

NOTES AND NEW SPECIES OF AMERICAN MOTHS OF THE GENUS SCOPARIA HAWORTH

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The genus *Scoparia* has been generally placed in a separate subfamily of the Pyralidae, the Scopariinae, following the classification of Sir George F. Hampson. More recently Edward Meyrick has included the genus in the large subfamily Pyraustinae. The species are small gray moths of obscure appearance, some of them being very variable within specific limits. The life histories of none of the American species have been worked out. The allied European forms feed on lichens or moss in the larval state. The following new species have accumulated in the collection of the United States National Museum, largely from the collecting of Dr. William Schaus and presented by him. Notes on the synonymy and distribution of some of the older species have been added.

SCOPARIA COMMORTALIS Dyar

Scoparia commortalis DYAR, Ins. Ins. Mens., vol. 9, p. 67, 1921.

Doubtfully distinct from *rectilinea* Zeller and occurring in the same region, the northern Pacific coast. It is browner than *rectilinea*, the markings less distinct, and in the types the outer line is distinctly flexous. In subsequent specimens, however, the line is about as straight as in *rectilinea*.

SCOPARIA DENIGATA, new species

Similar to *rigidalis* Barnes and McDunnough, but lighter gray-brown, the inner oblique and outer straight line and the discal patch more relieved. Expanse, 14–18 mm.

Type.—Male, Cat. No. 41335, U.S.N.M., Huachuca Mountains, Ariz. Paratypes, two males and one female, respectively, Arizona. August (O. C. Poling), San Diego, Calif., March 26, 1915 (H. G. Dyar); White Mountains, Ariz., altitude 7,200 feet, August, 1925 (O. C. Poling, gift of S. E. Cassino).

SCOPARIA NOMINATALIS Hulst

Scoparia nominatalis HULST, Trans. Amer. Ent. Soc., vol. 13, p. 148, 1886.

Scoparia spaldingalis BARNES and McDUNNOUGH, Cont. Nat. Hist. Lep. N. A., vol. 1, pt. 5, p. 34, 1912, pl. 3, figs. 1 and 4.

In the "Check List," 1917, Barnes and McDunnough refer *nominatalis* to the synonymy of *lugubralis* Walker, recognizing *spaldingalis* for the present form. This seems to be a mistake, because though Hulst's description is not of certain distinction between the obscure species of *Scoparia*, his locality is so. He describes from Vancouver Island, where the present species is frequent, whereas *lugubralis* was from Hudson Bay, and a colored figure of the type before me shows it to belong to the *basalis* group, as hereinafter mentioned.

The present species occurs in the Pacific coast forested region. Rocky Mountains in British Columbia, Utah, Colorado, Arizona, and as far south as Orizaba, Mexico, and Volcan Santa Maria, Guatemala (Schaus and Barnes), and the White Mountains of New Hampshire. It is very variable in the markings.

SCOPARIA ALBERTALIS, new species

Possibly one of the protean forms of *nominatalis*, but seems worthy of separation. Size and color of *nominatalis*, but the outer line appears black, not white, and is strongly excurved centrally. The inner line has dark shading, the discal dot diffused, terminal black markings slight. Expense, 18 mm.

Type.—Male, Cat. No. 41336, U.S.N.M.; Banff, Alberta, July 17, 1925 (O. Bryant). Paratype, male, Lake Minnewanka, Alberta, July 22, 1918 (H. G. Dyar). A specimen from Field, British Columbia, July 1, 1927 (T. Ulke), comes very near, but on account of the angled, not excurved outer line, I have let this stand under *nominatalis*.

SCOPARIA DELPHUSA Druce

Scoparia delphusa DRUCE, Biol. Cent.-Amer., Lep. Het., vol. 2, p. 279, 1896.

Scoparia smithi DRUCE, Biol. Cent.-Amer., Lep. Het., vol. 2, p. 279, 1896.

Scoparia sabura DRUCE, Biol. Cent.-Amer., Lep. Het., vol. 2, p. 279, 1896.

Scoparia flexuosa DYAR, Proc. U. S. Nat. Mus., vol. 54, p. 370, 1918.

The above names obviously refer to different forms of this variable species. The species occurs in Mexico, Arizona, and Colorado in the mountains.

SCOPARIA TRICOLORALIS Dyar

Scoparia tricoloralis DYAR, Ent. News, vol. 15, p. 72, 1904.

Scoparia rufitinctalis HAMPSON, Ann. Mag. Nat. Hist., ser. 7, vol. 19, p. 21, 1907.

Forested regions of British Columbia, Washington, and mountains of California. Hampson speaks of the lines as "rufous;" but though they are sometimes stained with reddish from the spreading of the reddish discal shade, the lines themselves are blackish.

SCOPARIA ECHO, new species

Ground light gray, blotched with olive-gray; lines whitish, narrow, the inner curved, the outer moderately centrally excurved; blackish blotches for claviform and orbicular, the reniform constricted, often T-shaped; subterminal shade whitish, waved, sometimes touching the excurve of outer line, preceded by heavy olivaceous shading and followed by blackish submacular terminal band. Hind wings sordid whitish. In the female, the fore wing is more heavily shaded with olivaceous blackish.

Type.—Male, Cat. No. 41342, U.S.N.M.; Victoria, British Columbia, August 21, 1920 (E. H. Blackmore). Paratypes, three males and four females, as follows: Victoria, B. C., August 21, 1921 (W. R. Carter); Victoria, B. C., August 6, 1919 (W. Downes); Fitzgerald, B. C., August 22, 1921 (W. R. Carter); Victoria, B. C., September 3, 1921 (W. R. Carter); Victoria, B. C., August 17, 1909 (A. J. Croker); Goldstream, B. C., August 12, 1920 (E. H. Blackmore); Wellington, B. C., August 20, 1903 (T. Bryant).

The specimens were originally classified under *fernaldalis*, which was thus thought to reach the Pacific coast. This form, however, has been rightly considered as a race of *basalis* by Barnes and McDunnough, and is quite distinct from *echo*.

SCOPARIA LEUCOPHTHALMA, new species

Allied to *echo*; smaller, the dark shadings more olivaceous and denser, not gray, the lines narrowed and contrasting whitish; claviform scarcely indicated; orbicular a dash; reniform Y-shaped with a little distinct white speck on its lower side. Expanse, 14 mm.

Type.—Male, Cat. No. 41343, U.S.N.M.; Victoria, British Columbia, July 13, 1922 (W. R. Carter). Paratypes five males and one female from the same locality and collector with dates as follows: July 8, 1921; July 7, 8, and 13, 1922; June 24 and 29, 1923.

SCOPARIA BASALIS Walker

Scoparia basalis WALKER, Cat. Lep. Het. Brit. Mus., vol. 34, p. 1497, 1865.

Scoparia biplagiatis WALKER, Cat. Lep. Het. Brit. Mus., vol. 34, p. 1499, 1865.

Scoparia libella GROTE, Bull. U. S. Geol. Surv., vol. 4, p. 675, 1878.

Scoparia fernaldalis DYAR, Ent. News, vol. 15, p. 72, 1904.

Scoparia obispalis DYAR, Journ. N. Y. Ent. Soc., vol. 14, p. 106, 1906.

Scoparia palloralis DYAR, Journ. N. Y. Ent. Soc., vol. 14, p. 106, 1906.

Scoparia bronzalis BARNES and BENJAMIN, Cont. Nat. Hist. Lep. N. A., vol. 5, p. 48, 1922.

Scoparia cervicalis McDUNNOUGH, Can. Ent., vol. 59, p. 267, 1927.

This is the common species of the northern Atlantic States, running south along the Blue Ridge Mountains to North Carolina. It also runs west to British Columbia, *fernaldalis* being described from

Kaslo, B. C., the race slightly larger than eastern *basalis* and darker shaded. The form *cervalis* McDunnough from Lillooet, B. C., is somewhat browner than *fernaldalis*, which inclines to gray. The species runs to the south along the Pacific coast, *obispalis* being described from San Luis Obispo, Calif., and *bronzalis* from San Bernardino. The distribution also follows the Rocky Mountains, *palloralis* being described from Colorado, New Mexico, and Arizona.

SCOPARIA PACIFICALIS Dyar

Scoparia pacificalis DYAR, Ins. Ins. Mens., vol. 9, p. 66, 1921.

Scoparia alaskalis BARNES and BENJAMIN, Cont. Nat. Hist. Lep. N. A., vol. 5, p. 49, 1922.

I have not seen specimens of *alaskalis* and the form has not been figured, but from the description it must be close to or be the same as *pacificalis*. It was described from Ketchikan, Alaska.

SCOPARIA LUGUBRALIS Walker

Scoparia lugubralis WALKER, Cat. Lep. Het. Brit. Mus., vol. 34, p. 1498, 1865.

Scoparia truncatalis McDUNNOUGH, Can. Ent., vol. 54, p. 36, 1922.

Very similar to *basalis*, but stouter and broader winged. I have not seen authentic specimens of *truncatalis*, but judge it to be the same. Specimens are before me from Trenton, Ontario, Canada, June 15, 1901 (Evans), Rochester, Minn. (C. N. Ainslie), and Nulato, Alaska, July 23, 1916 (B. P. Clark, donor).

SCOPARIA PHYCITINALIS, new species

Of the size and general color of *rectilinea* Zeller, narrower winged, the outer line flexuous and sharply indented subcostally. Gray, irrorate with black; lines whitish, the inner curved, followed by broad black shading in which the linear claviform and orbicular inhere; reniform quadrate, black and clouded; outer line preceded by black and followed by a broad black area, which has a tint of brown, itself white, sharply indented on discal fold and slightly black-dotted within; subterminal area lighter, indefinite, followed by a row of terminal dots. Hind wing pale fuscous. Expanse, 18 mm.

Type.—Male, Cat. No. 41344, U.S.N.M.; Bilby, Alberta, June 30, 1924 (O. Bryant). Paratypes, eight males and three females, ten of them from the same locality and collector, with dates June 3, 10, and 19, and July 1, 1924, and also: Kannanaskis, Alberta, June 23, 1925 (O. Bryant), and Moraine Lake, Alberta, July 11, 1925 (O. Bryant).

Other North American species not otherwise mentioned here are *centuriella* Denis and Schiffermiller (*ninguidalis* Hulst is the nor-

mal female; the type is before me from the Fernald collection), *torniplagalis* Dyar, *alialis* Barnes and McDunnough, *penumbralis* Dyar, *pallidalis* Dyar, *strigalis* Dyar, *schwarzalis* Dyar, and *normalis* Dyar.

SCOPARIA TERSELLA Zeller

Scoparia tersella ZELLER, Stett. Ent. Zeit., vol. 33, p. 476, 1872.

Described from Colombia and not at present before me. The inner pale line of fore wing is strongly oblique as in the following species. The expanse, according to Zeller's figure, is about 18 mm.

SCOPARIA PUSILLA Dyar

Scoparia pusilla DYAR, Proc. U. S. Nat. Mus., vol. 47, p. 320, 1914.

A small narrow-winged species of the pattern of *tersella*. Common on the Atlantic side of Panama, but not elsewhere reported.

SCOPARIA SUBTERSA, new species

In general as in *pusilla* Dyar, but larger. Fore wing yellowish gray, more or less overlaid with brown irrorations and blotches; lines pale, the inner strongly oblique from basal fourth of costa to middle of inner margin, which it reaches remote from the termination of the outer line; outer line flexuous, inbent subcostally; claviform and orbicular represented by black streaks, reniform blotched; a dark patch on costa above it and one within outer line; a pale subterminal line, a little flexed, followed by dotted dark shading. Hind wing white, slightly stained. Expanse, 14 mm.

Type.—Male, Cat. No. 41347, U.S.N.M.; Volcan Santa Maria, Guatemala, October (Schaus and Barnes). Paratypes, 14 specimens of both sexes from the same locality and collectors; two males, Jalapa, Mexico (Schaus collection); one male, Orizaba, Mexico (Schaus collection); seven specimens, Purulha, Sitio, and Juan Vinas, Costa Rica (Schaus and Barnes); one female, Trinidad, West Indies (A. Busck); a single specimen from Castro, Parana, Brazil, seems indistinguishable, but is not made a paratype on account of the geographical separation. It would seem that all these forms should be referable to *tersella*; but in that the measurement which Zeller gives of one wing is three-quarters the expanse of the specimens before me, and also he figures the two lines of fore wing as meeting on the inner margin, which is not so in the species here described.

SCOPARIA EXTINCTA Dyar

Scoparia extincta DYAR, Ins. Ins. Mens., vol. 9, p. 67, 1921.

This species follows here, though the markings are so faint that the obliquity of the inner line can be made out in certain specimens only. The species *denigata* Dyar and *rigidalis* Barnes and McDunnough, previously referred to, are allied.

SCOPARIA ALBIPUNCTATA Druce

Scoparia albipunctata DRUCE, Biol. Cent.-Am., Lep. Het., vol. 2, p. 563, 1899.

Described from Volcan Irazu, Costa Rica. I have a single female, slightly larger than Druce's measurement, Volcan Santa Maria, Guatemala, July (Schaus and Barnes). A very obscurely marked species, but the inner line of fore wing is erect and dentate, not oblique.

SCOPARIA TRICOLOR Zeller

Scoparia tricolor ZELLER, Stett. Ent. Zeit., vol. 33, p. 478, 1872.

Described from Colombia, and I have no material that I can positively identify with the name. *Scoparia cyclophora* Dyar from Mexico, however, evidently comes very close. This is represented in the collection by one female only. The following is close, but I think not identical:

SCOPARIA MOLLICULELLA, new species

As in *cyclophora*, slightly smaller, grayer, the blotching about as in the named species but lighter, scarcely contrasted. The reddish color inheres only in the reniform, which is composed of a ring open below or of two opposed cusps. This is possibly the male of *cyclophora*, but much more probably a derivative form addicted to high altitudes. Expanse, 14 mm. (*cyclophora* expands 16 mm.).

Type—Male, paratypes, two males, Cat. No. 41348, U.S.N.M.; Popocatepetl Park, Mexico, 8,000 feet, June, 1906 (W Schaus).

SCOPARIA STEREOSTIGMA Dyar

Scoparia stereostigma DYAR, Proc. U. S. Nat. Mus., vol. 54, p. 369, 1918.

Smaller and more compactly shaped than *molliculella* but evidently allied. Six specimens from Jalapa, Mexico, the type locality, are in the collection and four more from Volcan Santa Maria, Guatemala.

SCOPARIA MULTIFACIES, new species

Fore wing light gray, shaded with blackish beyond inner line and terminally, sometimes extensively shaded, rarely with a bronzy reflection; inner line pale, erect or slightly curved or irregular; orbicular and claviform obscure in the dark shade following it; median space generally clear gray; reniform a ringlet or quadrate or blotched, in one specimen covered and surrounded by a reddish shade to the outer line; this pale, notched more or less subcostally, crenulate, rather regular, preceded by a slender dark line, the termen solidly dark except for more or less distinct traces of an angled white subterminal line. Hind wing whitish, solid fuscous about the margin. Expanse, 13 mm.

Type.—Female, Cat. No. 41349, U.S.N.M.; Volcan Santa Maria, Guatemala, July (Schaus and Barnes). Paratypes, eight specimens of both sexes from the same locality and collectors and three specimens from Jalapa, Mexico (Schaus collection).

SCOPARIA INEXOPTATA, new species

A large pale long-winged species. Gray, rather evenly irrorate with black scales; lines pale, the inner curved or slightly oblique, followed by a narrow black line; claviform and orbicular detached beyond it, both dashes; reniform a double ellipse, quadrately joined; outer line sharply indented subcostally, with narrow black inner edge; terminal space indistinctly dark shaded, the pale subterminal line indistinctly X-shaped with the outer line. Hind wing pale sordid. Expanse, 16–22 mm.

Type.—Male, paratypes, three males, Cat. No. 41350, U.S.N.M.; Popocatepetl Park, Mexico, 8,000–10,000 feet and 9,500–11,500 feet. June, 1906 (W. Schaus).

SCOPARIA YCARDA, new species

Gray, rather dark, pulverulent in appearance in slightly flown specimens. Lines white, narrow, the outer roundedly excurved mesially; inner followed by a moderate black shade from which the linear claviform and orbicular project; reniform quadrate, often dotted or obscure, in the type brownish filled; terminal area dark with only traces of a pale sinuate subterminal line. Expanse, 10–13 mm.

Type.—Female, Cat. No. 41349, U.S.N.M.; Volcan Santa Maria, Guatemala, November (Schaus and Barnes). Paratypes, 11 specimens of both sexes from the same locality and collectors, and one female, Orizaba, Mexico, July, 1913 (R. Müller).

SCOPARIA BISCUTELLA Zeller

Scoparia biscutella ZELLER, Stett. Ent. Zeit., vol. 33, p. 474, 1872.

Scoparia albifrons DRUCE, Biol. Cent.-Am., Lep. Het., vol. 2, p. 278, 1895.

The name *albifrons* was introduced by Druce (1895) for what he thought a different species from *biscutella*, but his figure indicates the same form. Described from Columbia, specimens are before me from various localities in Costa Rica and Guatemala.

SCOPARIA ANAGANTIS Dyar

Scoparia anagantis DYAR, Proc. U. S. Nat. Mus., vol. 54, p. 370, 1918.

Of the same pattern as *biscutella* but a larger species. The unique type is a female, the markings being reduced and open.

SCOPARIA CRASSIUSCULA, new species

Pattern and color of *biscutella*, but smaller, the wings shorter and broader, much less elongate. The markings seem condensed and approximate in comparison with the named species, which is probably due to the wing-shape. Expanse, 13 mm.

Type.—Male, Cat. No. 41352, U.S.N.M.; Castro, Paraná, Brazil (Schaus collection). Paratypes, male and female with the same data. A fragment of a specimen, front wings only, St. Jean, Maroni River, French Guiana (W. Schaus) is apparently the same.

SCOPARIA IMPARILIS, new species

Wings rather elongated, pointed at apices. Pale violaceous gray; a broad black streak from base of fore wing on submedian fold to origin of vein 2; a black blotch for orbicular and a larger one for reniform, joined by a black line in lower part of cell and followed faintly by reddish; terminal space limited by a faint dark line, olivaceous shaded and with irregular black streaks; terminal black dots small, connected by a shade; fringe pale; ordinary lines wanting. Hind wing pale gray, the fringe white. Expanse, 17 mm.

Type, Male, Cat. No. 41380, U.S.N.M.; Villa Baleda, Porto Santo, Jamaica (T. D. A. Cockerell).

SCOPARIA VINASALIS, new species

Markings of *crassiuscula* but still smaller and more delicate. The marks are more smooth and even, the terminal space contrastingly dark, with a pale blotch centrally, not giving the X-mark appearance. The ground color has a tint of lilaceous, especially in the female. Expanse, 10 mm.

Type.—Male. Paratypes, two males and a female, No. 41353, U. S. N. M.; Juan Vinas, Costa Rica, January, May, and November (Schaus and Barnes).

SCOPARIA EXCURSALIS, new species

Small and delicate, the wings rather narrow and elongate. Fore wing light gray with violaceous tint, some black shading at the base; inner line pale, indistinct, but indicated by the black outer shading, angled outward mesially; ordinary spots lost except the reniform, which is dark, diffused and stained with reddish centrally; outer line scarcely indicated, forming with the subterminal line an indistinct X mark in the lightly darkened terminal area. Expanse, 11 mm.

Type.—Male. Paratype, male, No. 41354, U.S.N.M.; Juan Vinas, Costa Rica, the paratype marked February (Schaus and Barnes).

SCOPARIA ULMAYA, new species

Small, brown, with slight bronzy reflection; lines pale, the inner slightly oblique, the outer with loop-like central excurve; a round black spot for claviform; a thick rectangular black dash for reniform, the wing between the marks rather heavily filled in with brown; two black terminal patches; fringe pale, checkered with black. Expanse, 10 mm.

Type.—Male, No. 41355, U.S.N.M.; Guadeloupe, West Indies, July, 1905 (A. Busck).

SCOPARIA LONGIPENNIS Zeller

Scoparia longipennis ZELLER, Stett. Ent. Zeit., vol. 33, p. 479, 1872.

Described from Colombia. Specimens are before me from Mount Poas, Costa Rica, and Las Vigas, Mexico.

Other described South American species not otherwise here referred to are as follows:

Scoparia jonesalis Dyar, Bermuda.

Scoparia anadonta Dyar, Mexico.

Scoparia atricuprea Hampson, Jamaica, Colombia.

Scoparia ceramica Warren, Peru.

Scoparia strigigramma Hampson, Peru.

Scoparia ragonoti Butler, Peru, Chili, Juan Fernandez.

Scoparia chordactis Meyrick, Patagonia.

