1987

Friedlanderia cicatricella (Hübner, [1824]) (Fig. 14F)
Tinea cicatricella Hübner, 1823–1824: pl. 68 fig. 455.

Material: Kermānshāh Prov. 1 ♀: Eslām Ābād-e Gharb.

Distribution: Europe including C. and S. countries, Balticum, Belgium, S. England, The Netherlands and Ukraine; Kazakhstan; S. Russia and W. Siberian plain; Syria; Transcaucasia (BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: The wingspan of the examined male is 30 mm and its labial palpus is 3.5∞ the horizontal diameter of compound eye. This species was previously assigned to the genus *Acigona* Hübner, [1825], but later transferred to the genus *Friedlanderia* by AGNEW (1987). The genus and species are here newly reported from Iran.

Phenology: The moth is collected in the early July at 1500 m elevation.

Genus *Thopeutis* Hübner, [1818]

Thopeutis galleriellus (Ragonot, 1892) (Fig. 15A)
Cephis galleriellus Ragonot in Staudinger, 1892: 295-296.

Material: Bushehr Prov. 1 ♀: Bandar-e Deylam; Fārs Prov. 29 ♂♂, 11 ♀♀: Bakhtegān lake, Parishān lake; Golestān Prov. 1 ♂: Gorgān; Khuzestān Prov. 1 ♂, 29 ♀♀: Ābādān, Ahwāz; Sistān va Baluchestān Prov. 18 ♂♂, 49 ♀♀: Khājeh Mt., Zābol.

Distribution: Asia Minor; Caucasus; Europe including ?Bulgaria, Montenegro, Romania, S. France, Sardinia, Spain, Ukraine; India and Sri Lanka; Iran; Iraq; Israel; N. Africa (including Tunisia, the type locality of the species); N. America; S. Russia (BŁESZYŃSKI, 1965; SLAMKA, 2008; NUSS *et al*., 2003-2015).

Remarks: The wingspan of the males and females are 25-27 mm and 26-40 mm, respectively. Although FALKOVICH (1997) referred to variation in the forewing colour (from dirty white to brown) and the silky white colour of the hindwing, the males are darker than the females in both the fore- and hindwing in all the studied material.

Phenology: The moth is collected during the April to the June and at the September to the October from below the sea level to an elevation of about 1950 m.

Tribe Prionapterygini B. Landry, 1995

Genus *Mesolia* Ragonot in Joannis & Ragonot, 1889

Mesolia alborzella Bassi, 2013

Mesolia alborzella Bassi, 2013: 140,142.

Material: No specimens were available for examination during this study.

Distribution: Iran (S. Shimshak; an erroneous spelling of Shemshak) (BASSI, 2013).

Genus *Surattha* Walker, 1863

Surattha soudanensis Hampson, 1919 (Fig. 15B)

Surattha soudanensis Hampson, 1919 b: 68.

Material: Hormozgān Prov. 1 ♀: Hengām Island.

Distribution: Afghanistan; Bahrain; Iran (Bandar-e Chabahar); Saudi Arabia; Sudan (the type locality of the species) (AMSEL, 1961; BŁESZYŃSKI, 1965).

Phenology: The moth is collected in the early March.

Surattha strioliger Rothschild, 1913

Surattha strioliger Rothschild, 1913: 135.

Material: No specimens were available for examination during this study.

Distribution: Iran: Ahwaz; Saudi Arabia; Western part of C. Sahara (the type locality of the species) (AMSEL, 1954; BŁESZYŃSKI, 1965).

Remark: *Surattha stroblei* Amsel which was described form Iran (Ahwaz) by AMSEL (1954), now is considered a synonym of *Surattha strioliger* Rothschild (BŁESZYŃSKI, 1965).

Genus *Talis* Guenée, 1845

Talis quercella ([Denis & Schiffermüller], 1775) (Fig. 15C)

Tinea quercella Denis & Schiffermüller, 1775: 134.

Material: Ardebil Prov. 1 ♂: Moghān; Āzarbāijān-e Gharbi Prov. 2 ♂♂, 1 ♀: Bāzargān, Māku, Poldasht, Tāzeh Kand; Āzarbāijān-e Sharghi Prov. 7 ♂♂: Bostān Ābād, Marāgheh, Siāhchaman, Tabriz; Tehrān Prov. 1 ♂: Shahriār.

Distribution: Asia Minor; C. Asia; southern part of C. Europe (including Austria, the type locality of the species). It is also reported from ?Bavaria, Bulgaria, Poland, Romania, SW. & C. part of European Russia, Sardinia, Sicily, Spain and Ukraine; Iran (Elburs Mt. and Karaj); Iraq; Mongolia; NW. Africa; NW. China; SW. Siberia (AMSEL, 1949a, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: *Talis iranica* which was described form Iran (Karaj) by AMSEL (1949a) is now considered as a subspecies of *Talis quercella iranica* Amsel (BŁESZYŃSKI, 1965). The wingspan of the examined specimens is 27-35 mm and the labial palpus is 1.5-2.0∞ the horizontal diameter of compound eye. Although according to BŁESZYŃSKI (1965), the females have a reduced forewing pattern, in the single female examined, the forewing (Fig. 5B) is darker than that of the males (Fig. 5C) and has a distinct pattern. In the genitalia of the examined males the saccular processes are more or less asymmetrical and pointed apically (Fig. 6D). Four subspecies of this species are already known but only one, *T. quercella iraniaca* is reported from Iran (Karaj) so far.

Phenology: The moth is collected during the June to the September between 30-1750 m elevations.

Talis renetae Ganev & Hacker, 1984 (Fig. 15D)

Talis renetae Ganev & Hacker, 1984: 249-250.

Material: Khorāsān-e Razavi Prov. 2 ♂♂: Mashhad; Khorāsān-e Shomāli Prov. 4 ♂♂: Golestān National Park: (Ālmeh, Sulgerd); Māzandarān Prov. 2 ♂♂: Chālus, Tonekābon.

Distribution: Turkey: Ankara (the type locality of the species) (GANEV & HACKER, 1984).

Remarks: This species is newly reported from Iran.

Phenology: The moth is collected during the June and from September to October between 1100-1600 m elevations.

Unplaced genera

Genus *Ancylolomia* Hübner, [1825]

Ancylolomia micropalpella Amsel, 1951 (Fig. 15E)
Ancylolomia micropalpella Amsel, 1951: 526.

Material: Bushehr Prov. 1 ♂: Khalij-e Nāyband; Hormozgān Prov. 3 ♂♂, 1 ♀: Bandar Abbās, Geno.

Distribution: Bahrain; Iran including Baluchestan (Chabahar), Larestan (Sarzeh, the type locality of the species); Saudi Arabia (AMSEL, 1951, 1961; BŁESZYŃSKI, 1965).

Remarks: The wingspan of the examined specimens (21-26 mm) is considerably less than that cited by BŁESZYŃSKI (1965) (27-33 mm) and the labial palpus is 1.0-1.2∞ or less than the horizontal diameter of compound eye; while in the specimens examined by BŁESZYŃSKI (1965) it was 2. Although the valvae in the male genitalia have elongated hairs, according to BŁESZYŃSKI (1965), this character was not clear in the studied males (BŁESZYŃSKI, 1965).

Phenology: The moth is collected during the October to December from the sea level to an elevation of about 650 m.

Ancylolomia palpella ([Denis & Schiffermüller], 1775) (Fig. 15F)
Tinea palpella Denis & Schiffermüller, 1775: 134.

Material: Alborz Prov. 1 ♂, 1 ♀: Malārd, Karaj; Ardebil Prov. 17 ♂♂, 18 ♀♀: Moghān; Āzarbāijān-e Gharbi Prov. 1 ♂, 3 ♀♀: Orumiyeh, Māku, Poldasht; Āzarbāijān-e Sharghi Prov. 1 ♂, 1 ♀: Kaleybar; Esfahān Prov. 1 ♂, 4 ♀♀: Delijān; Fārs Prov. 27 ♂♂, 31 ♀♀: Mahārlu lake, Estahbān, Sarvestān, Neyriz, Sepidān, Shirāz, Dasht-e Arzhan, Ābādeh; Ghazvin Prov. 1 ♂: Rudbār, Dasht-e Āghā; Gilān Prov. 2 ♀♀: Bandar Anzali; Golestān Prov. 32 ♂♂, 11 ♀♀: Gorgān; Khorāsān-e Shomāli Prov. 38 ♂♂: Golestān National Park (Ālmeh, Sulgerd); Hormozgān Prov. 2 ♂♂, 3 ♀♀: Fārur Island, Geno Mt., Bandar Abbās; Khorāsān-e Razavi Prov. 1 ♂, 1 ♀: Neyshābur; Kermān Prov. 1 ♂, 2 ♀♀: Jiroft, Shahr-e Bābak, Rābar, Lālehz ār; Ilām Prov. 3 ♂♂: Mishkhās; Kermānshāh Prov. 1 ♂: Kermānshāh; Kohgiluyeh va Boyerahmad Prov. 2 ♀♀: Yāsuj; Lorestān Prov. 20 ♂♂, 3 ♀♀: Aznā, Oshtorānkuh, Aligudarz; Māzandarān Prov. 2 ♂♂: Chālus, Gazanak; Tehrān Prov. 47 ♂♂, 11 ♀♀: Evin, Varāmin, Shahriār.

Distribution: Asia Minor; Canary Islands; C. and S. Europe (including Austria, the type locality of the species), but rare; E. Europe: Belgium, Bulgaria, Macedonia, Romania, Serbia, Ukraine; Kazakhstan; Middle East: Iran (Karaj, Kermanshah, Pir-e Zan, Shiraz, Sine Sefid), Iraq, Lebanon, Palestine, Syria; Russia; Transcaucasia (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: The wingspan of the examined males is 25-38 mm and that of the females is 26-48 mm. Moreover, the length ratio of the labial palpus to the horizontal diameter of the compound eye (3.5-6.0) is more variable than that cited by BŁESZYŃSKI (1965) (4.5-5.5). Forewing pattern of the examined specimens consists of two different types in the females, even in the same locality. Some females are quite similar to the males (Fig. 5D) but in others the wing colour is amber with an indistinct pattern and a dark brown longitudinal line in the lower half of the forewing, starting from the base and extending towards the subterminal line, exactly comparable to the wing pattern of *A. palpella syriaca* Rebel, 1911 (Fig. 5E). Up to now only one of the four described subspecies of this species, *A. palpella palpella* ([Denis & Schiffermüller], 1775) has been reported from Iran. In the genitalia of the examined females the bursa copulatrix is without any clear sclerotized area, as indicated by BŁESZYŃSKI (1965).

Phenology: The moth is collected in February and during the April to the November from the sea level to an elevation of about 2750 m.

Ancylolomia pectinatellus (Zeller, 1847) (Fig. 16A)
Crambus pectinatellus Zeller, 1847: 747.

Material: Ardebil Prov. 4 ♂♂: Moghān; Fārs Prov. 8 ♂♂, 2 ♀♀: Estahbān, Ghāsem Ābād, Shirāz, Tang-e Chogān, Miāndeh, Fasā, Zāhed Shahr.

Distribution: Asia Minor; Europe including Balkan Penninsula, Bosnia and Herzegovina, Croatia, ?Hungary, Macedonia, Malta, Montenegro, S. Italy, Serbia, Sicily (the type locality of the species) and Slovenia; Middle East: Cyprus; Iran (Ahwaz, Bandar-e Imam Khomayni, Shiraz), Iraq, Palestine, Syria (AMSEL, 1949b, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008).

Remarks: The examined specimens are slightly smaller (22-27 mm) than those examined by BŁESZYŃSKI (1965) (25-31 mm) and the labial palpus is 2.5-4.0∞ the horizontal diameter of compound eye.

Phenology: The moth is collected during the August to the November between 40-1750 m elevations.

Ancylolomia tentaculella (Hübner, 1796) (Fig. 16B)
Tinea tentaculella Hübner, 1796: 26-27.

Material: Ardebil Prov. 21 ♂♂, 1 ♀: Moghān; Bushehr Prov. 2 ♂♂: Jam; Fārs Prov. 1 ♂: Shirāz; Golestān Prov. 2 ♂♂: Gorgān; Gilān Prov. 2 ♂♂: Rahim Ābād, Tālesh; Kermānshāh Prov. 1 ♂: Ghasr-e Shirin; Māzandarān Prov. 1 ♂: Kelārdasht.

Distribution: Asia Minor; C. and S. Ural regions; Europe: S. Europe (including Italy, the type locality of the species), Bulgaria, ?Hungary, Macedonia, Serbia, SE. England, Slovenia, Switzerland, Ukraine; Russia; Middle East: Iraq, Lebanon, Syria (BŁESZYŃSKI, 1965; SLAMKA, 2008) and Iran (Azarbaijan) (MYRZAYANS & KALALI, 1970).

Remarks: The wingspan of the examined specimens 26-40 mm, and the labial palpus is 2.5-4.5∞ the horizontal diameter of compound eye; according to BŁESZYŃSKI (1965) they were 29-38 mm and 3.0-3.5 mm, respectively. The males of *A. palpella* and *A. tentaculella* can easily be separated by the shape of the antennae, while the diagnostic character in the females is found in the labial palpus. In *A. palpella* it is longer and more slender, but in *A. tentaculella* it is shorter and thicker. Moreover, the maxillary palpus in *A. palpella* is slender while in *A. tentaculella* it is shorter with a rounded apex. As stated by BŁESZYŃSKI (1965), in *A. tentaculella* the dorsal apophyses are longer compared to those of *A. palpella*, but we found no considerable differences between the specimens we examined in this regard.

Phenology: The moth is collected during the early June to the November between 40-2500 m elevations.

Ancylolomia tripolitella Rebel, 1909 (Fig. 16C)
Ancylolomia tripolitella Rebel, 1909: 283-284.

Material: Bushehr Prov. 1 ♂: Kangān; Khuzestān Prov. 1 ♀: Ahwāz.

Distribution: S. Europe: Malta, Sardinia, Spain; Canary Islands; N. Africa (including Tripolitania, the type locality of the species); Middle East: Bahrain, Jordan, Syria (BŁESZYŃSKI, 1965; SLAMKA, 2008), Iran: Sarzeh (AMSEL, 1961).

Remarks: The length ratio of the labial palpus to the horizontal diameter of the compound eye in the examined material (2) is less than that cited by BŁESZYŃSKI (1965) (3). In the male genitalia of the examined specimens, contrary to that cited by BŁESZYŃSKI (1965), the gnathos is not shorter than the uncus, as they are nearly equal in size. In the genitalia of examined females, the corpus bursae and ductus bursae are not the same length; sclerotized area of antrum is longer than that cited by BŁESZYŃSKI (1965) and extended to half the length of the bursa copulatrix (Fig. 6B).

Phenology: The moth is collected during the October to November between 10-150 m elevations.

Ancylolomia westwoodi Zeller, 1863 (Fig. 16D)
Ancylolomia westwoodi Zeller, 1863: 11.

Material: Hormozgān Prov. 4 ♂♂, 6 ♀♀: Mināb, Isin; Sistān va Baluchestān Prov. 1 ♂: Bampur.

Distribution: Australia: Terra Vandiemenii (the type locality of the species) (NUSS *et al*., 2003-2015).

Remarks: Based on the type specimen, the locality of the subspecies *Ancylolomia westwoodi bitubirosella* Amsel, which was originaly described as *A. bitubirosella* Amsel, is: Iran, Belutschistan, Iranshar (German spellings of Baluchestān, Irānshahr), 800 m. (AMSEL, 1959a; BŁESZYŃSKI, 1965; NUSS *et al*., 2003-2015). This subspecies distributed in Afghanistan; Iran: Baluchestan (Iranshahr); W. Pakistan: Karachi; E. and S. India; Sri Lanka; Indonesia: Sumatra, Celebes, Bali and Java; Malay Peninsula and Philippines (BŁESZYŃSKI, 1965).

Hindwing of the examined specimens, regardless of that described by BŁESZYŃSKI (1965), is not brownish. All the specimens have snowy white hindwings. Genitaliae of the studied males are similar to those collected in Pakistan (Karachi) by VARTIAN in 1961 (BŁESZYŃSKI, 1965).

Phenology: The moth is collected during the March to April and the November to December between 30-520 m elevations.

Genus *Calamotropha* Zeller, 1863

Calamotropha lupatus (Meyrick, 1932) (Fig. 16E)
Crambus lupatus Meyrick, 1932: 344.

Material: Fārs Prov. 1 ♂: Farāshband.

Distribution: India: Punjab, Lyallpur (the type locality of the species) (NUSS *et al*., 2003-2015).

Remarks: The wingspan of the examined specimen is 28 mm and its labial palpus is 2.5-3∞ the horizontal diameter of compound eye. This species is newly reported from Iran.

Phenology: The moth is collected in the mid-April at 800 m altitude.

Calamotropha paludella (Hübner, [1824]) (Fig. 16F)
Tinea paludella Hübner, 1823-1824: pl. 68 figs 452-453.

Material: Gilān Prov. 4 ♂♂, 12 ♀♀: Asālem, Bandar Anzali, Rasht; Kordestān Prov. 1 ♂: Marivān; Khuzestān Prov. 6 ♂♂, 15 ♀♀: Ābādān, Albāji, Dezful, Haft Tappeh, Hamid, Minu Island; Māzandarān Prov. 4 ♀♀: Nur, Tonekābon.

Distribution: Africa and Madagascar; Australia; C. Asia; Europe; Iran: Shiraz; Kashmir; Pimorye and Amurland; W. Siberian plain (AMSEL, 1961; BŁESZYŃSKI, 1965; SLAMKA, 2008; NUSS *et al*., 2003-2015).

Remarks: The wingspan of the examined specimens is 21-35 mm and the labial palpus is 2.5-3.5∞ the horizontal diameter of the compound eye. The species exhibits sexual dimorphism, the males being generally smaller and darker than the females (Fig. 5F). Two subspecies of this species have already been described of which one, *C. paludella paludella* (Hübner), has been reported from Iran (BŁESZYŃSKI, 1965).

Phenology: The moth is collected during the April to the May and the early July to the September from below the sea level to 1350 m elevation.

Discussion

As shown in Figure 17, the crambine species are distributied continuously in the Hyrcanian district (and some areas in the southern slopes of Alborz in the Irano-Turanian region); Kerman Mts. (which have been considered as a zoogeographic zone by ZARUDNY (1911)), Zagros Mts., North Khorasan, and Nubo-Sindian region. A more or less distinct discontinuity can only be visible in Nubo-Sindian Region between the Persian Gulf coast and the Hormoz strait, and Baluchestan (southern and south eastern of Iran). Such an opinion has also been stated by ANDERSON (1968) in his study on the lizards of Iran. Based on the overall distribution map of the examined crambine species of Iran (Fig. 17), no specimen was found to be distributed in Khorasan-e Jonubi, Northen parts of Kerman Province and east and north eastern parts of Yazd and Esfahan Provinces. In our opinion, this could be in part

due to the incomplete sampling in the above-mentioned areas, and mainly due to the climatic conditions of these places, especially in the desert area of Iran, unsuitable for crambine species. The deserts and plains of the Irano-Turanian area have severely limited the distribution patterns of Iranian crambine species (Fig. 17). This is more or less similar to the distribution patterns of Iranian endemic planthoppers presented by MOZAFFARIAN (2013).

Based on the examined specimens and available literature (AMSEL, 1949a, b, 1951, 1959, 1961; BŁESZYŃSKI, 1959, 1965; MIRZAYANS & KALALI, 1970; EBERT 1973; NUSS *et al*., 2003-2013; WIESER *et al*., 2001; ALIPANAH, 2003), distribution of the genera *Catoptria*, *Chrysocrambus*, *Metacrambus* and *Talis* in Iran is restricted to the Irano-Turanian Region and none of the species of these genera has hitherto been collected in the Saharo-Arabian Region; while the genera *Agriphila*, *Ancylolomia*, *Euchromius*, *Pediasia*, *Chilo* and *Calamotropha* are distributed in both regions. Iranian species of the genus *Surattha* can only be found in the Saharo-Arabian Region.

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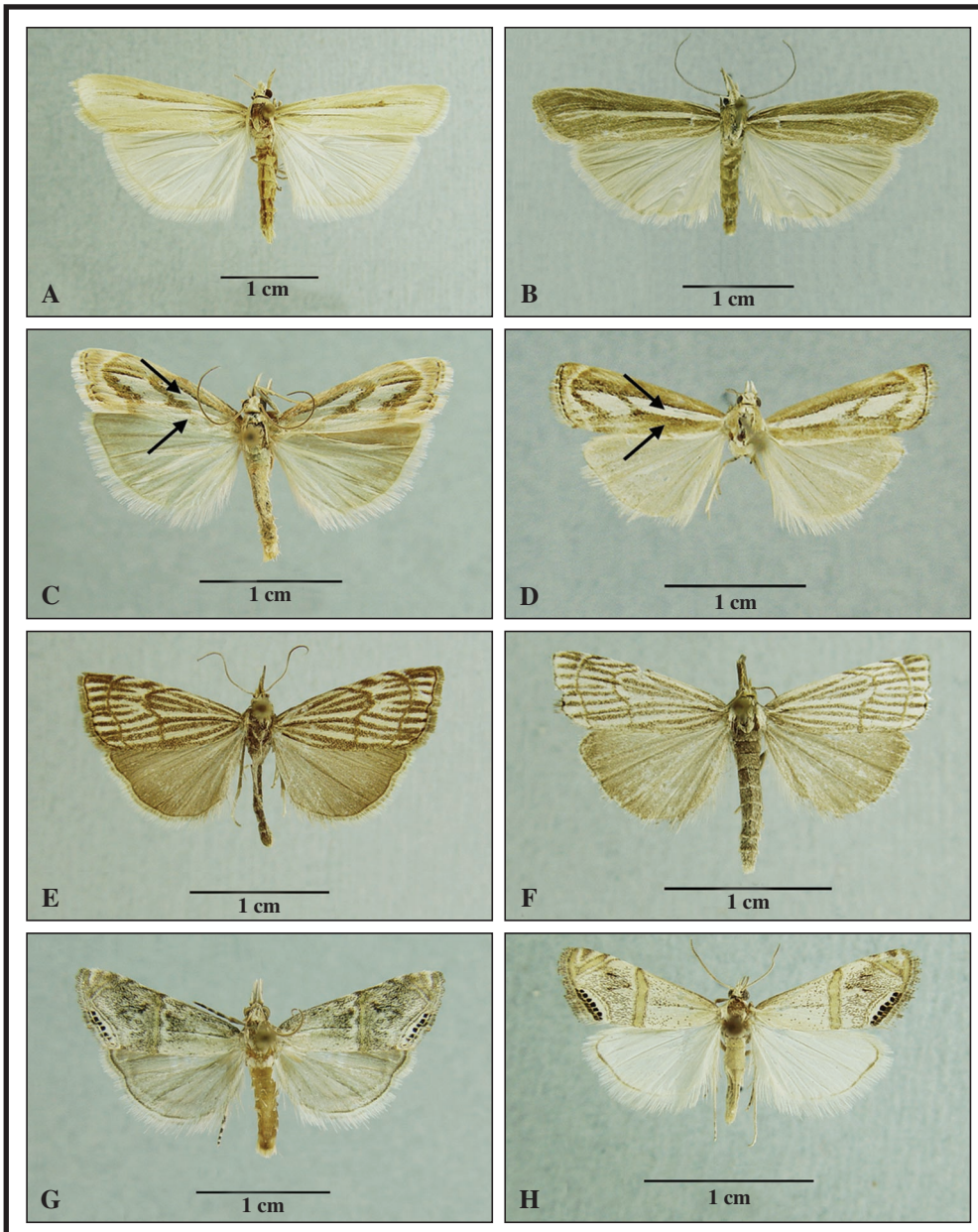

Figure 2.– A-B) *Agriphila deliella* (Hb.), male: A) yellowish form. B) yellowish grey form. C) *Catoptria pfeifferi* (Osth.), male; upper and lower arrows indicate the relatively short proximal cell and faded away lower margin of the forewing, respectively. D) *Catoptria colchicellus* (Led.), female; upper and lower arrows indicate elongated proximal cell and distinct lower margin of the forewing, respectively. E-F) *Chrysocramboides craterella* (Scop.), male: E) dark brown form. F) light brown form. G) *Euchromius keredjella* (Ams.), male. H). *Euchromius malekalis* Ams., male.

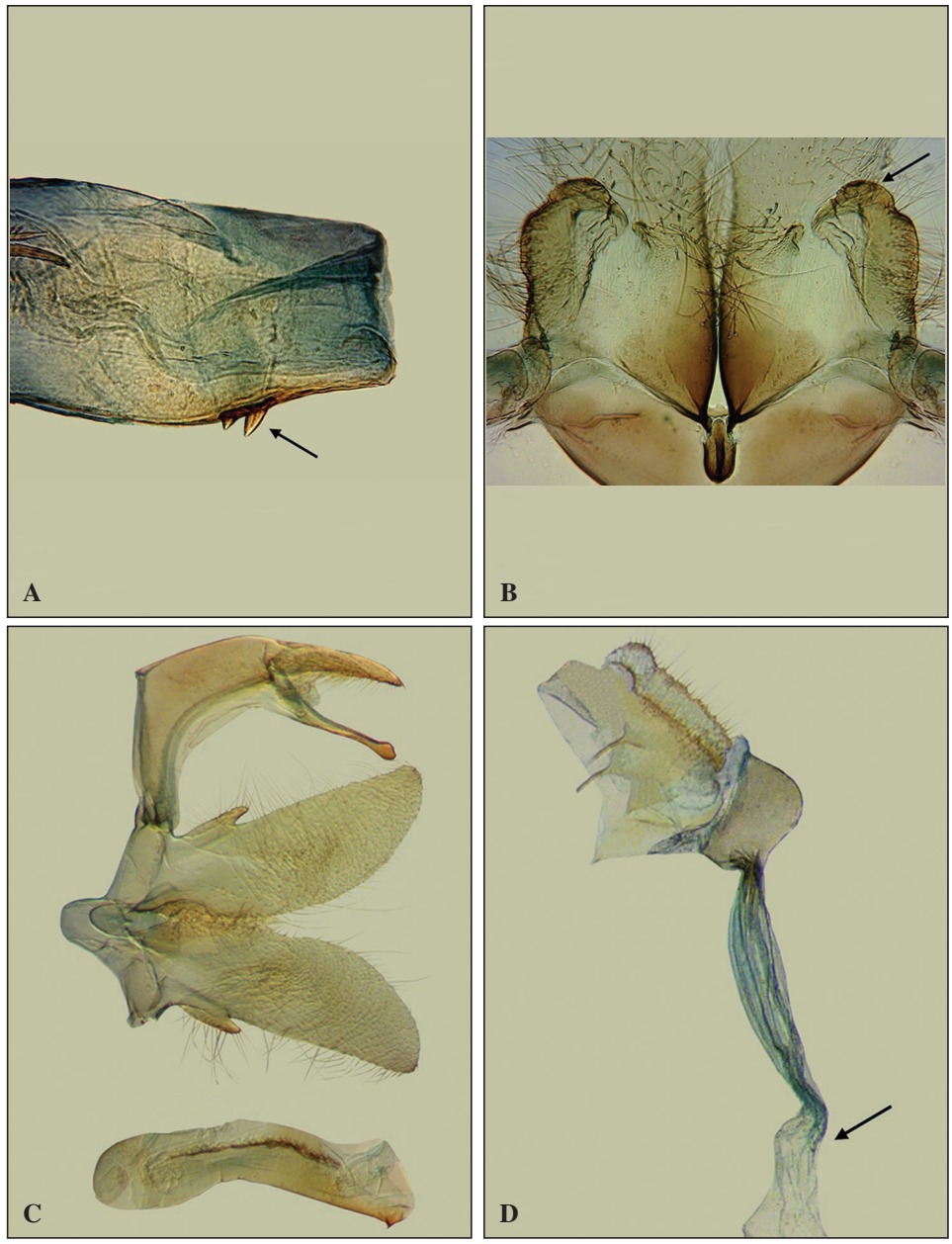

Figure 3.– Genitalia. A) end of phallus in *Agriphila poliellus* (Tr.); arrow indicates the small thorns on the ventroapical part. B) smooth costal arms in the male genitalia of *Agriphila poliellus* (Tr.). C) male genitalia in *Agriphila tristella* ([D. & Schiff.]), D) posterior end of the female genitalia in *Agriphila tristella* ([D. & Schiff.]) arrow indicates narrow distal end of ductus bursa.

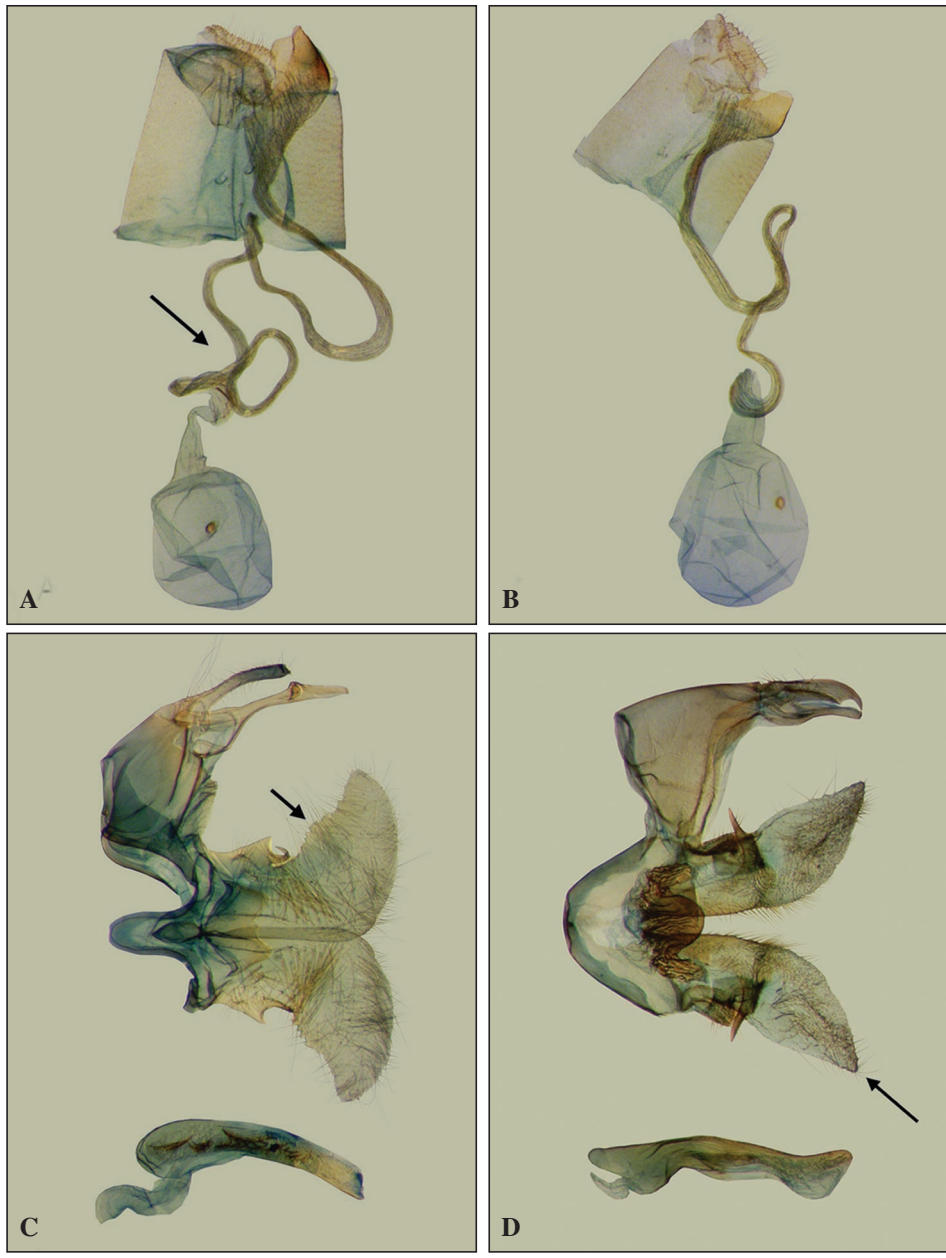

Figure 4.– Genitalia. A) female genitalia in *Catoptria colchicellus* (Led.); arrow indicates the twists of ductus bursa. B) female genitalia in *Catoptria dimorphellus* (Stgr.). C) male genitalia in *Euchromius ocellea* (Hw.); arrow indicates the serrated swelling of the upper side of valva. D) male genitalia in *Metacrambus kurdistanellus* (Ams.); arrow indicates the pointed apex of cucullus.

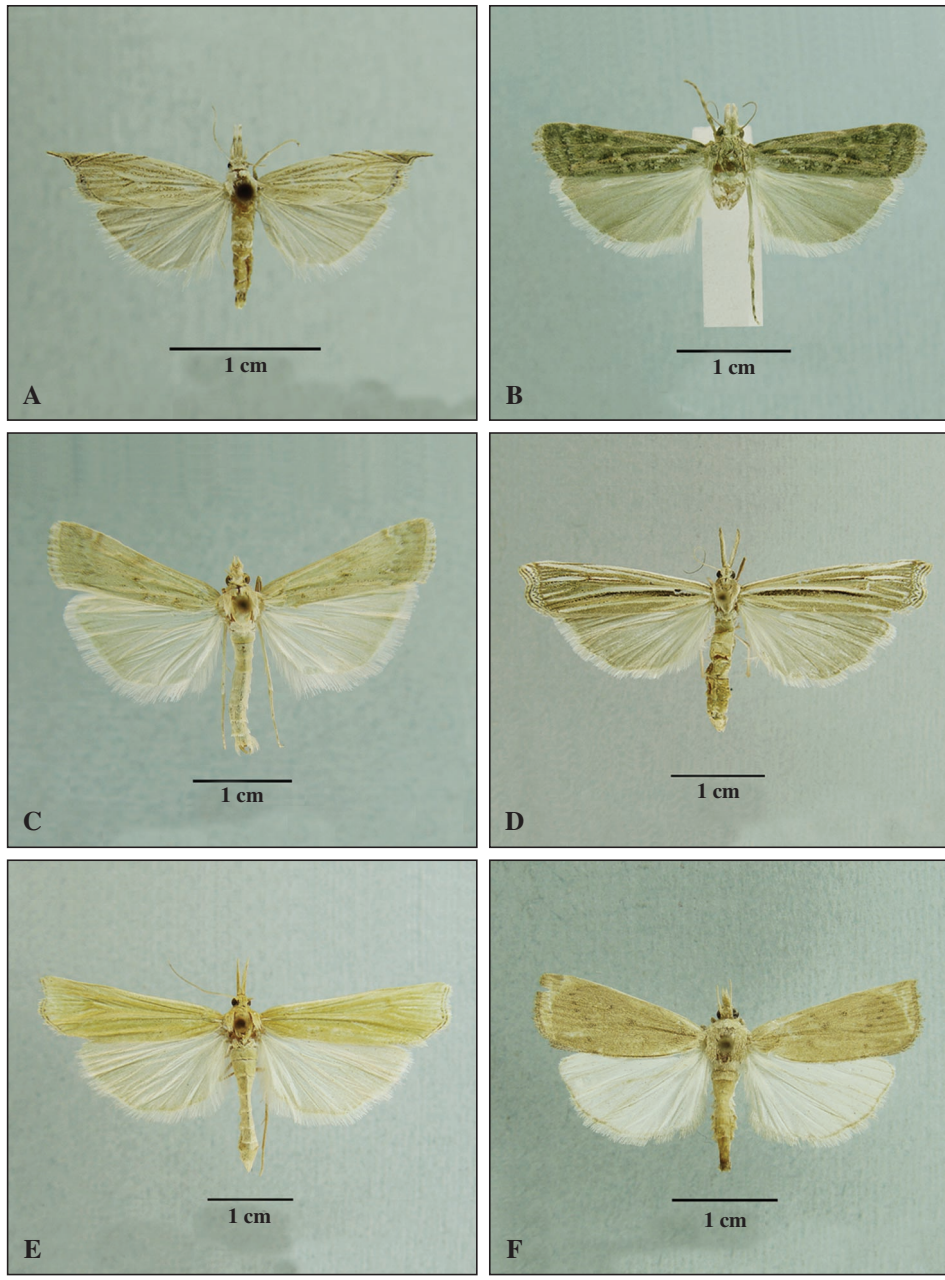

Figure 5.– A) *Metacrambus jugaraicae* Błesz., female. B-C) *Talis quercellus* ([D. & Schiff.]): B) female. C) male. D-E) *Ancylolomia palpella* ([D. & Schiff.]), adult female: D) greyish form. E) amber-coloured form. F) *Calamotropha paludella* (Hb.), female.

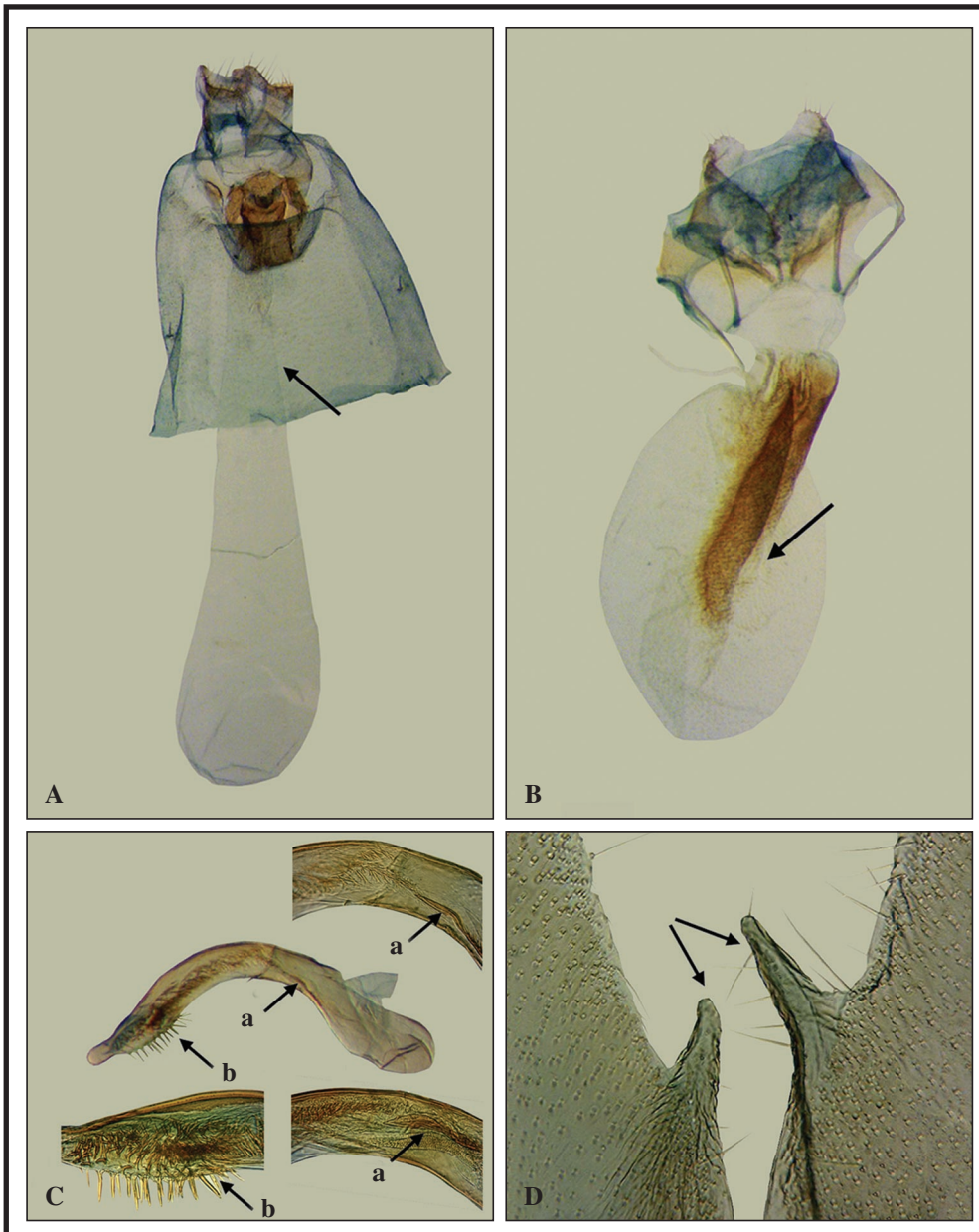

Figure 6.– Female and male genitalia. A) female genitalia in *Metacrambus kurdistanellus* (Ams.); arrow indicates indistinguishable junction of ductus bursa and corpus bursa. B) female genitalia in *Ancylolomia tripolitella* Rbl.; arrow indicates the extended sclerotized area of antrum. C) phallus in *Pediasia contaminella* (Hb.); arrows indicate: (a) the small, more or less elongated cornutus and series of tiny thorns positioned longitudinally next to it, (b) brush-like spines on the apicoventral side of phallus. D) a part of male genitalia in *Talis quercella* ([D. & Schiff.]); arrow indicates the asymmetrical saccular processes.

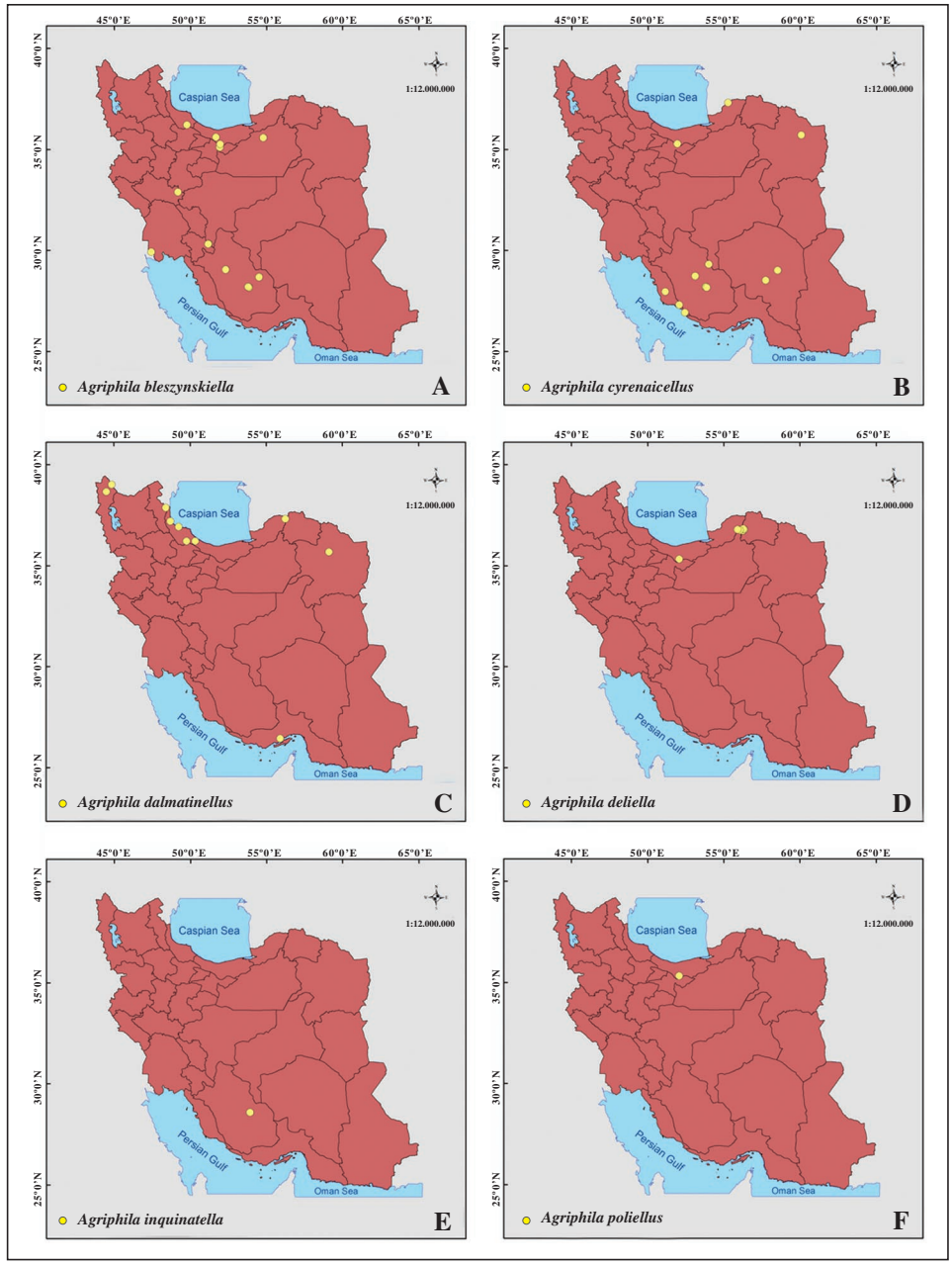

Figure 7.– Distribution of crambine species in Iran. A) *Agriphila bleszynskiella* Ams. B) *Agriphila cyrenaicellus* (Rag.). C) *Agriphila dalmatinellus* (Hamps.). D) *Agriphila deliella* (Hb.). E) *Agriphila inquinatella* ([D. & Schiff.]). F) *Agriphila poliellus* (Tr.).

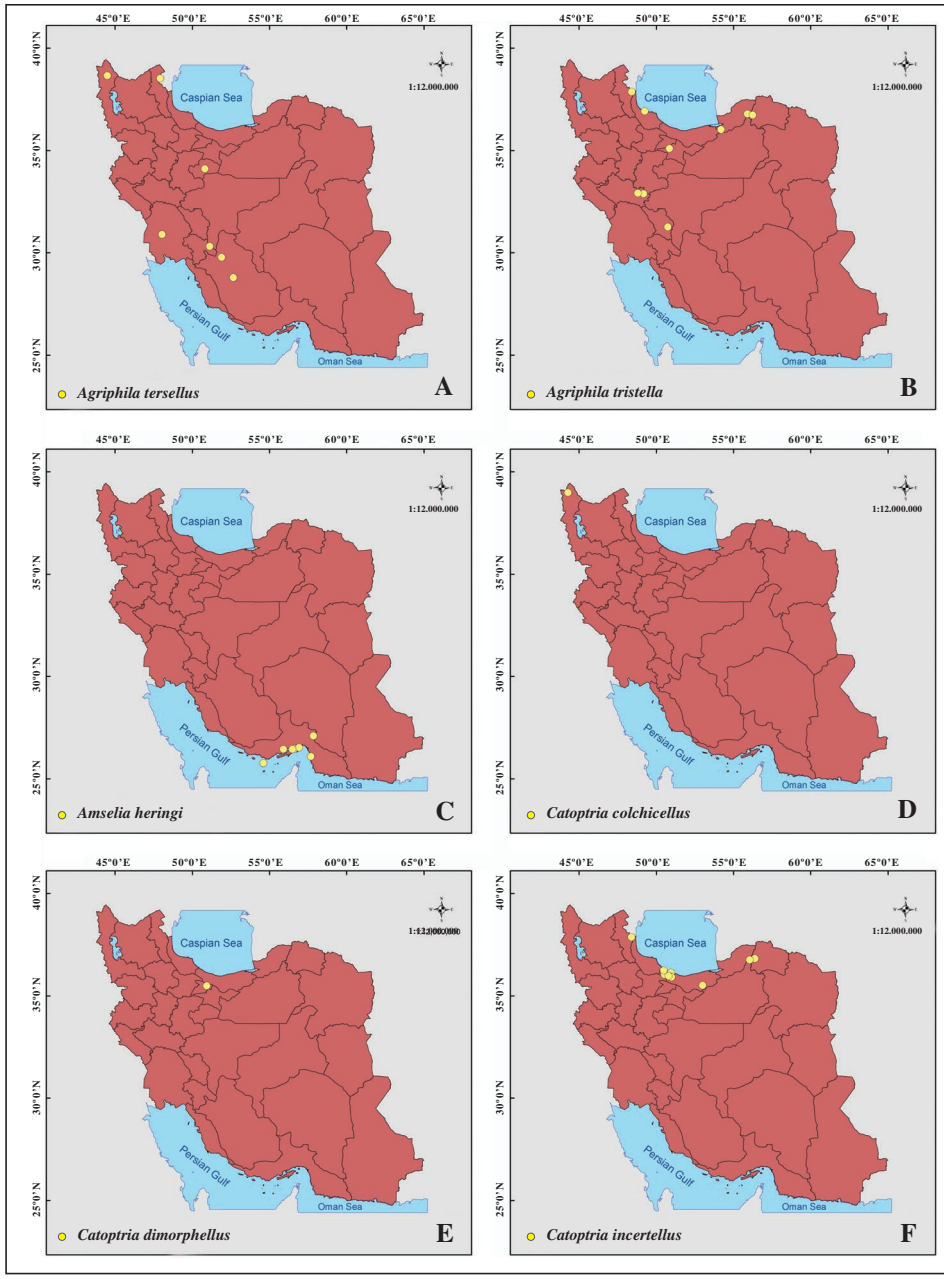

Figure 8.– Distribution of crambine species in Iran based on the examined specimens. A) *Agriphila tersellus* (Led.). B) *Agriphila tristella* ([D. & Schiff.]). C) *Amselia heringi* (Ams.). D) *Catoptria colchicellus* (Led.). E) *Catoptria dimorphellus* (Stgr.). F) *Catoptria incertellus* (H.-S.).

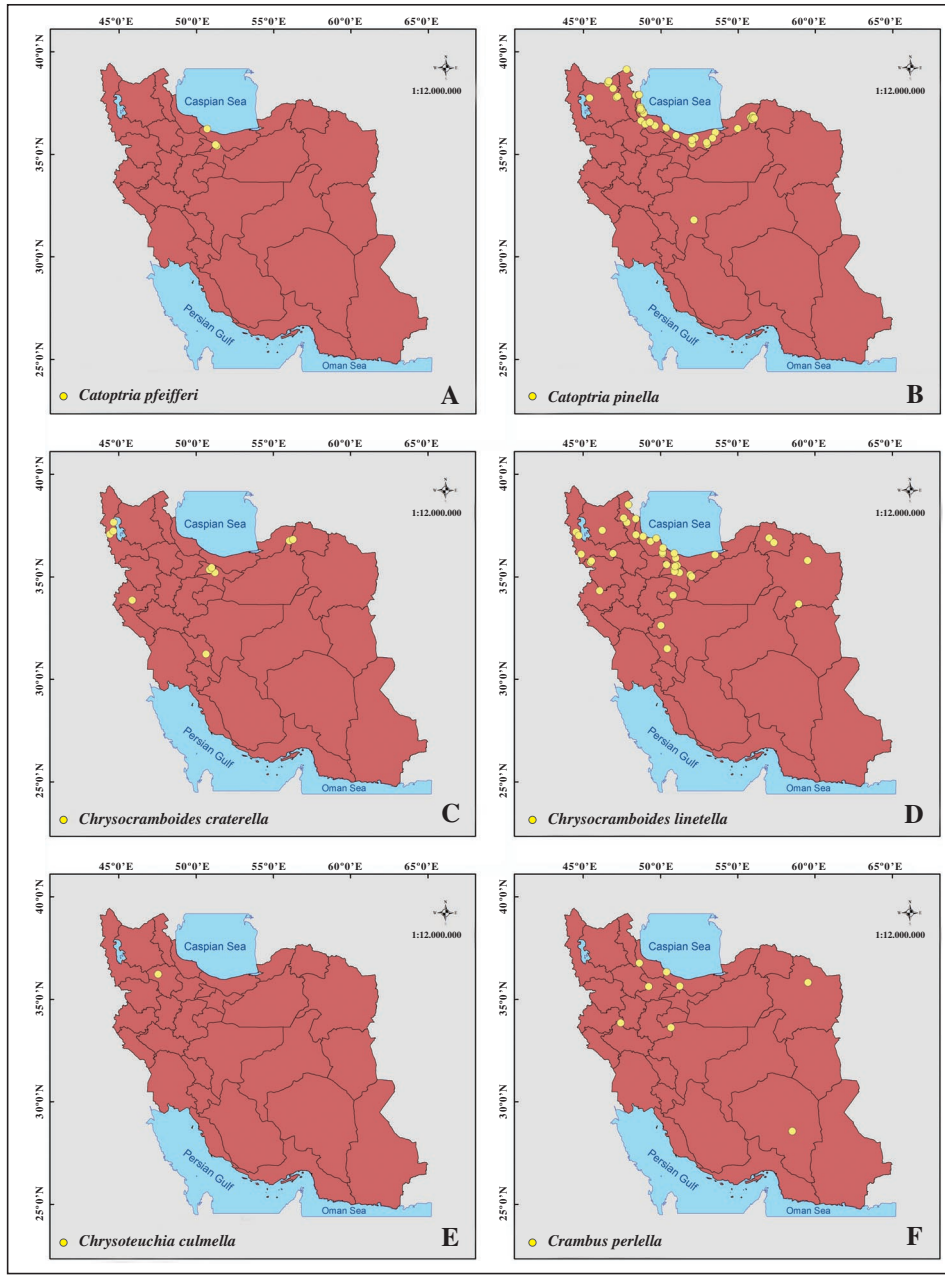

Figure 9.– Distribution of crambine species in Iran based on the examined specimens. A) *Catoptria pfeifferi* (Osth.). B) *Catoptria pinella* (L.). C) *Chrysocramboides craterella* (Scop.). D) *Chrysocrambus linetella* (F.). E) *Chrysoteuchia culmella* (L.). F) *Crambus perlella* (Scop.).

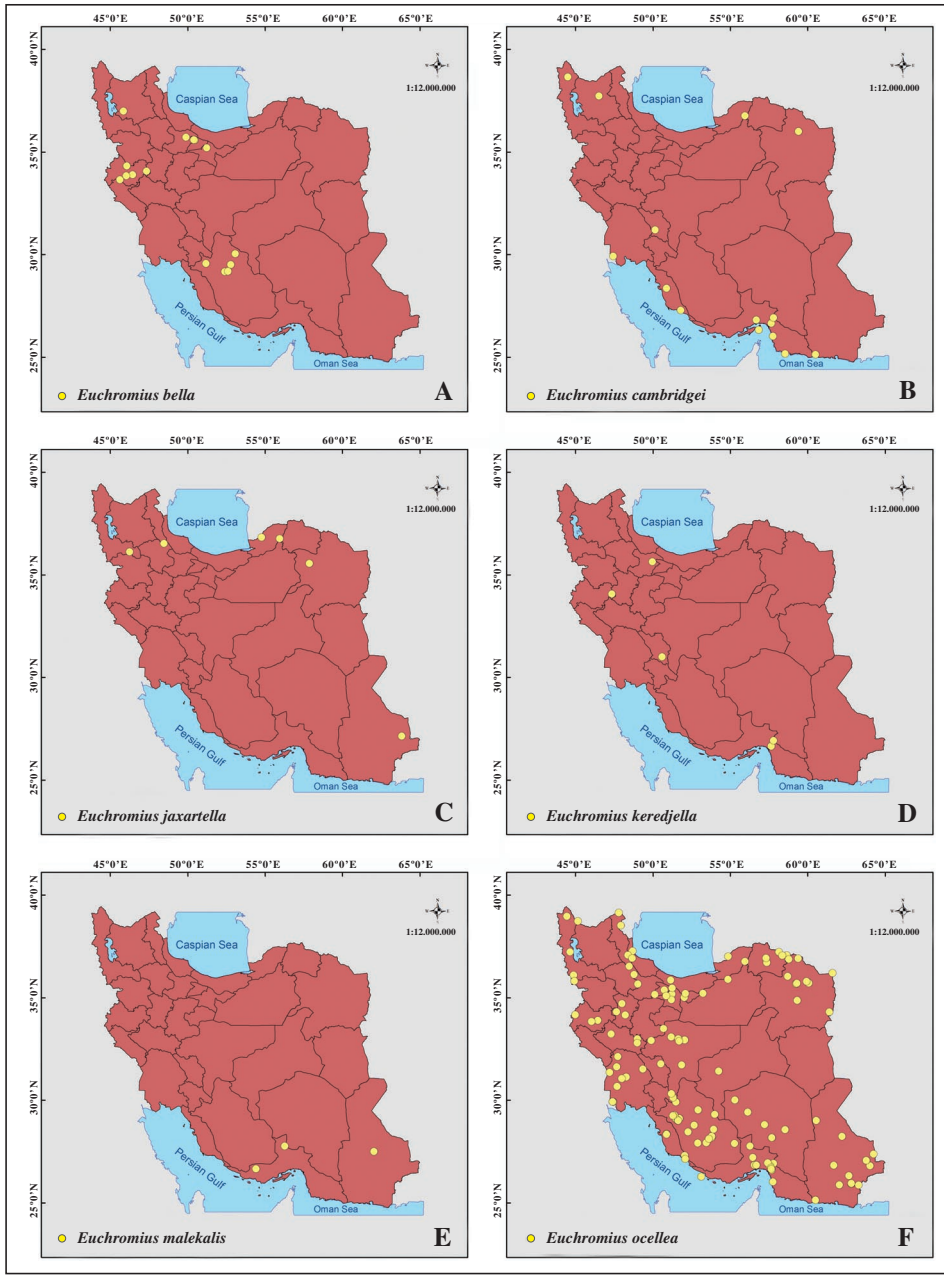

Figure 10.– Distribution of crambine species in Iran based on the examined specimens. A) *Euchromius bella* (Hb.). B) *Euchromius cambridgei* (Z.). C) *Euchromius jaxartella* (Ersch.). D) *Euchromius keredjella* (Ams.). E) *Euchromius malekalis* (Ams.). F) *Euchromius ocellea* (Hw.).

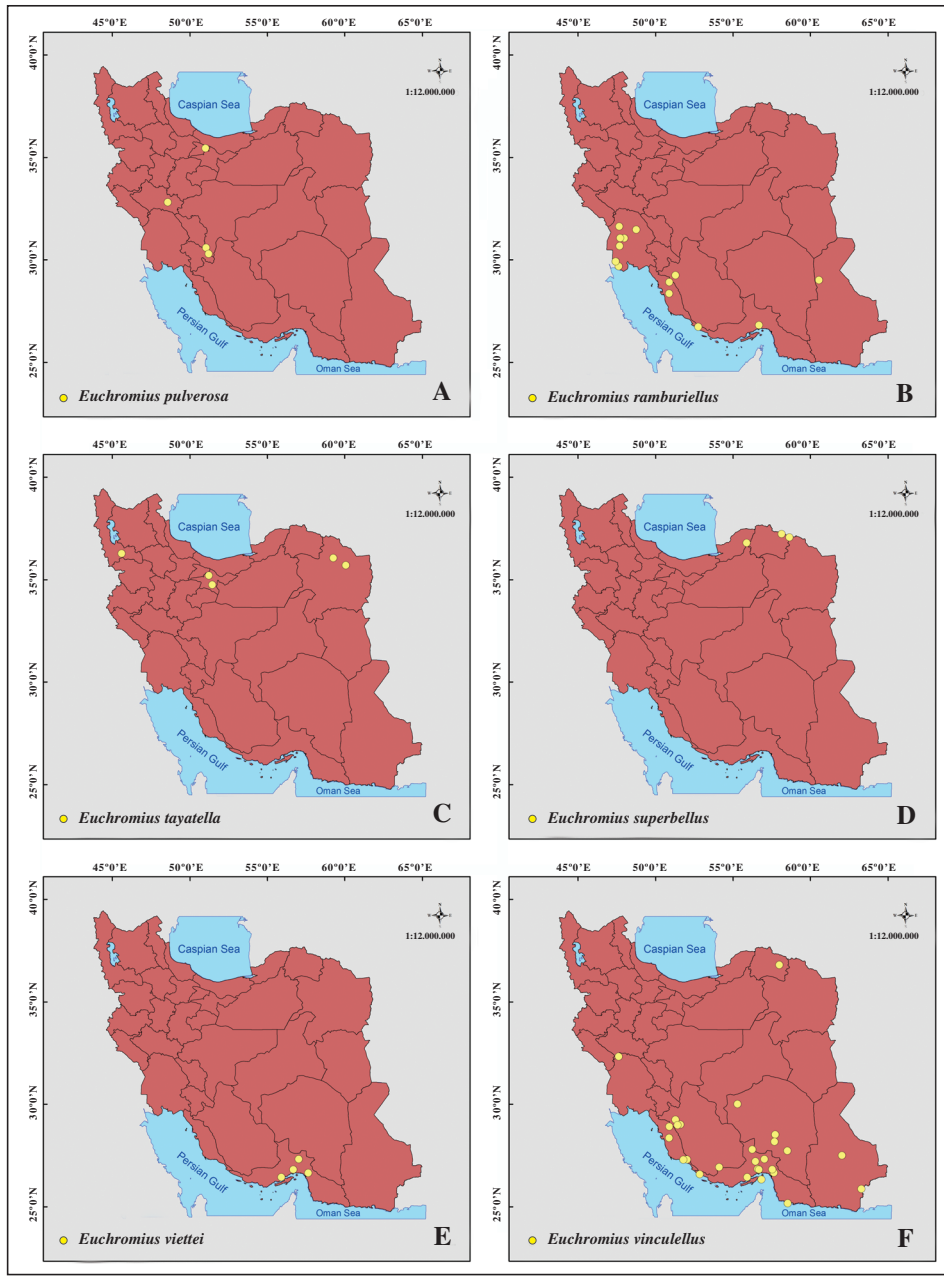

Figure 11.– Distribution of crambine species in Iran based on the examined specimens. A) *Euchromius pulverosa* (Chr.). B) *Euchromius ramburiellus* (Dup.). C) *Euchromius tayatella* (Ams.). D) *Euchromius superbellus* (Z.). E) *Euchromius viettei* Błesz. F) *Euchromius vinculellus* (Z.).

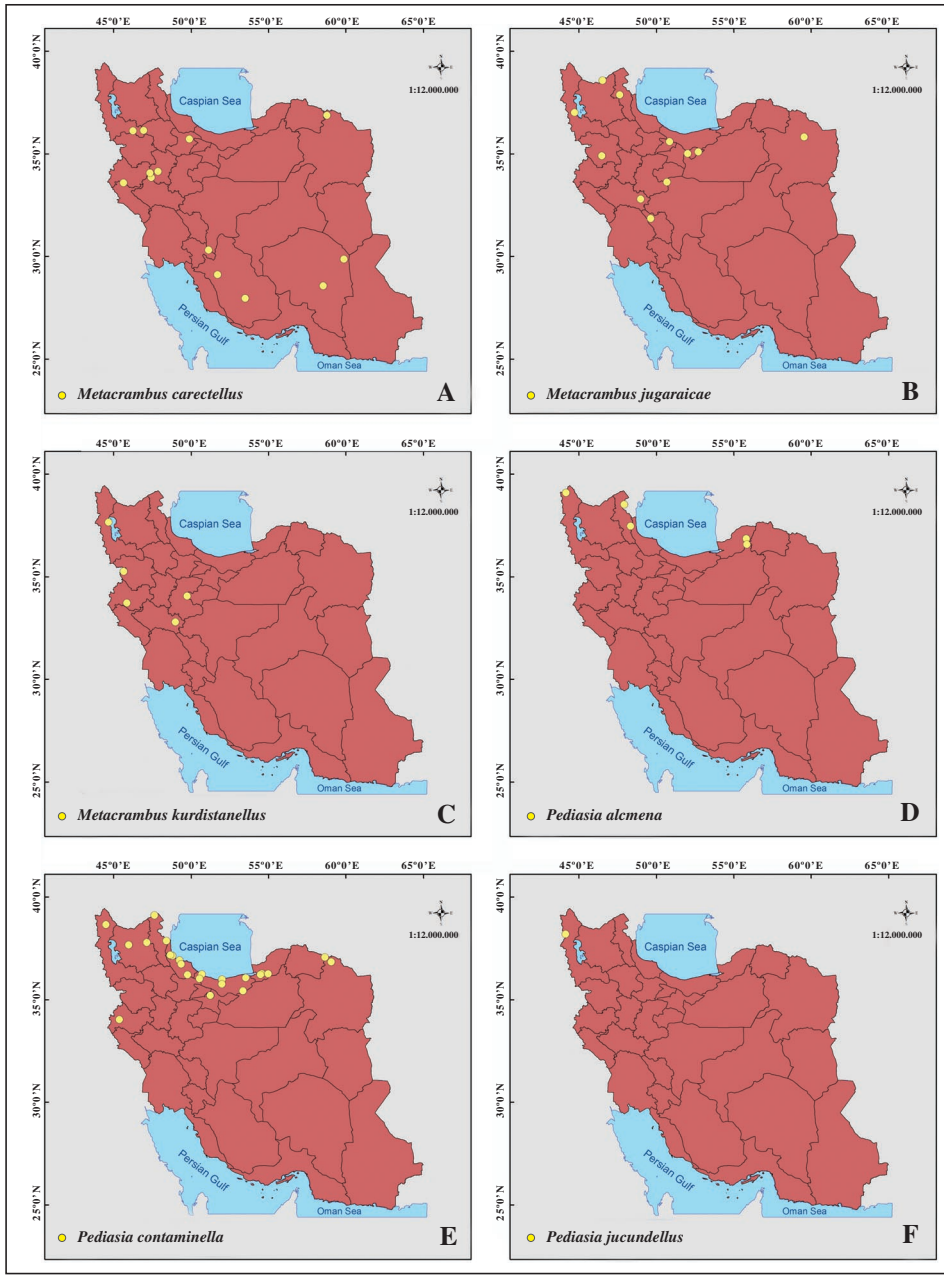

Figure 12.– Distribution of crambine species in Iran based on the examined specimens A) *Metacrambus carectellus* (Z.). B) *Metacrambus jugaraicae* Błesz. C) *Metacrambus kurdistanellus* (Ams.). D) *Pediasia alcmena* Błesz. E) *Pediasia contaminella* (Hb.). F) *Pediasia jucundellus* (H.-S.).

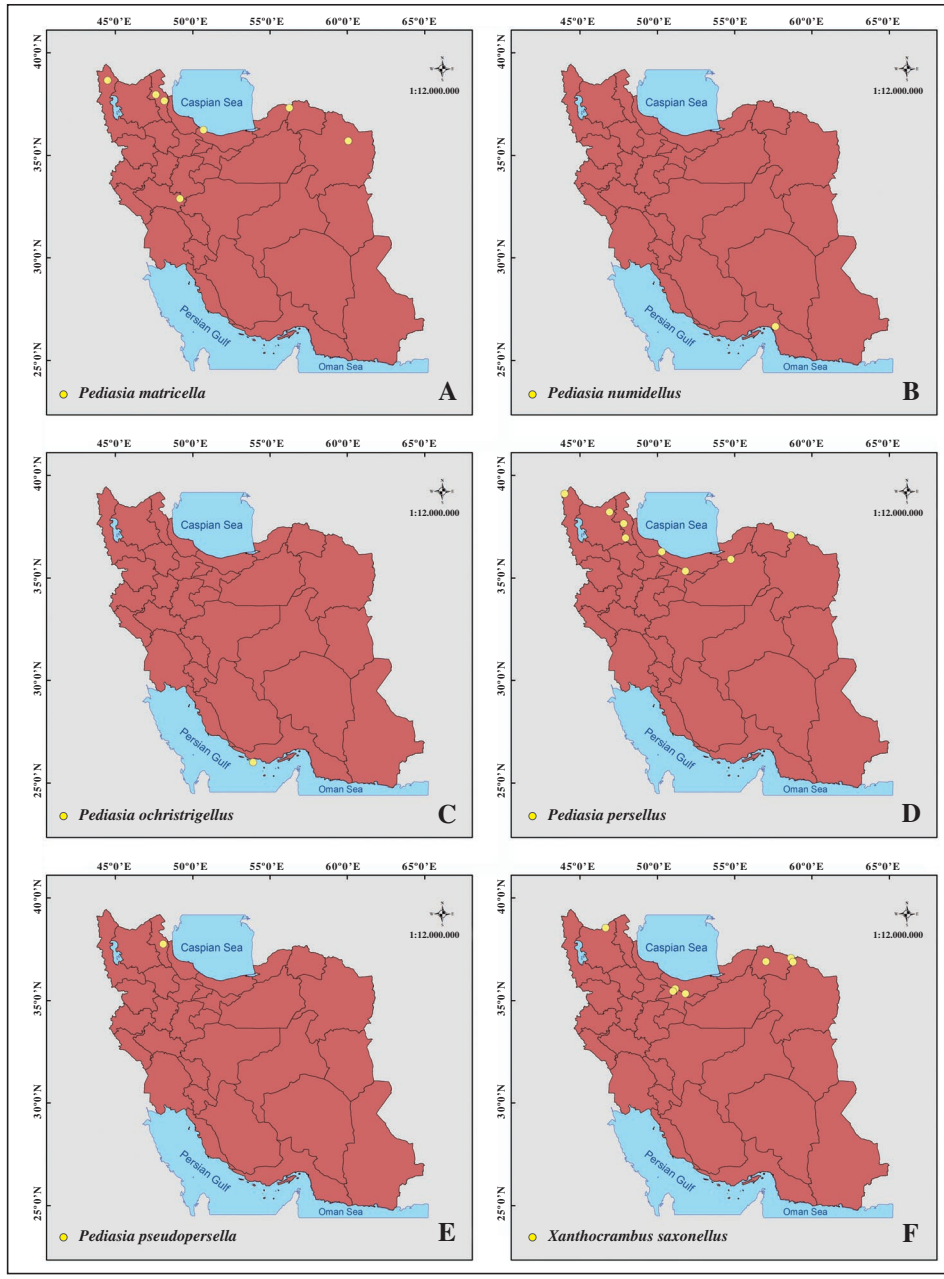

Figure 13.– Distribution of crambine species in Iran based on the examined specimens A) *Pediasia matricella* (Tr.). B) *Pediasia numidellus* (Rbl.). C) *Pediasia ochristrigellus* (Hamps.). D) *Pediasia persellus* (Toll). E) *Pediasia pseudopersella* Błesz. F) *Xanthocrambus saxonellus* (Zck.).

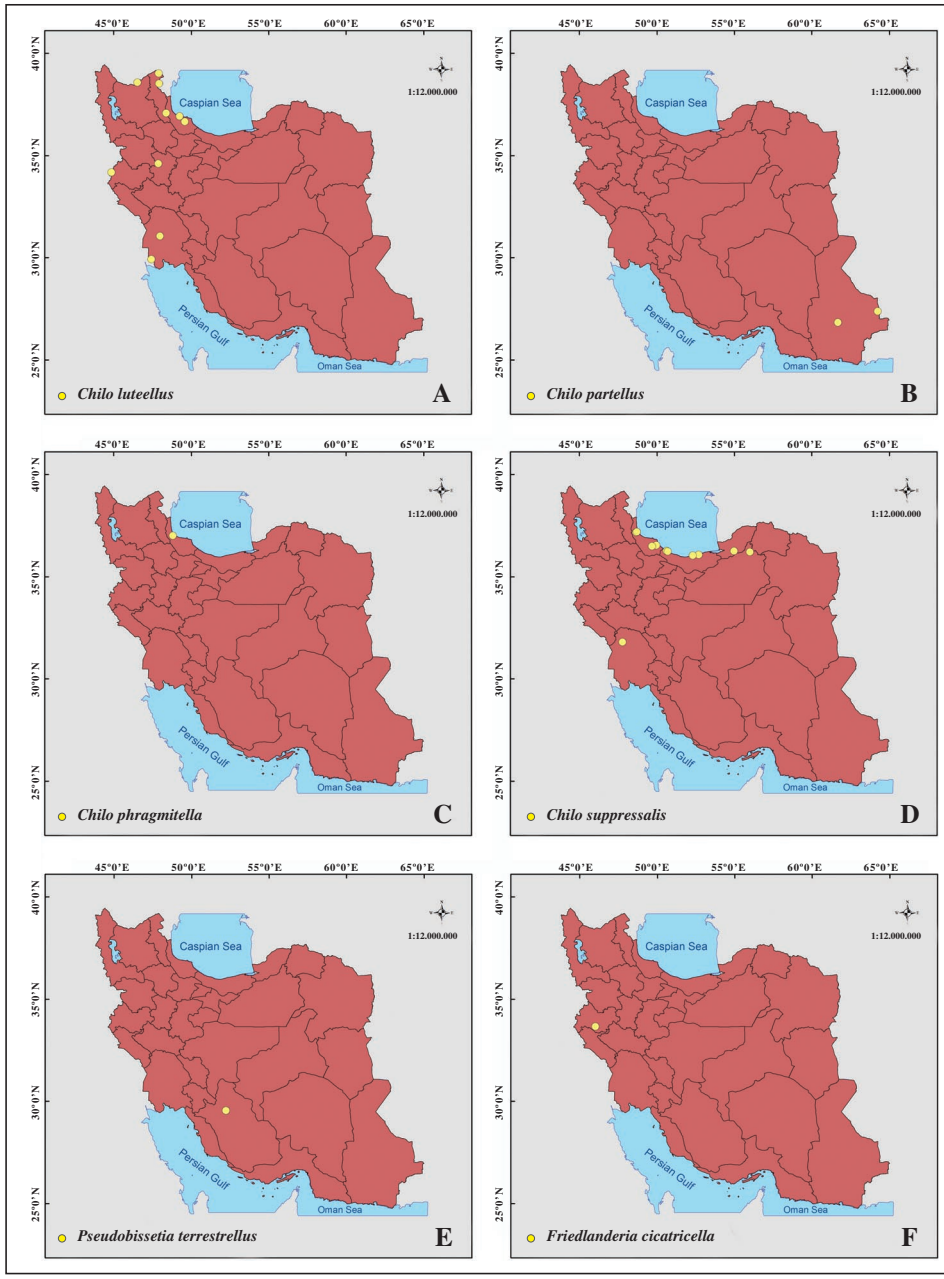

Figure 14.– Distribution of crambine species in Iran based on the examined specimens A) *Chilo luteellus* (Motsch.). B) *Chilo partellus* (Swinh.). C) *Chilo phragmitella* (Hb.). D) *Chilo suppressalis* (Wlk.). E) *Pseudobissetia terrestrellus* (Chr.). F) *Friedlanderia cicatricella* (Hb.).

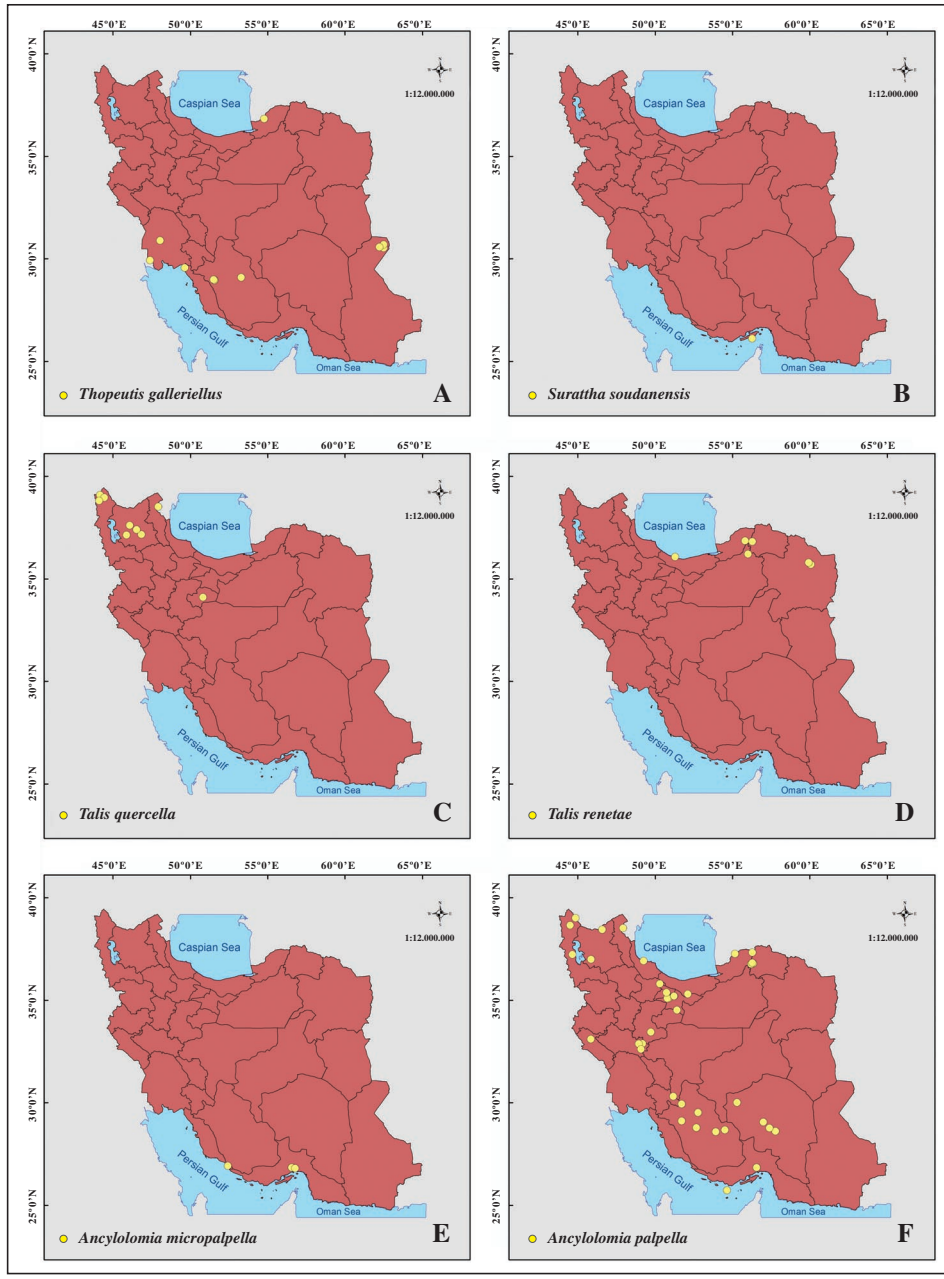

Figure 15.– Distribution of crambine species in Iran based on the examined specimens A) *Thopeutis galleriellus* (Rag.). B) *Surattha soudanensis* Hamps. C) *Talis quercella* ([D. & Schiff.]). D) *Talis renetae* Gnv. & Hack. E) *Ancylolomia micropalpella* (Ams.) F) *Ancylolomia palpella* ([D. & Schiff.]).

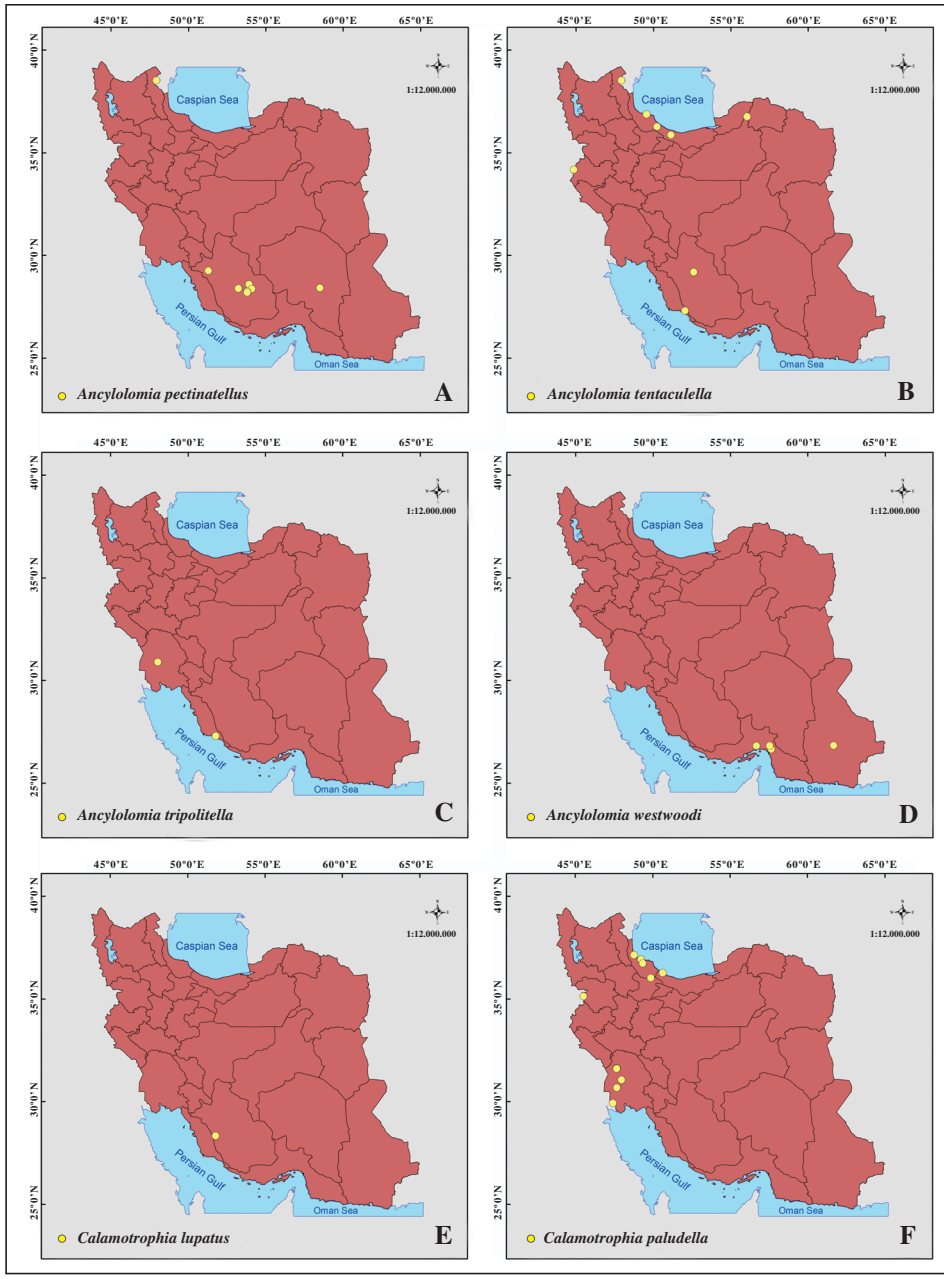

Figure 16.– Distribution of crambine species in Iran based on the examined specimens A) *Ancylolomia pectinatellus* (Z.). B) *Ancylolomia tentaculella* (Hb.). C) *Ancylolomia tripolitella (*Rbl.). D) *Ancylolomia westwoodi* (Z.). E) *Calamotropha lupatus* (Meyr.). F) *Calamotropha paludella* (Hb.).

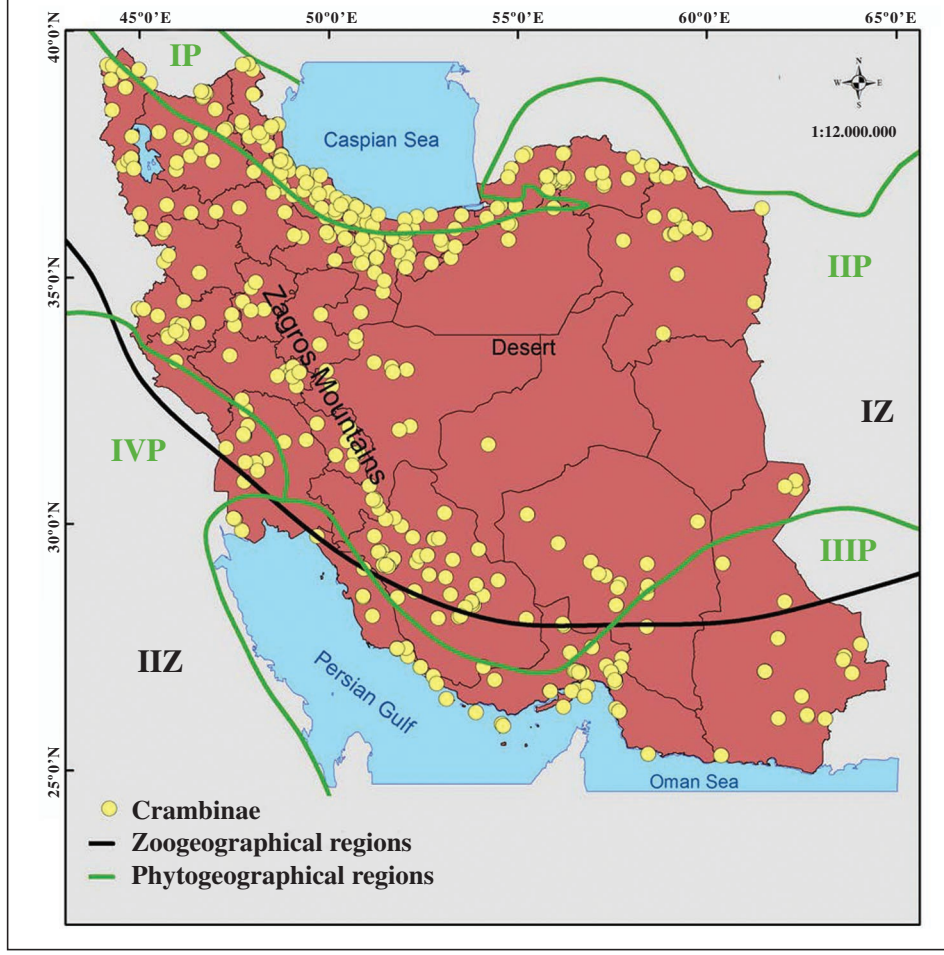

Figure. 17.– Overall distribution map of the examined crambine species in Iran with zoogeographical (Black line) (after EMELJANOV (1974) and Phytogeographical regions (Green lines) (after ZOHARY (1973) and FREY & PROBST (1986)). Roman numerals indicate Phytogeographical (Green) and Zoogeographical (Black) regions of Iran: IP, Euro-Siberian. IIP, Irano-Turanian. IIIP, Nubo-Sindian. IVP, Saharo-Arabian. IZ, Irano-Turanian. IIZ, Saharo-Arabian.