

Records and Descriptions of Palearctic and South Asiatic *Laspeyresiini* (Lepidoptera: Tortricidae)

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Abstract: *Chretienia* (with five included species) and *Phanetoprepa* (with three included species) are described as new genera, and *Laspeyresia bengalica* (Bengal), *L. minuta* (Bengal), and *Phanetoprepa agenjoi* (Spain) are proposed as new species.

Chretienia, new genus

Figs. 1-6

Grapholitha (in part): Zeller, 1847, p. 734. Lederer, 1859, p. 340. Barrett, 1873, p. 148. Ragonot, 1894, p. 218. Rebel, 1901, p. 122. Walsingham, 1903, p. 214. Rebel, 1912, p. 85. Chrétien, 1915, p. 304-307. Rebel, 1924, p. 42.

Grapholitha (*Grapholitha*) (in part): Heinemann, 1863, p. 183.

Grapholitha (*Semasia*) (in part): Wocke, 1871, p. 257.

Laspeyresia (in part): Walsingham, 1903, p. 214. Meyrick, 1916, p. 21; 1920, p. 351. Kennel, 1921, pp. 722, 723. Zerny, 1935, p. 134. Clarke, 1955, p. 37; 1958, p. 431. Obraztsov, 1959, p. 175, 196, 197; 1960, p. 143. Razowski, 1961, p. 647.

Pamene (in part): Caradja, 1916, p. 71.

TYPE-SPECIES: *Grapholitha rhezelana* Chrétien, 1915.

Head roughly scaled, face with a large, flat tuft of large, somewhat iridescent, dense scales. Antenna in male somewhat thickened, with short, appressed ciliations, noticeable chiefly apically; in female less thick, with short setae. Palpus porrect, longer than width of eye; second segment longest, dilated apically; terminal segment exposed, rather short, broad and blunt. Proboscis moderate. Thorax smooth.

Forewing elongate, moderately broad; costa gently curved; apex rounded, somewhat produced, termen slightly concave between R_5 and M_3 , tornus broadly rounded, dorsum gently and gradually curved. No costal fold in male. 12 veins, all separate. Sc slightly incurved, R_1 almost from middle of cell, R_2 less than twice as close to R_3 as to R_1 ; R_3 about four times as close to R_4 as to R_2 ; R_4 running to costa, R_5 to utmost point of termen; on termen M_3 and Cu_1 slightly more remote from each other than at base; Cu_1 from lower angle of cell, Cu_2 from between middle and last third of cell; fork of A_{2+3} about one-third.

Hindwing subovate, about 1; costa almost straight, apex rounded, not produced, termen oblique, gently convex, tornus broadly rounded. 8 veins: Sc almost straight, M_2 and M_3 apparently subparallel, in fact about twice as remote from each other at termen as at base; M_3 and Cu_1 long-stalked, from between two-thirds and three-fourths of cell; A_2 and A_3 more distinct than A_1 ; cubitus with pecten.

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FIGS. 1-5. *Chretienia rhezelana* (Chrétien). 1. Male, wing venation. 2. The same, head, in lateral aspect. 3. In dorsal aspect. 4. Male genitalia (slide No. 6648, Hammam-es-Salahin, Algeria, April 14, 1904). 5. Female genitalia (slide No. 6649, same data, but April 10, 1904).

MALE GENITALIA: Eighth and ninth intersegmental membrane simple, or with one or more large, broad, strongly sclerotized scales, on each side of membrane. Tegumen ribbon-shaped, uncus and socii absent, gnathos membranous. Valva elongate, moderately broad; cucullus rotundate, hardly separated by a neck from the rest of valva; basal opening of valva large and elongate; external angles of sacculus indistinct or not defined at all; processus basalis short. Aedeagus robust, widely cylindrical, with a narrow coecum penis;

one strongly sclerotized cornutus, shaped as an elongate, laterally thickened plate, or two or more thick cornuti, connected by a hardly visible membrane.

FEMALE GENITALIA: Papillae anales weak, elongate, slightly dilated caudally. Apophyses posteriores shorter than anteriores, or equally long. Ostium bursae wide, located on caudal edge of ventral plate, or posteriad of it; antrum more or less sclerotized, elongate and rather broad, vase-shaped, dilated caudally and narrowed rostrally. Ductus bursae broad and short; cervix bursae rather indistinct or shifted to the left side, receiving ductus seminalis; ostium wide, generally with thorns, directed inwards, into the bursa copulatrix; corpus bursae more or less pear-shaped, smooth or slightly reticulated; signa, two short thorns or lacking.

REMARKS: The new genus is dedicated to the memory of the French Lepidopterist, P. Chrétien, who was the first to show the distinction of some of its species from those, placed recently in the genera *Laspeyresia* Hübner and *Grapholitha* Treitschke. Chrétien (1915) erroneously regarded also *Selania extinctana* (Chrétien) as a member of the present group. He has been misled by the fact that the species of both *Selania* Stephens and *Chretienia* have in common a frontal shield of glassy scales, covering the face, a feature distinguishing these two genera from the other Laspeyresiini. However, *Selania* and *Chretienia* differ from each other in the labial palpi and the venation of the hind wing which was also observed by Chrétien; the important difference of the genital characters, however, remained unknown to him.

***Chretienia rhezelana* (Chrétien), new combination**

Figs. 1-6

Grapholitha rhezelana Chrétien, 1915, p. 304.

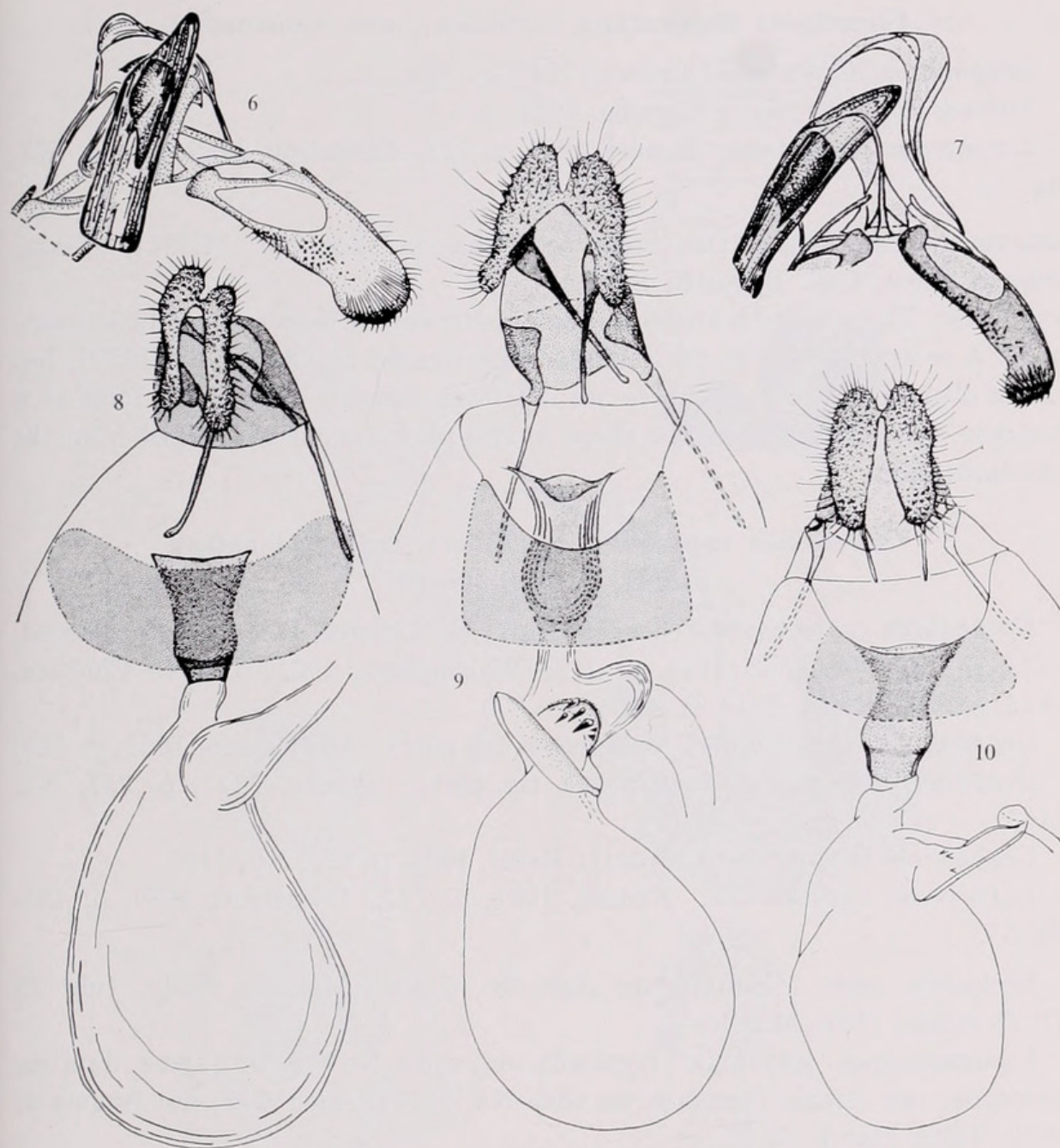
Laspeyresia rhezelana: Obraztsov, 1959, p. 186. Razowski, 1961, p. 674, pl. 87, fig. 8.

Lectotype, male (genitalia on slide No. 3791), "11.7.07, boutons de *Capparis*, Ham. Sal., 6, 6 1." In the Muséum National d'Histoire Naturelle, Paris. Selected and figured by Razowski (1961).

SPECIMENS EXAMINED: Three males and two females (genitalia of two, on slides Nos. 6648 ♂, and 6649 ♀), Hammam-es-Salahin, Algeria, April 9-14, 1914 (Walsingham Collection) (Brit. Mus.).

MALE GENITALIA: Valva much broader than in *C. capparidana*; cucullus correspondingly larger, less curved down; setae above ventral edge of valva before cucullus separated from those on the sacculus. Aedeagus not narrowed apicad; cornutus shaped as a broad tapering plate, with a longitudinal fold slightly protruding beyond the oblique edge of plate.

FEMALE GENITALIA: Ostium bursae caudad of and rather remote from the ventral plate; antrum long, pitcher-shaped, widely dilated caudally, narrowed in median part, with sides strongly concave, somewhat rounded and dilated anteriorly less than posteriorly; two narrow girdles in anterior portion of antrum and two lateral colliculi. Ductus bursae slightly longer than in *C. capparidana*. Corpus bursae elongate; dilated portion of ductus seminalis internally with some short thorns pointed towards ostium.



FIGS. 6-10. Genitalia. **Chretienia rhezana** (Chrétien), male. 7. **C. capparidana** (Zeller), male genitalia (slide No. 6650, Messina, Sicily, July 25 (P. E. Zeller), paralectotype). 8. The same species, female genitalia (slide No. 6651). 9. **C. planifrontana** (Rebel), female genitalia (slide No. V.15, Vienna Museum). 10. **C. capparidana** (Zeller), female genitalia (slide No. 6652), Corfu, April, 1872.

REMARKS: The specimens examined were reared from larvae collected March 5, 1904, on *Capparis spinosi*. The external characters of the adults correspond with the original description of *C. rhezana*; the male genitalia of a dissected specimen match well the figure of those of the lectotype. It should be emphasized that the aedeagus in that figure is shown in dorsal aspect, for this reason the cornutus appearing somewhat disfigured.

Chretienia decoratana (Chrétien), new combination

Grapholitha decoratana Chrétien, 1915, p. 306.

Pamene decorata /sic/: Caradja, 1916, p. 71.

Laspeyresia decoratana: Kennel, 1921, p. 723. Obraztsov, 1959, p. 186, 197, fig. 32.

SPECIMENS EXAMINED: One male (genitalia on slide No. M.567), Biskra, Algeria. Zool. Coll. Bavarian State.

REMARKS: This species is known to the present author from a single male specimen. A re-examination of the genitalia slide figured by Obraztsov (1959), has shown that in the aedeagus there are not three separate cornuti but folds of a common, sclerotized plate. The shape of this plate cannot be defined from the examined slide.

Chretienia capparidana (Zeller), new combination

Figs. 7-8, 10, 19-20

Grapholitha capparidana Zeller, 1857, p. 734. Lederer, 1859, p. 340. Barrett, 1873, p. 148. Ragonot, 1894, p. 218. Walsingham, 1903, p. 214. Chrétien, 1915, p. 307. Rebel, 1924, p. 42.

Grapholitha (*Grapholitha*) *leplastriana* (in part): Heinemann, 1863, p. 183.

Grapholitha (*Semasia*) *leplastriana* (in part): Wocke, 1871, p. 257, No. 1163.

Grapholitha leplastriana (in part): Rebel, 1901, p. 122, No. 2196.

Laspeyresia capparidana: Kennel, 1921, p. 722. Obraztsov, 1959, p. 186, fig. 33.

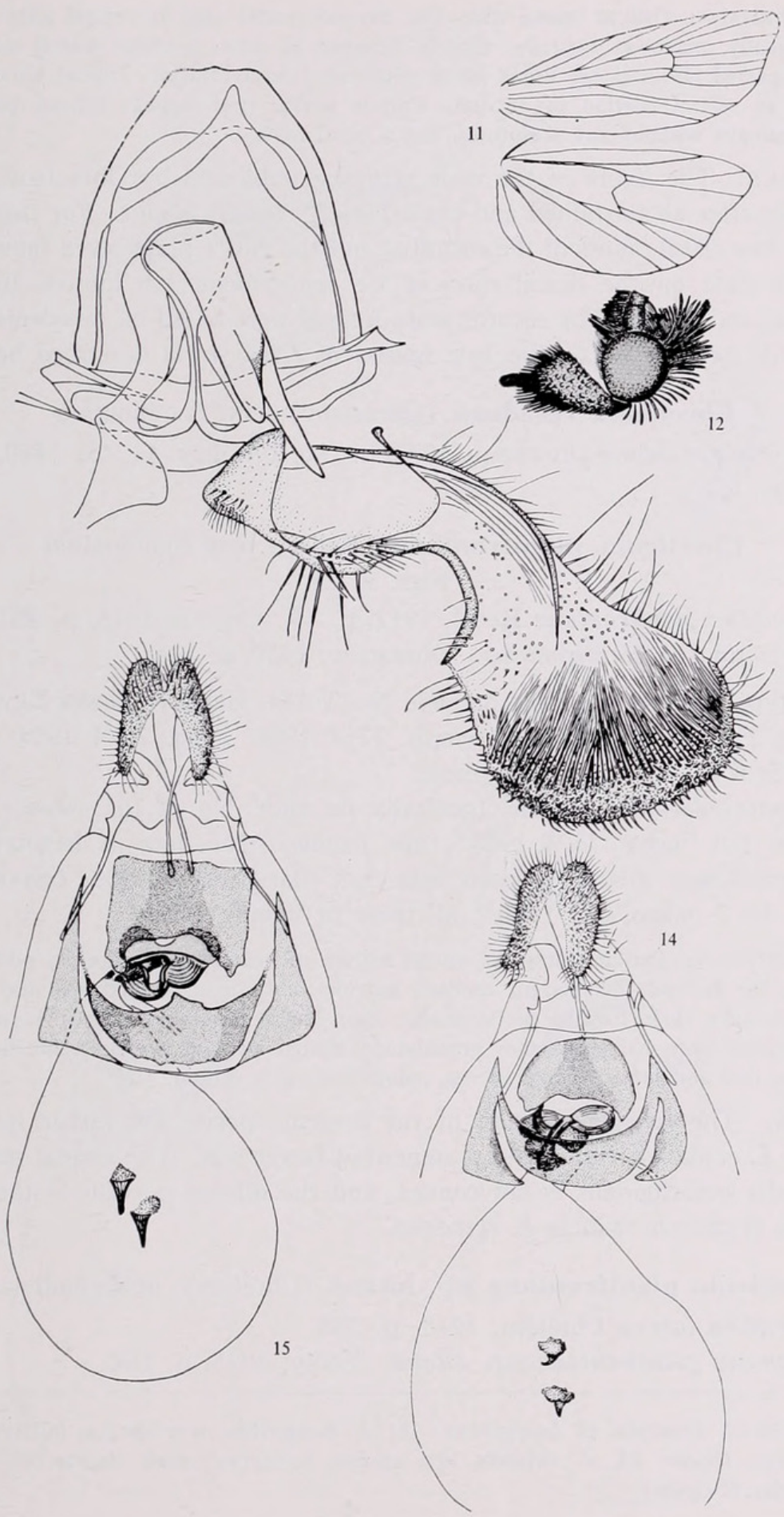
Lectotype, male (Genitalia on slide No. 5680), Messina, Sicily, July 25 (P. E. Zeller) (Brit. Mus.).

Lectoparatypes, one male (genitalia on slide No. 6650), same data as lectotype; one female (genitalia on slide No. 6651), same data, but August 2, 1847. (Brit. Mus.).

OTHER SPECIMENS EXAMINED: One female (genitalia on slide No. 6652), Corfu, April, 1872 (Walsingham Collection, No. 84612) (Brit. Mus.). One male (genitalia on slide No. M.538), Gravosa, Dalmatia (Zool. Coll. of the Bavarian State).

MALE GENITALIA: Valva moderately broad, cucullus hardly separated, a rounded, slightly dilated distal portion of valva, somewhat downcurved and covered with setae; numerous smaller setae in distal part of sacculus and above ventral edge of valva before cucullus. Aedeagus insignificantly narrowed apicad, with a short, blunt, ventroapical thorn; cornutus, a broad, elongate plate with two acute distal points.

FIGS. 11-15. Genitalia and head. **Phanetoprepa agenjoi**, new genus and species, male, wing venation. 12. Female, head. 13. Male genitalia (slide No. A.9). 14. Female genitalia (slide No. A.10). 15. **P. strigulatana** (Kennel), female genitalia (slide No. A.13).



FEMALE GENITALIA: Ostium bursae wide, just beyond caudal edge of ventral plate; antrum broad caudally, narrower rostrally, slightly incurved at sides; extreme rostral portion of antrum separated like a rather broad girdle with two lateral colliculi. Ductus bursae short, as broad as rostral portion of antrum. Corpus bursae pear-shaped; dilated portion of ductus seminalis without any sculptures, nor a basal fold.

REMARKS: The figure of the male genitalia published by Obraztsov (1959) was made after an unstained and inadequately cleared mount. For this reason only the two distal points of the cornutus, not the entire plate, were shown. The authentic data on the distribution of *C. capparidana* are limited to Sicily, Dalmatia, and Corfu. The records from Bengal were based on misidentification and should be referred to two new species of *Laspeyresia* described below.

Chretienia resedana (Obraztsov), new combination

Laspeyresia resedana Obraztsov, 1959, p. 186, 196, figs. 44, 45; 1960, p. 143, pl. 12, figs. 1, 2.

Chretienia planifrontana (Rebel), new combination

Figs. 9, 21

Grapholitha planifrontana Rebel, 1912, p. 85. Crétien, 1915, p. 307.

Laspeyresia (?) *planifrontana*: Obraztsov, 1959, p. 186.

Lectotype, female (genitalia on slide No. V.15), Heluan /Lower Egypt/, "in Früchten *Farsetia aegyptiaca*, nymph. 17/4 1908, imag. 20/4 1908 (Vienna Mus.). Selected in the present place.

Lectoparatypes, one female (genitalia on slide No. V.16), same data as lectotype, but "imag. 24/4 1908"; one female, same data as lectotype; one female (abdomen missing), same data, but "larva 17/1 1908, cocoon 26/1, nymph 10/2 imago, 6/3 1908"; all three in Vienna Mus.

FEMALE GENITALIA: Ostium bursae at caudal margin of ventral plate; lamella postvaginalis projecting far beyond this margin caudad; antrum subtriangular, narrowed and rounded rostrad, broader than lamella postvaginalis; two lateral colliculi. Ductus bursae short. Corpus bursae pear-shaped, surface granulated; dilated part of ductus seminalis with a large basal fold and some internal thorns, pointing towards ostium.

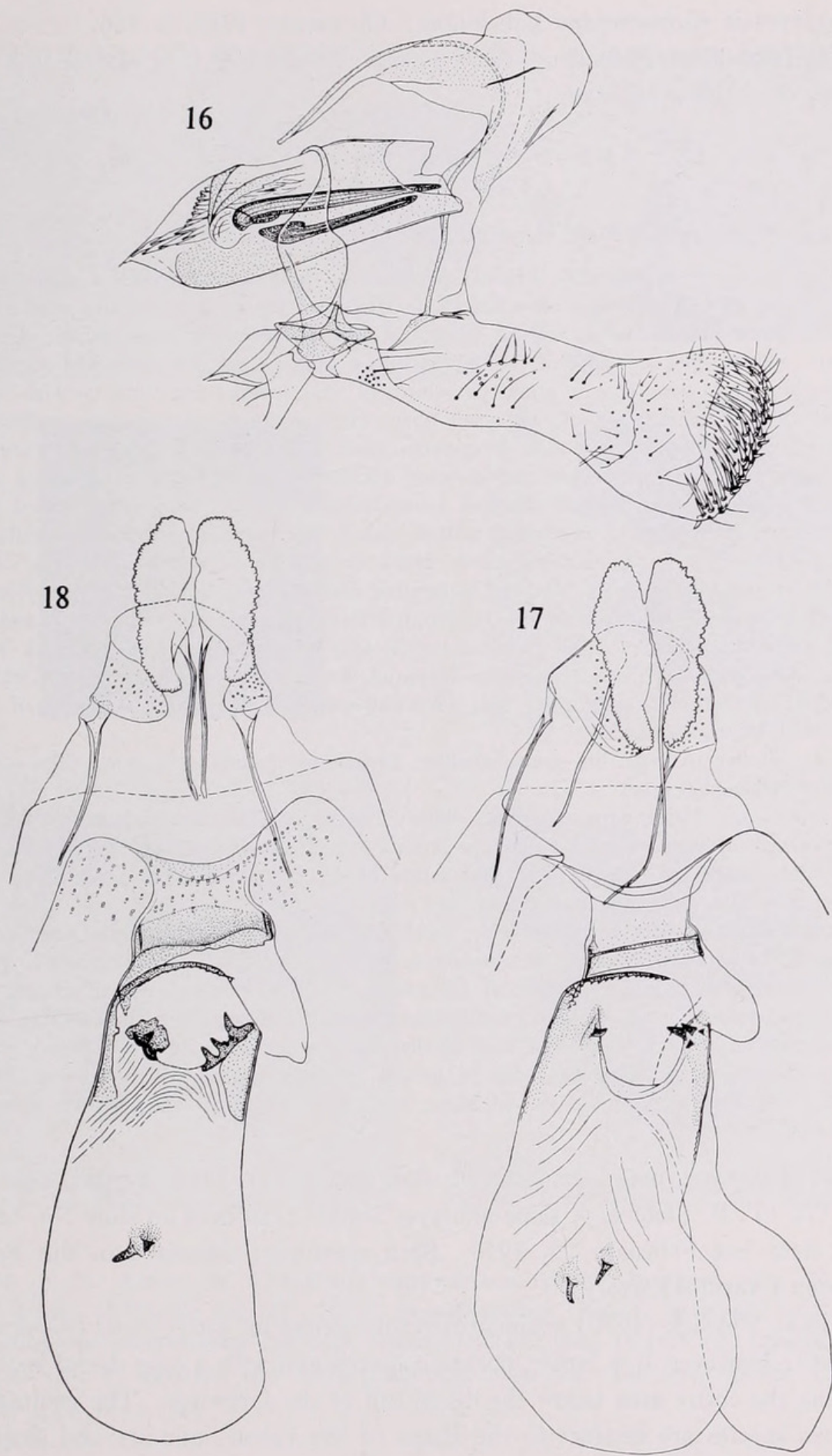
REMARKS: The female genitalia of the present species are rather similar to those of *L. resedana*, but are of a somewhat larger size. The caudal margin of the lamella postvaginalis is not convex, and the dilated portion of the ductus seminalis is shorter than in *L. resedana*.

Chretienia planifrontana ssp. *lotana* (Chrétien), new combination

Grapholitha lotana Chrétien, 1915, p. 386.

Laspeyresia planifrontana ssp. *lotana*: Zerny, 1935, p. 134.

FIGS. 16-18. Genitalia of *Laspeyresia*. 16. *L. bengalica*, new species, holotype, male. 17. Allotype, female. 18. *L. minuta*, new species, holotype, female (figure by W. Bergmans, Leiden Museum).



Laspeyresia planifrontana ssp. *lotana*: Obraztsov, 1959, p. 186.

This form has remained unknown to me. Tentatively it is placed as a subspecies of *C. planifrontana*.

Laspeyresia bengalica, new species

Figs. 16-17, 25-26

Laspeyresia capparidana Meyrick (nec Zeller), 1920, p. 351.

MALE: Antenna brownish olive. Head concolorous, front smooth, with a slight golden sheen. Palpi whitish, brownish olive apicad, yellowish on the inside; terminal joint brown-black. Thorax grayish olive, tegulae paler. Forewings yellowish brown-olive; a broad elongate whitish spot on dorsum, occupying entire area below cell, narrowed in middle, and reaching from wing base to about two-thirds of wing length; numerous blackish brown, vertical lines crossing this spot; on costa about eight oblique, blackish olive rather long streaks directed outwards; in their interspaces some bluish gray, leaden lines, originating from short, elongate costal spots and directed outwardly; a narrow black elongate streak in external half of cell; oblique, blackish brown streaks directed basad and located above and externad from already mentioned whitish dorsal spot; ocelloid patch large, yellowish-olive, finely gray-striated, including seven black dots, some of them elongate; a bluish-gray leaden line, dilated in middle, and separating ocelloid patch from inside; terminal line black from apex of wing to vein M_1 , interrupted there by a grayish yellow spot and continued to tornus as an external, cupreous-brown edge to ocelloid patch; cilia dark brown with a slight cupreous sheen. Length of forewing, 4.5 mm. Hindwings yellowish white in basal half, dark brown outwardly; cilia brownish-white, dark towards the apex of wing, with a dark brown subbasal line.

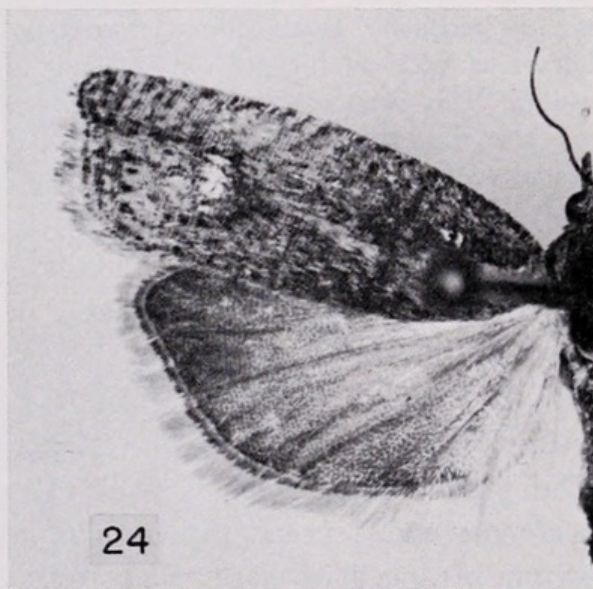
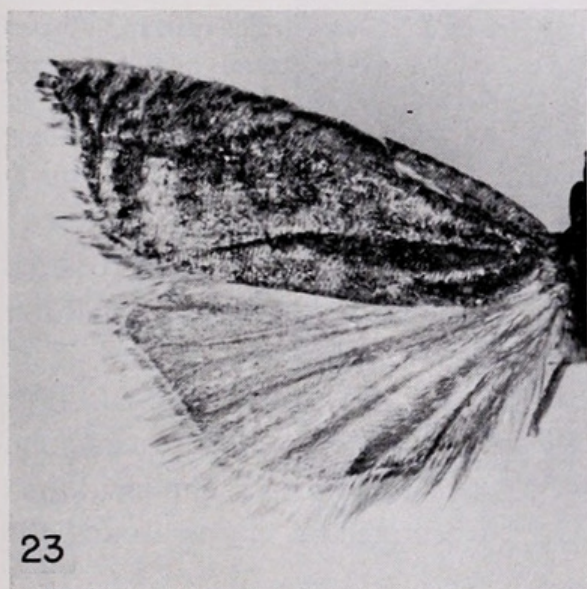
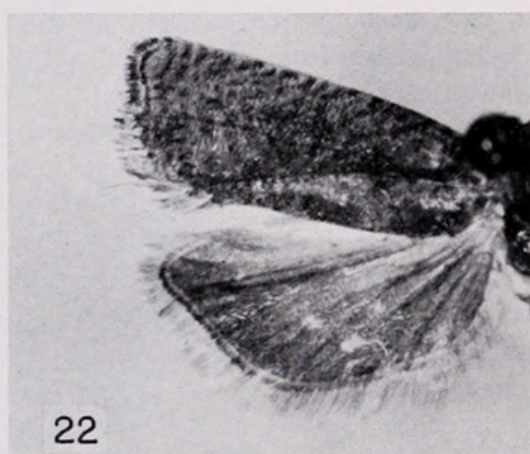
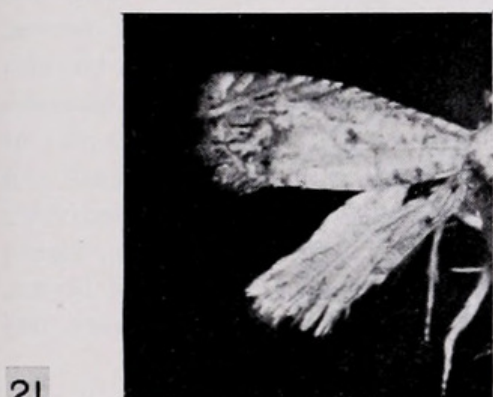
FEMALE: Similar to male, but much smaller. Length of forewing, 3.5 mm. Cilia of hind wing not darkened at apex.

MALE GENITALIA: Valva with a narrow, slightly convex cucullus; a slight, rather flat concavity of ventral edge before cucullus; the latter rotundate, well separated by this concavity and a slight concavity of costa. Aedeagus rather strong and thick; two strong, long cornuti with obtuse tips, and bases dilated from one side.

FEMALE GENITALIA: Ostium bursae wide, located at caudal edge of ventral plate; antrum slightly narrower than ostium, membranous, with a sclerotized girdle cephalad; ductus bursae as wide as adjacent portion of antrum, with a blind lateral sac at ostium. This ostium very large, round, with short sclerotized thorns, a single thorn on one side of the ostium, another similar thorn and two smaller, at the opposite side; a narrow, serrate, sclerotized plate forming caudal edge of ostium. Corpus bursae widely tubular, dilated rostrad; two thin acute thorn-shaped signa, each with a dilated and slightly sclerotized round base.

TYPES: Holotype, male (genitalia on slide No. 6657), Pusa, Bengal, February 21, 1910 (T. B. Fletcher); same allotype, female (genitalia on slide No. 6658), same data but February 23, 1910. Both specimens deposited in the British Museum (Natural History).

REMARKS: Meyrick (1920) misidentified this species for *Laspeyresia capparidana* (Zeller). However, it is larger, darker coloured and with a long dorsal spot, occupying the entire area below the discal cell of the forewings. The genitalia of the two species are distinct in the shape of the valvae, number and shape of



FIGS. 19-24. Adults. 19. **Chretienia capparidana** (Zeller), lectotype, male. 20. The same species, abdominal pouches. 21. **C. planifrontana** (Rebel), lectotype, female. 22. **Phanetoprepa strigulatana** (Kennel), female, Jándula, Jaén, IV.1933 (F. Escalera, Coll. Agenjo). 23. **P. agenjoi**, new species, holotype, male. 24. The same species, allotype, female.

cornuti, in the males, and in the width of the sclerotized girdles around the antrum, and the sculpture around the ostium, in the females.

Laspeyresia minuta, new species

Figs. 18, 27

Laspeyresia capparidana: Meyrick (nec Zeller), 1920, p. 351.

FEMALE: Antennae yellowish brown. Head olive-brown; frons smooth, with a strong golden sheen. Palpi ochreous, terminal joint brown. Thorax olive-brown, with a golden sheen; Tegulae with gray tips. Forewings pale ochreous, densely and finely striated with dark brown transverse undulate lines; base of wing with a blackish brown dorsal spot, continued obliquely outward and reaching discal cell; in middle of dorsum a whitish ochreous oblique streak, divided lengthwise towards apex by a blackish-brown line, and reaching end of cell; on both sides of upper part of this streak a blackish brown line, and a third line closing streak from the side of cell; area between this streak and tornus dark brown, finely transversely striated by pale ochreous; ocellus high, yellowish, with fine blackish lines from costa to dorsum, and two short black streaks along veins; a third, obliterate, similar streak between two mentioned streaks, more distinct on left wing; inner border of ocellus whitish, outer yellowish; eight black costal dots with yellow interspaces; fourth and sixth prolonged as blackish lines toward inner and outer border of ocellus, respectively; each of these edged externally by bluish violet plumbeous lines; terminal line fine, black; cilia dark brown, with a slight silky sheen. Length of forewing 3 mm. Hind wings brown, paler at extreme base; cilia gray, with a blackish basal line; along termen a very fine yellowish line.

MALE, unknown.

FEMALE GENITALIA: Ostium bursae wide, located at caudal edge of ventral plate; antrum slightly narrower than ostium, membranous, with a sclerotized girdle rostrad; ductus bursae as wide as the adjacent portion of antrum, with a slight lateral dilatation over ostium. This ostium very large, round, with well developed almost equal thorns, three at one side of ostium, two at the opposite side; a narrow serrate sclerotized plate forming caudal edge of ostium. Corpus bursae widely tubular, rounded rostrad; two small, somewhat blunt thorn-shaped signa, with round, slightly sclerotized bases.

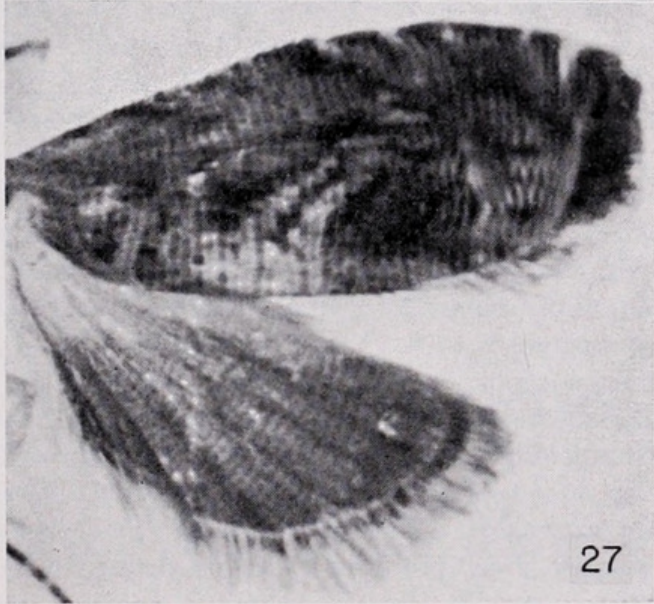
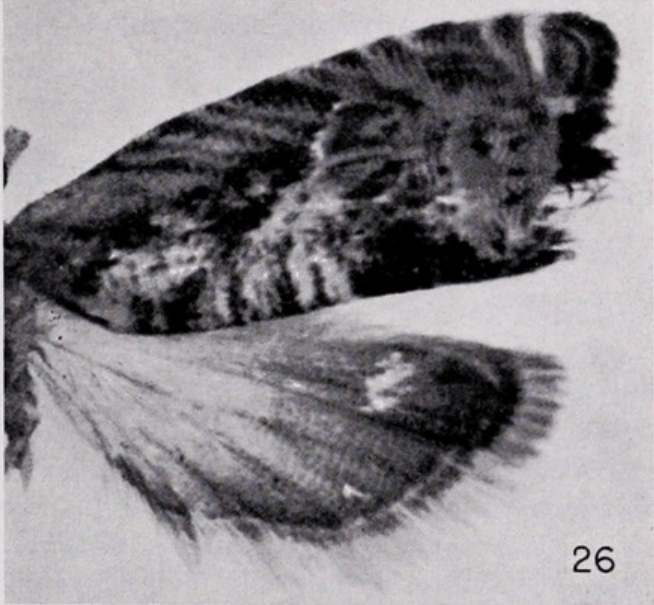
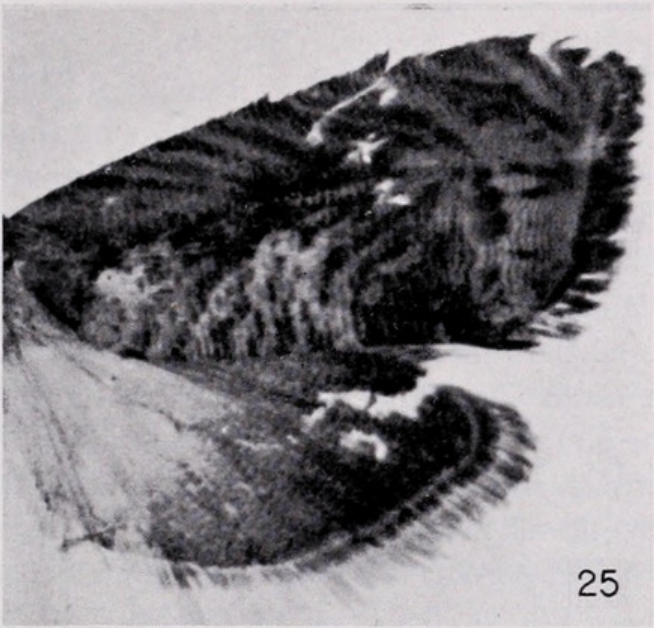
TYPE: Holotype, female (genitalia on slide No. 6660), Pusa, Bengal, bred September, 1919 (T. B. Fletcher); deposited in the British Museum (Natural History).

REMARKS: The present new species has been confounded by Meyrick (1920) with *Laspeyresia capparidana* (Zeller) with which it has nothing in common. The present species is as well externally as in the genitalia similar to *L. aeologramma* Meyrick, which, however, differs in having the thorns around the ostium arranged in three groups, each of two thorns.

Laspeyresia aeologramma Meyrick

Laspeyresia aeologramma Meyrick, 1916, p. 21. Clarke, 1955, p. 37; 1958, p. 431, pl. 214, figs. 2-2c.

FIGS. 25-27. Adults. 25. *Laspeyresia bengalica*, new species, holotype, male. 26. The same species, allotype, female. 27. *L. minuta*, new species, holotype, female.



TYPE: Holotype, female (genitalia on slide No. 7393 J.F.G.C.), Minbu, Lower Burma, August, 1915 (T. B. Fletcher) (Brit. Mus.).

The present species forms together with *L. bengalica* and *minuta*, described above, a group of species with the genitalia resembling those of the species of *Chretienia*, new genus. The male genitalia, known as yet only in *L. bengalica*, however, differ from *Chretienia* by the cucullus being somewhat more dilated and missing the specialized scales caudad from the eighth abdominal segment. The female genitalia differ from those in *Chretienia* species by a much shorter and wider antrum and the wide and very short ductus bursae, bearing a lateral sac or a dilatation caudad from the ostium. Moreover, typical of the *aeologramma* group is the presence of strong thorns around the ostium, and two thorn-shaped signa in the median portion of the corpus bursae. Signa are lacking in *Chretienia*, while the thorns in the ductus seminalis are located not around the ostium but in the dilated portion of the ductus seminalis itself.

Phanetoprepa, new genus

Figs. 11-14, 23, 24

TYPE-SPECIES: **Phanetoprepa agenjoi**, new species.

Grapholitha (in part): Kennel, 1899, p. 41. Rebel, 1901, p. 121.

Semasia (in part): Kennel, 1916, p. 515.

Epiblema (in part): Lucas, 1942, p. 125. Razowski, 1961, p. 677.

Head roughly scaled. Antennae slightly serrate in the two sexes; ciliations dense, under 1. Palpus porrect, longer than width of eye, second segment triangular, distally dilated by scales, terminal segment blunt, exposed, moderately long. Ocellus present. Proboscis developed. Thorax smooth.

Forewing elongate, moderately broad, gently curved or almost straight, apex broadly rounded, slightly produced, termen moderately oblique, straight or slightly concave. No costal fold in male. Sc gently incurved, R_1 distinctly from before middle of cell, R_2 as far from R_1 as the latter from wing base; R_3 twice as far from R_2 as from R_4 ; veins R_3 to M_1 almost equidistant, R_4 to extreme end of costa, R_5 to just below apex; upper internal vein from between R_1 and R_2 to R_5 ; lower internal vein from towards base to M_3 ; M_2 and Cu_1 almost equidistant from M_3 ; M_3 slightly curved, in its middle more distant from M_2 than at its base and end; Cu_1 curved, from angle of cell; Cu_2 from between middle and posterior third of cell; A_1 rather well developed; A_{2+3} furcate over $i/4$.

Hind wing subtrapezoidal, over 1; apex rounded. Sc gently incurved, R and M_1 separate, in basal third approximated, then diverging; M_2 close to M_3 and almost parallel; M_3 and Cu_1 stalked, from angle; Cu_2 from slightly beyond $2/3$ of cell; all anal veins developed, A_2 with a basal fork. Cubitus pectinated.

MALE GENITALIA: Tegumen simple, moderately broad, with a flat top; uncus and socii absent; gnathos band-shaped, membraneous, somewhat produced and tapering caudally. Valva elongate, bent with a distinct neck slightly before middle; costa arcuate in basal half, then incurved; cucullus broad, irregularly rounded; sacculus narrow, convex in basal portion, much narrower externally, ending with a sharp point, slightly protruding beyond edge of valva; basal opening large; processus basalis moderate, tip bulbous. Anellus rather high, broader and convex ventrally, concave laterally. Aedeagus moderately longer than

anellus, narrow and bifurcate distally, end with one blunt and another longer, narrower sharp process; no cornuti.

FEMALE GENITALIA: Papillae anales weak, elongate; apophyses posteriores longer than anteriores. Ventral plate of seventh sternite sclerotized, a transverse crescent middle part with caudal angles more or less connected with subtriangular lateral parts; lamella postvaginalis broad, with lateral angles directed rostrad. Ostium bursae wide, partly covered by lamella postvaginalis, antrum irregularly shaped, strongly sclerotized and with complicate sculptures; no separate ductus bursae. Corpus bursae more or less pear-shaped, narrower caudally, without cervix; ductus seminalis to extreme caudal part of bursa copulatrix; two conical, straight or somewhat curved signa.

REMARKS: Closely related to *Laspeyresia* Hübner and *Grapholitha* Treitschke. The male genitalia resemble those of the species of *succedana* group of the genus *Laspeyresia* and the female genitalia are rather similar to those of some species of *Grapholitha*. The position of vein M_2 in the hindwing, however, is quite different from both. Moreover, the complicated sculptures of the antrum are unique in the entire tribe Laspeyresiini. Three species are attributed to this new genus. Previously two of them were treated as members of the tribe Eucosmini; one species is new.

Phanetoprepa agenjoi, new species

Figs. 11-14, 23-24

Head and palpus smoke-gray, terminal segment of palpus black. Thorax and abdomen smoke-gray. Forewing concolorous with thorax, but actually striated by numerous fine, alternately olive-gray and pale gray, dull violet glittering lines, originating from dark costal streaks and their whitish interspaces, respectively; ocellus vertical, rather narrow, with three to five slightly elongate, black dots located one over another; inner and outer emarginations of ocellus silvery violet, duller in female; terminal line fine, black; cilia gray, paler at base. Length of forewing: male, 10 mm, female, 8 mm. Hind wing gray-brown; cilia white with a fine, gray-brown basal line.

MALE GENITALIA, as described for the genus.

FEMALE GENITALIA: Ventral plate of seventh sternite with caudolateral angles of crescent central portion connected with lateral pieces; lamella postvaginalis rounded caudally, with two acute angles. Antrum slightly curved, with a longitudinal, tubular sclerotization, followed caudally by lateral swellings and semicircles at the cephalic margin of ostium bursae. Two curved rather short signa.

Holotype, male (genitalia on slide No. A.9), Cercedilla, Province Madrid, Spain, 1481 m, July, 10, 1957 (R. Agenjo). Allotype, female (genitalia on slide No. A.13), Estepar, Province Burgos, Spain, 810 m, June 15-30 (R. Agenjo). In the collection of Mr. R. Agenjo, Madrid.

REMARKS: The new species differs from *hartigi* Lucas in having distinct colour and markings of the forewing. It is rather similar to *P. strigana* Kennel, but the latter has no violet glittering of the forewing and the silvery emargination of the ocellus is less developed. The genitalia in all the three species are distinct.

Phanetoprepa strigulatana (Kennel), new combination

Fig. 22

Grapholitha strigulatana Kennel, 1899, p. 41, pl. 1, fig. 40. Rebel, 1901, p. 121, no. 2167.

Semasia strigulatana: Kennel, 1916, p. 515, pl. 20, fig. 4.

SPECIMENS EXAMINED: Two females (genitalia of one on slide No. A.101), Jándula, Province Jaén, Spain, April, 1933 (F. Escalera). In the collection of Mr. R. Agenjo, Madrid.

DISTRIBUTION: South France, East Pyrenees; Spain; Portugal; Northwest Africa.

Phanetoprepa hartigi (Lucas), new combination

Epiblema hartigi Lucas, 1942, p. 125. Razowski, 1961, p. 677, pl. 92, fig. 26 (female genitalia).

DISTRIBUTION: East Pyrenees.

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BOOK REVIEW

Curculionidae Subfamily Apioninae of North and Central America with Reviews of the World Genera of Apioninae and World Subgenera of *Apion* Herbst (Coleoptera). David G. Kissinger. Taxonomic Publications, South Lancaster, Mass. 01561, 1968, 559 pp. Lithographed; paper bound. \$20.00.

This is a monumental study, and about one half of the book comprises the author's remarkable illustrations. Most of them are enlarged photographs (15 or more on a page) of these tiny weevils which are less than 3 mm. long. The illustrations show either the entire beetle or restricted parts, such as the head, beak, elytra, and even parts as small as the antennae and the genitalia. The details of the vestiture and punctuation are beautifully brought out. Line drawings of anatomical details, various graphs, and more than 20 distributional maps of the species in the United States and Central America are included. There is an index of host and associated plants as well as a general index. Even the size of the book is large, 8½ by 11 inches.

The text is chiefly a revision of the large genus *Apion* in North and Central America (about 300 species divided into 13 subgenera and various species groups), but also reviews the Apioninae of the world (nearly 1500 species distributed in 26 genera) with keys to the genera. The 36 subgenera of *Apion* of the world are briefly diagnosed and illustrated.

Utilizing genitalic and other structures not employed previously, Kissinger has redefined the subfamily to include two tribes, Ithycerini and Nanophyini, which were formerly considered as subfamilies of the Curculionidae. He has an excellent discussion of the structures and characters used, and their importance in this taxonomically difficult group.

The author's methods are thorough, he characterizes all categories (tribes, subtribes, genera, species groups, etc.), and he gives complete citations of types and the literature for species and genera. At the end of the book he lists the higher categories in the world fauna and all the species in North and Central America and some additional notes on the subfamily. This will be the "bible" of the Apioninae for some time to come.

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