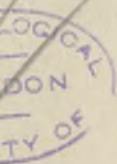


H. J. G. Watkins, Buxton (P.A.)

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Moths of Mesopotamia & N. W. Persia

S. 273.



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MOTHS OF MESOPOTAMIA AND N. W. PERSIA.

PART III.

GEOMETRIDÆ.

BY

LOUIS B. PROUT.

Subfamily—*Hemitheineæ*.

1. CHLORISSA PULMENTARIA, Guen.

Nemoria pulmentaria, Guen, Spec. Gen. Lep., IX., 349 (1858).

“Mesopotamia”, without more exact data, 1 ♀, very rubbed, apparently referable to this species (Br.)

Staudinger records *C. pulmentaria* from Syria, Asia Minor, Armenia and N. Persia, as well as a great part of Europe and Central Asia, but as the closely allied Indian species *solidaria*, Guen., extends to Fao on the Persian Gulf, it is possible that some of his records, together with the present one, are really referable to *solidaria*.

2. MICROLOXIA POLEMIA, Prout.

Microloxia polemia, Prout, Nov. Zool, XXVII, 300 (1920).

Kut al Amara, 3 ♀ ♀, 7-9th August 1918 (P. A. B.)

The description of this interesting new species, as also that of *Lithostege buxtoni*, appeared in 1920. The types are in my collection. No. 1 of the “Novitates.” Rather broader-winged than *halimaria*, Chret., the markings sometimes rather suggestive of *Xenochlorodes beryllaria*, Mann, the hindwing even more fully rounded.

Subfamily—*Sterrhineæ*.

3. SCOPULA ORNATA, Scop.

Phalæna ornata, Scop., Ent. Carn., 219 (1763).

Enzeli, N. W. Persia, 2 ♂ ♂, 1st May and 30th June 1919 (P. A. B.)

The earlier specimen is worn, the later probably represents a second brood. The species has not hitherto been recorded from Persia and the form may prove racially differentiable.

4. SCOPULA NIGROPUNCTATA, Hufn.

Phalæna nigropunctata, Hufn., Berl. Mag., IV., 526 (1767).*Acidalia strigilaria*, Stgr. and Rbl., Cat. Lep. Pal. (i), 275 (1901).

Enzeli, N. W. Persia, sea level, 2 ♀ ♀, 6th and 30th June 1919 (P. A. B.)

5. SCOPULA OCHROLEUCATA, H.-Sch.

(*Acidalia ochroleucata*, H.-Sch., Syst. Bearb. Schmett. Eur., III, t. 3, f. 21-23 (1844).

Acidalia ochroleucaria, H.-Sch., tom. cit. p. 24 (1847).

Baghdad, 2 ♂ ♂, 22nd September; 1 ♂, 25th September; 1 ♂, 7th October 1917 (P. A. B.)

Amara, 1 ♂, 2nd November 1918; 5 ♀ ♀, 2nd April, 15th June, 22nd June, 28th October, 19th November 1918 (P. A. B.)

Qazvin, N. W. Persia, 1 ♂, 17th July 1919 (P. A. B.)

Variable as usual, the Amara ♀, dated 2nd April, much larger than the rest. At Baghdad the species was common in melon patches.

Staudinger only records *ochroleucata* under its own name from the Canaries and a few Mediterranean countries, referring to most of the N. African and Asiatic localities under "*remotata*, Guen. (præc. sp. forma Darw. ?)" It is certainly all one and is doubtfully distinct, even racially, from *minorata*, Bdv. (S. Africa, Madagascar, Mauritius, etc.)

6. STERRHA POLITATA, Hb.

Phalæna Geometra politata, Hb., Vög. u. Schmett. p. 5, f. 1 (1793).

Enzeli, sea level, 2 ♂♂, 28th May, 1 ♂, 8th June, 1 ♀, 29th June 1919 (P. A. B.)

All are referable to the form *abmarginata*, Bhtsch., which seems racially constant in some places (e.g., Hungary), while in others it occurs with the name-type. I am not sure, however, that these Persian specimens may not form a separable race from the European—slightly less glossy, more tinged with straw-colour, costal markings rather weak, subterminal line broad (in the sole ♀ almost reaching the distal margin), underside rather sharply marked.

7. STERRHA ELONGARIA, Rbr.

Dosithoea elongaria, Rbr., Ann. Soc. Ent. Fr., II, 38 (1833).

Kut al Amara, 2 ♀♀, 9th August 1918 (P. A. B.)

Obscurely marked specimens with a strong sandy tone of colour, somewhat doubtfully referred to this widely distributed and variable species, which perhaps still comprises more than one not yet satisfactorily differentiated.

Subfamily—*Larentiinae*

8. RHODOMETRA SACRARIA, Linn.

Phalæna Geometra sacraria, Linn., Syst. Nat. (ed. 12) I (2) 863 (1767).

Baghdad, 3 ♂♂, 1 ♀, 23rd September 1917 (P. A. B.)

Amara, River Tigris, 4 ♀♀, 11th May, 14th June, 16th June and 20th June 1918, P. A. B.

Shahrohan, Dyala River (close to Persian border) 1 ♂, 30th July 1918 (P. A. B.).

Kut al Amara, 1 ♂, 9th August 1918 (P. A. B.)

Not very variable, all referable broadly to the name-typical form. On an average small, especially the Baghdad specimens.

9. LYTHRIA PURPURARIA, Linn.

Phalæna Geometra purpuraria, Linn., Syst. Nat. (ed. 10) I, 522 (1758).

Qazvin, N. W. Persia, 4,000 feet, 1 ♂, 30th July 1919 (P. A. B.)

Belongs to the form *lutearia*, Vill., which seems prevalent in the summer generation in eastern localities. New for Persia (?).

10. LITHOSTEGE BUXTONI, Prout.

Lithostege buxtoni, Prout, Nov. Zool., XXVII, 312 (1920).

Kangavar, Hamadan, N. W. Persia, 5,000 feet, 1 ♂, 6th December 1918 (P. A. B.), the type of the species.

Shergat (Asshur), Mesopotamia, 1 ♂, 27th December 1919, at light (H. D. P.)

A very interesting new species, forming (together, perhaps, with "*Anisopteryx*" *chaoticaria*, Alph., which is unknown to me) a new section of the genus, characterized by the long ciliation of the ♂ antenna. Apparently variable, the second specimen darker than the type, with the longitudinal curved white stripe of the forewing more sharply expressed.

11. LITHOSTEGE FARINATA, Hufn.

Phalæna farinata, Hufn., Berl. Mag. IV, 610 (1767).

Mirjana, near Kizil Robot, Dyala River, 1 ♂, 20th February 1919, flying by day (H. D. P.)

Kizil Robot, 1 ♂, 1 ♀, 23rd and 28th February 1919 (H. D. P.)

Apparently new for Mesopotamia, though recorded from Palestine and Armenia.

12. ORTHONAMA OBSTIPATA, Fab.

Phalæna obstipata, Fab., Ent. Syst. III (2), 199 (1794).

Larentia fluviata Stgr. and Rbl., Cat. Lep. Pal. (i), 298 (1901).

Amara, River Tigris, 1 ♂ (small), 15th June 1918, 2 ♀ ♀, 1st May and 2nd November, 1918 (P. A. B.)

Enzeli, N. W. Persia, 1 ♂, 1 ♀, (small), 28th May 1919.

A migrant, found nearly throughout Europe and Continental Asia, besides a great part of America.

13. CENOTEPHRIA ALFACARIATA, Rbr.

[] *alfacariata*, Rbr., Cat. Syst. Lep. Andal. (2) t. 18, f. 1 (1866).

Cidaria ibericata, Stgr., Cat. Lep. Eur. (ed. 2) 187 (1871).

Menjil, N. W. Persia, 2,000 feet, 1 ♂, 30th March 1919, at light (P. A. B.)

Darker and more strongly marked, with a stronger cell-spot, than our western forms, but I think referable here. Not hitherto recorded from further east than Palestine. The similar *reclamata* Püng. is more elongate-winged, with the hindwing whiter.

14. EUPHYIA POLYGRAMMATA, Bkh.

Phalæna Geometra polygrammata, Bkh., Naturg. Eur. Schmett, V, 560 (1794).

Enzeli, N. W. Persia, sea level, 2 ♀ ♀, 14th and 20th June 1919 (P. A. B.).

New for Persia, though known from Asia Minor and Turkestan.

15. EUPITHECIA CENTAUREATA, Schiff.

Geometra centaureata, Schiff., Schmett. Wien. 114 (1775).

Tephroclystia oblongata, Stgr. and Rbl., Cat. Lep. Pal. (i), 308 (1901).

Enzeli, N. W. Persia, sea level, 1 ♀, 26th May 1919 (P. A. B.).

Already known from Syria, Armenia, Transcaspia, etc.

16. EUPITHECIA ULTIMARIA, Bdv.

Eupithecia ultimaria, Bdv., Gen. et Ind. Meth., 210 (1840).

Amara, River Tigris, 1 ♂, 3rd April 1918, 1 ♀ at light, 15th June 1918 (P. A. B.).

New for Mesopotamia. Both examples have the underside very sharply marked and are probably referable to the form *opisthographata*, Dietze (Iris, xix., 66).

17. GYMNOSCELIS PUMILATA, Hb.

Geometra pumilata, Hb., Samml. Eur. Schmett. IV., t. 75, f. 388 (1808-17).

Astara, N. W. Persia, sea level, 1 ♀, 4th July 1919, (P. A. B.).

Qazvin, N. W. Persia, 1 ♀, 2nd October 1919, (P. A. B.).

Recorded from Mesopotamia and Armenia but not, I think, from Persia.

Sub-family—*Geometrine*.18. *CABERA PUSARIA*, Linn.

Phalæna Geometra pusaria, Linn., Syst. Nat. (ed. 10), i., 522 (1758).

Enzeli, N. W. Persia, sea level, 1 ♂, 21st June 1919, 1 ♂ and 1 ♀, 30th June 1919 (P. A. B.).

19. *MACARIA NOTATA*, Linn.

Phalæna Geometra notata, Linn., Syst. Nat. (ed. 10) i., 523 (1758).

Enzeli, N. W. Persia, sea level, 1 ♀, 24th April 1919 (P. A. B.).

20. *MACARIA SIGNARIA*, Hb.

Geometra signaria, Hb., Samml. Eur. Schmett., IV., t. 61, f. 313 (1800-08).

Talysh, Persian S. W. Caspian, sea level, 1 ♂, 9th July 1919 (P. A. B.).

New for Persia, though known from Armenia.

21. *MACARIA ÆSTIMARIA*, Hb.

Geometra æstimaria, Hb., Samml. Eur. Schmett., IV., t. 64, f. 333 (1800-08).

Amara, 1 ♀, 15th June 1918 (P. A. B.).

By the shape, tone and underside I think this example really belongs here and not to the following, which is evidently the common *Macaria* of the region.

22. *MACARIA SYRIACARIA*, Stgr.

Macaria æstimaria var. *syriacaria*, Stgr., Cat. Lep. Eur. (ed. 2) 160 (1871).

Kut al Amara, 3 ♀ ♀, 18th June 1915 (1918), 18th and 28th June 1918, also one labelled "Mesopotamia" and undated (Br.); 2 ♀ ♀, 8th and 9th August 1918 (P. A. B.); Amara, 5 ♂ ♂, 1st May, 28th June (2), 10th and 26th August 1918; 12 ♀ ♀, 23rd April ("common"), 25th April, 9th June, 2nd and 4th July, 8th August, 9th August (2), 1st September, 6th September ("2 among weeds in garden") 30th September and 28th October, all in 1918 (P. A. B.); 1 ♂, 31st August 1918, at light (W.E.E.)

Previously recorded from Syria, Cyprus, Armenia and Transcaspia and in the form *tenuiata*, Stgr., from N. Persia. Standinger regards the last named as a possibly distinct species, but unless he would treat the whole of the material before me as referable to it—which is gainsaid by his diagnosis—I think it is *syriacaria* which is the species, with *tenuiata* as an ab. The distal margin of the hindwing is somewhat less crenulate than in *æstimaria* and there are other appreciable differences.

The series is variable. One ♀ (25th April) belongs to the extreme aberration *tenuiata*, a second (25th April) is almost as extreme and the earliest ♂ (1st May) in large measure corresponds, though the dark postmedian line is finer and reaches the costa. It is thus suggested that this form may be characteristic of a first generation or of the earliest emergences. The specimen taken by Capt. Evans is a pretty aberration with strong bands, on the hindwing accompanied distally by a large, irregular dark spot in the middle.

23. *TEPHRINA DISPUTARIA*, Guen.

Eubolia (?) *disputaria*, Guen., Spec. Gen. Lep. X., 489 (1858).

Amara, cultivated ground by the Chahala Canal, 1 ♂, 24th August 1917 (W.E.E.).

24. *ECTROPIS BISTORTATA*, Goeze.

Phalaena Geometra bistortata, Goeze, Ent. Beytr., III (3), 438 (1781).

Enzeli, Gilan, N. W. Persia, sea level, 1 ♀, 30th June 1919 (P. A. B.).

Apparently not very different from our western forms. The range of these widely-distributed species in the Orient is not yet well ascertained, but Staudinger records it (presumably) under the erroneous name of *crepuscularia* from Armenia.

25. *GNOPHARMIA COLCHIDARIA*, Led.

Gnophos colchidaria, Led., Ann. Soc. Ent. Belg. XIV., 39, 48 (1870).

Menjil, N. W. Persia, semi-desert hills, 2,000 feet, 2 ♂♂, 26th and 28th March; 4 ♀♀, 26th, 28th and 29th March and 7th April 1919 (P. A. B.).

New for Persia but described from Transcaucasia. Unfortunately I have little material for comparison and the genus needs further study as regards geographical variation. The form before me is darkish, with the contrasts of ground colour and bordering beneath not extremely pronounced.

26. *GNOPHARMIA COLCHIDARIA OBJECTARIA*, Stgr. (?) (sp. div. ?)

Gnopharmia colchidaria var. *objectaria*, Stgr., Iris V., 183 (1892).

Qazvin, N. W. Persia, 4,000 feet, 1 ♂, 27th August 1919.

Lighter and more variegated with reddish than the foregoing, the contrasts of the undersurface extreme. The latter distinction is probably more weighty than the former, as the response of the upperside to the immediate environment is such a marked feature in the *Gnophos* group.

27. *ZAMACRA FLABELLARIA*, Heeger.

Amphidasis flabellaria, Heeger, Beitr. Schmett., p 6, f. 6-11 (1838).

Mirjana, near Kizil Robot, Dyala River, 10 ♂♂, 6 ♀♀, 7th January 1919 (H. D. P.)

More variegated with white than my examples from Syria and on the whole rather large.



