

New records to the Pyraloidea fauna of the Republic of Daghestan (Russia) (Lepidoptera: Crambidae, Pyralidae)

A. N. Poltavsky & E. V. Ilyina

Abstract

There are 10 new snout-moth species first reported for the fauna of the Republic of Daghestan (North-East Caucasus, Russia): *Praeepischnia iranella* Amsel, 1953; *Eurhodope rosella* (Scopoli, 1763); *Ancylosis dumetella* Ragonot, 1887; *Euchromius bleszynskiellus* Popescu-Gorj, 1964; *Crambus monochromellus* Herrich-Schäffer, 1855; *Xanthocrambus lucellus* (Herrich-Schäffer, 1848); *Evergestis manglialis* Erschoff, 1877; *Hellula undalis* (Fabricius, 1794), *Udea olivalis* ([Denis & Schiffermüller], 1775) and *Pyrausta aerealis* (Hübner, 1793).

KEY WORDS: Lepidoptera, Pyraloidea, Pyralidae, Crambidae, new records, Daghestan, Russia.

Nuevos registros de Pyraloidea a la fauna de la república de Daguestán (Rusia) (Lepidoptera: Crambidae, Pyralidae)

Resumen

Se incluyen 10 especies de pirálidos registrados por primera vez para la fauna de la república de Daguestán (Nordeste del Cáucaso, Rusia): *Praeepischnia iranella* Amsel, 1953; *Eurhodope rosella* (Scopoli, 1763); *Ancylosis dumetella* Ragonot, 1887; *Euchromius bleszynskiellus* Popescu-Gorj, 1964; *Crambus monochromellus* Herrich-Schäffer, 1855; *Xanthocrambus lucellus* (Herrich-Schäffer, 1848); *Evergestis manglialis* Erschoff, 1877; *Hellula undalis* (Fabricius, 1794), *Udea olivalis* ([Denis & Schiffermüller], 1775) y *Pyrausta aerealis* (Hübner, 1793).

PALABRAS CLAVE: Lepidoptera, Pyraloidea, Pyralidae, Crambidae, nuevos registros, Daguestán, Rusia.

Introduction

Modern investigations of Heterocera moths in the Republic of Daghestan have been undertaken annually since 1998. Originally it was the Noctuidae moth family (POLTAVSKY & ILYINA, 2002, 2003; MATOV, ILYINA & POLTAVSKY, 2012). Now we have begun the study of the Pyraloidea moths, which were collected simultaneously with noctuids. The current Pyraloidea list of Daghestan includes 93 species. Most of them are listed for the North-East Caucasus (Chechenia and Daghestan) (SINEV, 2008a, 2008b), basing on a few earlier publications (CHRISTOPH, 1877; RAGONOT, 1901; ROMANOFF, 1887). We report here 10 species as new for Daghestan.

Material and methods

Snout-moths were collected by hand-catching on white screen, attracted by mercury vapour lamps (HQM) 'DRL' 300 W. We have analysed 483 Pyraloidea specimens altogether during the total period of study. The collecting sites of the new species are listed below (with geographical coordinates). They belong to 5 mountain areas at different heights above sea level (a.s.l.). Species

determination was checked by Dr. Sergey Sinev, Zoological Institution of the Russian Academy of Sciences (St. Petersburg) and Tatyana Trofimova, Samara State university. Digital photos of Pyraloidea moths were made with a Nikon D-90 camera and retouched for publication using CorelPhotoPaint-5 program. Represented material is stored in the private collection of A. Poltavsky (Rostov-on-Don, Russia).

Collecting sites in Daghestan:

Lowlands: Karaman-2 - village in the suburb of Makhatchkala town (43 02' 07.8"N, 47° 26' 25.2"E).

Foothills: Sarykum - large single sand dune in the Kumtor-Kale District (43 00' 33"N, 47 13' 51"E).

Front mountain-ranges: Barshamay - village in Kajtaghsy District, 400 m a.s.l. (42 06' 42.7"N, 47° 50' 52.9"E); Dylm - village in Kazbekovsky District, 655 m a.s.l. (43° 04' 29.0"N, 46° 37' 43.5"E); Ersa - village in Tabasaransky District, 800 m a.s.l. (42° 01' 20.5"N, 48° 00' 26.8"E); Gertma - village in Kazbekovsky District, 1200 m a.s.l. (42° 59' 26.8"N, 46° 45' 01.1"E).

Central mountain area: Chirkata - village in Gumbetovsky District, 425 m a.s.l. (42° 46' 56.0"N, 46° 42' 59.6"E); Salda - village in Tljara District, 1800 m a.s.l. (41° 58' 28.6"N, 46° 30' 34.4"E); Upper Kazanische - village in Buinaksk District, 1000 m a.s.l. (42° 43' 18.9"N, 47° 08' 08.8"E).

Highlands: Kala village in Rutul District, 1500 m a.s.l. (41° 34' 40.8"N, 47 21' 12.3"E); Kurush - village in Dokuzparinsky District, 2500 m a.s.l. (43° 22' 56.4"N, 46° 46' 03.7"E); Rutul - village, centre of Rutul District, 1300 m a.s.l. (41° 32' 03.9"N, 47° 26' 24.0"E).

Results

PYRALIDAE

Phycitinae

Praeepischnia iranella Amsel, 1953 (Figs. 15-17)

Material examined: 1 ♂, 2 ♀♀, Daghestan, Kala, 10-VII-2011 (coll.: P. Alieva). **New record for Russia.**

General distribution: North-eastern Iran (AMSEL, 1953; MOHAMMADIAN, 2006).

Eurhodope rosella (Scopoli, 1763) (Fig. 10)

Material examined: 1 ♀, Daghestan, Upper Kazanische, 25-VI-1999; 1 ♀ (coll.: E. Ilyina). Daghestan, Salda, 25-VII-2014 (coll.: E. Ilyina). **New record for Daghestan.**

General distribution: European-Caucasus. Southern and Central Europe, Transcaucasus (available from <http://www.lepiforum.de>), European Russia, South Ural, North-West Caucasus (SINEV, 2008a).

Ancylois dumetella Ragonot, 1887 (Figs. 8, 9)

Material examined: 1 ♀, Daghestan, Chirkata, 15-VII-2013 (coll.: G.-M. Habiev). **New Record for Daghestan.**

General distribution: original description and type locality (Kuldsha, NW China) (RAGONOT, 1887); Iran (KOÇAK & KEMAL, 2012); South Siberia (SINEV, 2008a). Afro-Iranian-Siberian, Algeria, Iran, Turkey (available from <http://en.wikipedia.org/>);

CRAMBIDAE

Crambinae

Euchromius bleszynskiellus Popescu-Gorj, 1964 (Figs. 5, 6)

Material examined: 1 ♂, Daghestan, Dylm, 3-VIII-2014 (coll.: G.-M. Habiev). **New record for Daghestan.**

General distribution: Euro-Anatolien: Wolga-Don area, South Ural (SINEV, 2008b); South Ukraine (GOVORUN, 2008); Greece, Romania (KARSHOLT & RAZOWSKI, 1996); Turkey (KOÇAK & KEMAL, 2009).

Crambus monochromellus Herrich-Schäffer, 1855 (Figs. 11-14)

Material examined: 1 ♂, Daghestan, Kurush, 2-VII-2014 (coll.: E. Ilyina). **New record for Daghestan.**

General distribution: Euro-Asian mountainous: Alpes, Caucasus, Transcaucasus, Asia Minor, Central Asia (BURMANN, 1976), North-West Caucasus (SHCHUROV & LAGOSHINA, 2013), Tibet, Central China (available from <http://baike.baidu.com/>).

Remarks: A single specimen collected has an extremely dark color and gnathos much shorter in comparison to specimen from Alpes. SLAMKA (2008) referred *Crambus monochromellus* as a valid species, but then it was synonymized with *Crambus perlellus* (Scopoli, 1763) (KARSHOLT *et al.*, 2013).

Xanthocrambus lucellus (Herrich-Schäffer, 1848) (Figs. 4, 7)

Material examined: 1 ♂, Daghestan, Ersy, 6-VII-2008 (coll.: E. Ilyina). **New record for Daghestan.**

General distribution: Amphipalaeartic. Europe, North-West Caucasus, South Siberia, Far East (SINEV, 2008b), Europe, Korea, China and Japan (available from <http://en.wikipedia.org/>).

Evergestinae

Evergestis manglisalis Erschoff, 1877 (Figs. 1, 3)

Material examined: 1 ♀, Daghestan, Rutul, 10-VIII-2014 (coll.: E. Ilyina). **New record from Daghestan.**

General distribution: Type locality: Transcaucasus (Georgia, Manglis) (ERSCHOFF, 1877), Armenia (KOÇAK & KEMAL, 2012). North-West Caucasus (SINEV, 2008b). Endemic to Caucasus.

Glaphyriinae

Hellula undalis (Fabricius, 1794) (Figs. 20-22)

Material examined: 1 ♂, Daghestan, Karaman-2, 25-VIII-2014 (coll.: E. Ilyina); 1 ♂, same locality, 18-X-2014 (coll.: E. Ilyina); 1 ♀, Daghestan, Sarykum, 24-VIII-2013 (coll.: E. Ilyina). **New Record for Daghestan.**

General distribution: Euro-Paleotropical: European Russia (SINEV, 2008b); Western Europe, Africa, Asia Minor, Iraq, Pakistan, China, India, Malaysia, South-East Asia, Philippines, Hawaii Islands, Australia (available from <http://www.plantwise.org/>).

Pyraustinae

Udea olivalis ([Denis & Schiffermüller], 1775) (Fig. 2)

Material examined: 2 ♂♂, 1 ♀, Daghestan, Salda, 25-VII-2014 (coll.: E. Ilyina). **New record for Daghestan.**

General distribution: Euro-Anatolian. Western Europe, European Russia, South Ural, North-West Caucasus (SINEV, 2008b); Turkey (KOÇAK & KEMAL, 2009).

Pyrausta aerealis (Hübner, 1793) (Figs. 18-19)

Material examined: 1 ♂, Daghestan, Chirkata, 14-VII-2014 (coll.: E. Ilyina). **New record for Daghestan.**

General distribution: Mediterranean-Centralasian. Europe, Algeria, Kyrgyzstan, Kazakhstan,

Afghanistan, China, Algeria (available from <http://en.wikipedia.org/>), North-West Caucasus (SHCHUROV & LAGOSHINA, 2013); Iran, Turkey (KOÇAK & KEMAL, 2012).

Discussion

Of the ten reported snout-moth species - nine are new for the fauna of Daghestan republic and one (*Praeepischnia iranella* Amsel) is new for the fauna of Russia. All species have different types of geographical ranges. Their presence in Daghestan is not surprise, since they are known in the adjacent regions. Among the reported species there is one potential agricultural pest – a Cabbage Webworm *Hellula undalis* (F.). It's findings in some regions of European Russia (SINEV, 2008b), could be explained by occasional introduction with vegetables, but on the territory of Daghestan this thermophilic species may find suitable climate conditions for stable development. Three specimens of *Hellula undalis* collected here were rather worn, which could be a result of migratory activity.

Acknowledgements

We are grateful to Dr. Sergey Sinev (St. Petersburg) and Dr. Tatyana Trofimova (Samara) for their help in the identification of moths.

BIBLIOGRAPHY

- AMSEL, H. G. 1953.– Die Microlepidopteren der Brandt'schen Iran-Ausbeute 4. Teil.– *Arkiv för Zoologi*, **6** (16): 255-325
- BURMANN, K., 1976.– Crambinae (Insecta: Lepidoptera, Pyralidae) der montanen bis nivalen Stufe Tirols.– *Berichte des naturwissenschaftlich-medizinischen Vereins in Innsbruck*, **63**: 245-268.
- CHRISTOPH, H. 1877.– Sammelresultate aus Nordpersien, Krasnowodsk in Turkmenien und dem Daghestan.– *Horae Societatis Entomologicae Rossicae*, **12**: 181-299.
- ERSCHOFF, N. G. 1877.– Diagnosen neuer Lepidopteren aus den verschiedenen Provinzen des Russischen Reiches.– *Horae Societatis Entomologicae Rossicae*, **12**: 336-348.
- GOVORUN, A. V., 2008.– Results of the snout-moths studies (Lepidoptera, Pyralidae) of the Black Sea Biosphere Reserve.– *Reserve Management in Ukraine*, **14**(1): 51-52. (In Russian).
- KARSHOLT, O., NIEUKERKEN, E. J. van & DE JONG, Y. S. D. M., 2013.– *Lepidoptera, Moths*. Fauna Europaea version 2.6. Available from <http://www.faunaeur.org> (accessed 1th February 2015)
- KARSHOLT, O. & RAZOWSKI J., 1996.– *Lepidoptera of Europe. A Distributional Checklist*: 380 pp. Apollo Books.
- KOÇAK, A. O. & KEMAL, M., 2009.– Revised Checklist of the Lepidoptera of Turkey.– *Priamus supplement*, **17**: 1-253.
- KOÇAK, A. O. & KEMAL, M., 2012.– Number of species of the Lepidoptera fauna selected countries, with sample lists of some classical localities in Old World.– *Cesa News*, **83**: 8-56.
- MATOV, A. Y., ILYINA, E. V. & POLTAVSKY, A. N., 2012.– Records of some rare noctuid moths (Lepidoptera: Noctuidae) in Daghestan republic (Russia) in 2009.– *Phegea*, **40**(2): 56-60.
- MOHAMMADAN, H., 2006.– *Biological diversity of Lepidoptera in Iran (Geographic distribution of 2200 species)*: 389 pp. Shabpareh Publications, Tehran.
- POLTAVSKY, A. N. & ILYINA, E. V., 2002.– The Noctuidae (Lepidoptera) of the Daghestan Republic (Russia).– *Phegea*, **30**(1): 11-36.
- POLTAVSKY, A. N. & ILYINA, E. V., 2003.– The Noctuidae (Lepidoptera) of the Daghestan Republic (Russia). II.– *Phegea*, **31**(4): 167-181.
- RAGONOT, E.-L. 1887.– Diagnoses d'espèces nouvelles de Phycitidae d'Europe et des pays limitrophes.– *Annales de la Société Entomologique de France*: 225-260.
- RAGONOT, E.-L. 1901.– Monographie des Phycitinae et des Galleriinae.– *Mémoires sur les lépidoptères rédigés par N. M. Romanoff*, **8**: 1-603.

- ROMANOFF, N. M. 1887.– Les Lépidoptères de la Transcaucasie. Pt. 3.– *Mémoires sur les lépidoptérés rédigés par N. M. Romanoff*, **3**: 1-49.
- SHCHUROV, V. I. & LAGOSHINA, A. G., 2013.– Pyralid moths (Lepidoptera: Pyralidae, Crambidae) of the North-West Caucasus.– *Proceedings of the Russian Entomological Society*, **84**(1): 76-109. (In Russian).
- SINEV, S. Yu., 2008a.– Pyralidae. *Catalogue of the Lepidoptera of Russia*: 156-170. SPb; M. KMK Scientific Press. (In Russian).
- SINEV, S. Yu., 2008b.– Crambidae. *Catalogue of the Lepidoptera of Russia*: 170-187. SPb; M. KMK Scientific Press. (In Russian).

*A. N. P.

Botanical garden of the Southern Federal University
Botanicheskiy spusk, 7
RF-344041 Rostov-on-Don
RUSIA / *RUSSIA*
E-mail: poltavsky54@mail.ru
<https://orcid.org/0000-0002-1613-0710>

E. V. I.

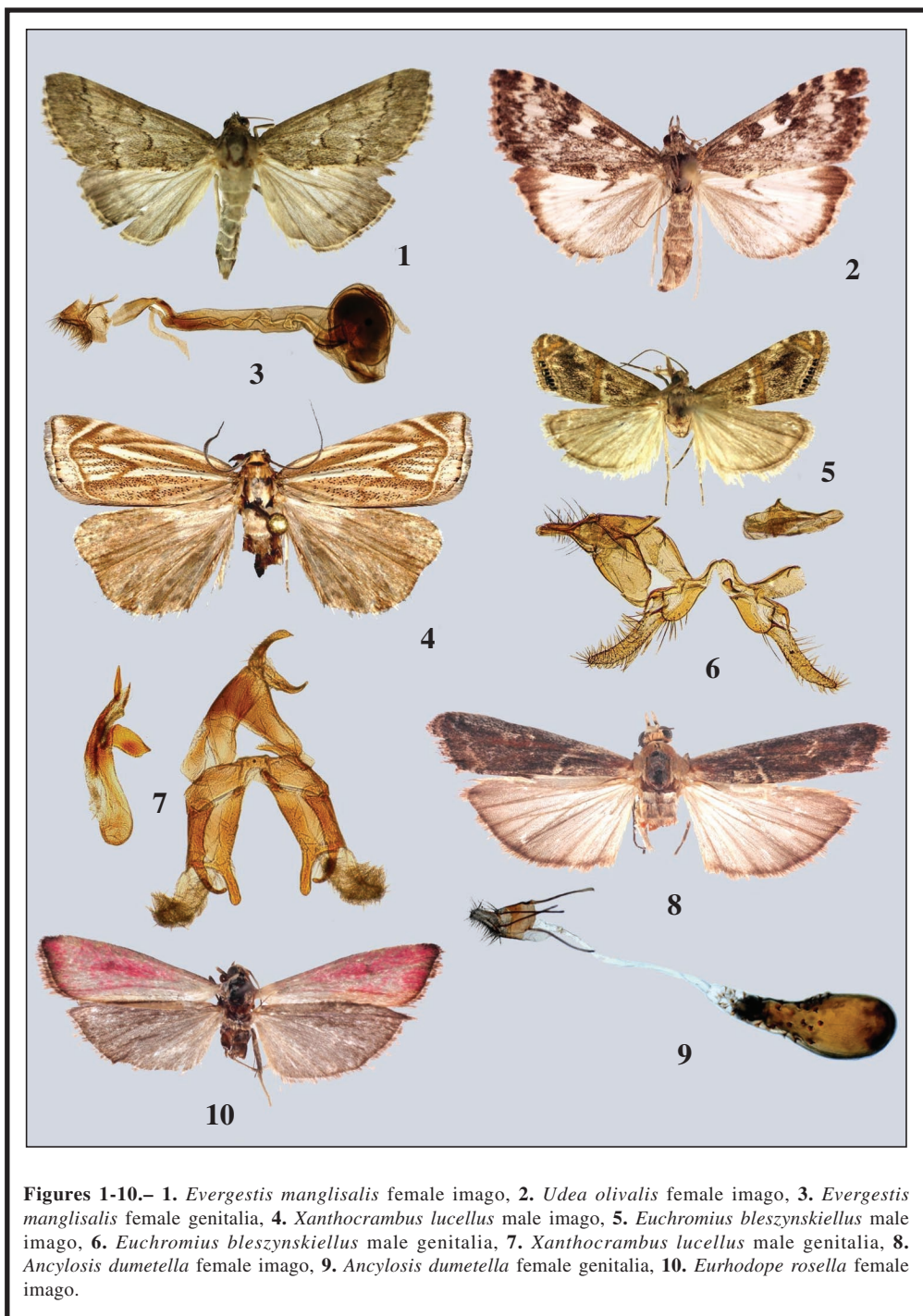
Daghestan Scientific Centre of the Russian Academy of Science
Precaspian Institute of Biological Resources, DSC of RAS
Magomeda Gadzhieva str., 45
RF-367025 Makhachkala
RUSIA / *RUSSIA*
E-mail: carabus@list.ru
<https://orcid.org/0000-0002-5426-4015>

*Autor para la correspondencia / *Corresponding author*

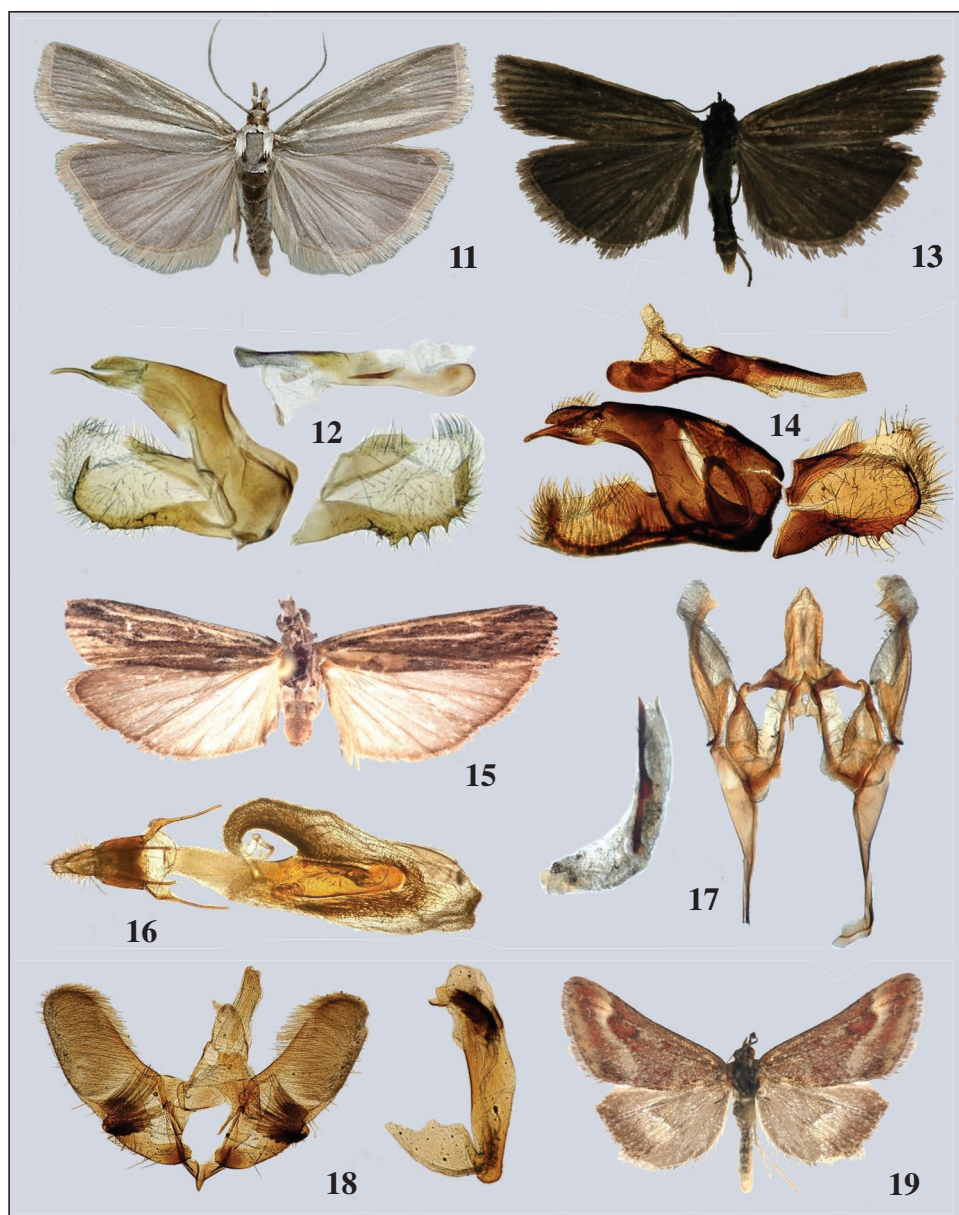
(Recibido para publicación / *Received for publication* 2-II-2015)

(Revisado y aceptado / *Revised and accepted* 27-VI-2015)

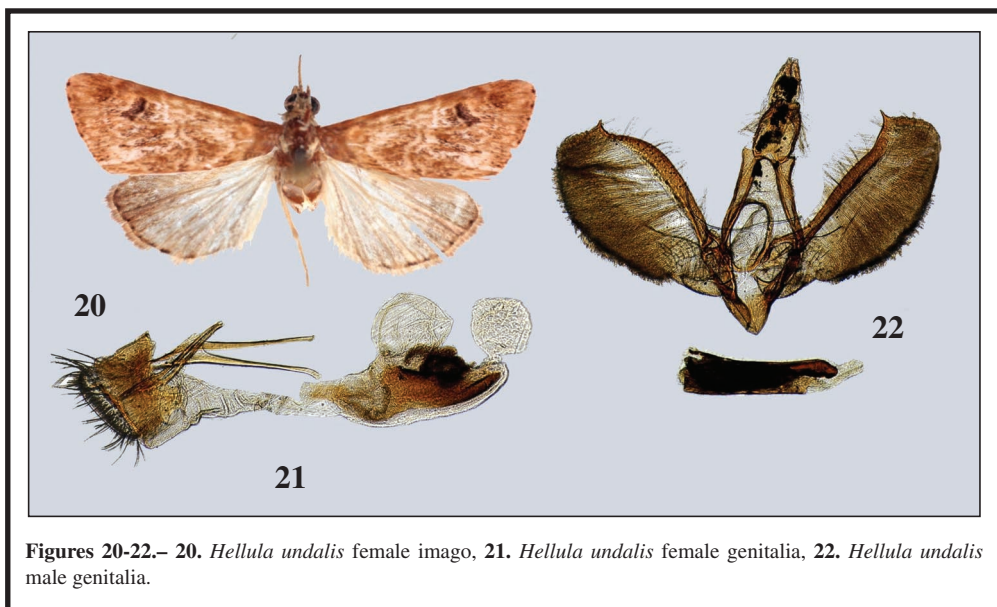
(Publicado / *Published* 30-IX-2016)



Figures 1-10.– 1. *Evergestis manglialis* female imago, 2. *Udea olivalis* female imago, 3. *Evergestis manglialis* female genitalia, 4. *Xanthocrambus lucellus* male imago, 5. *Euchromius bleszynskiellus* male imago, 6. *Euchromius bleszynskiellus* male genitalia, 7. *Xanthocrambus lucellus* male genitalia, 8. *Ancylosis dumetella* female imago, 9. *Ancylosis dumetella* female genitalia, 10. *Eurhodope rosella* female imago.



Figures 11-19.– 11. *Crambus monochromellus* male imago from Alpes (<http://www.lepiforum.de>), 12. *Crambus monochromellus* male genitalia from Europe (<http://www.dissectiongroup.co.uk>), 13. *Crambus monochromellus* male imago from Daghestan, 14. *Crambus monochromellus* male genitalia Daghestan, 15. *Praeepischnia iranella* female imago, 16. *Praeepischnia iranella* female genitalia, 17. *Praeepischnia iranella* male genitalia, 18. *Pyrausta aerealis* male genitalia, 19. *Pyrausta aerealis* male imago.



Figures 20-22.— 20. *Hellula undalis* female imago, 21. *Hellula undalis* female genitalia, 22. *Hellula undalis* male genitalia.