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ASIATIC TORTRICIDÆ.

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N.B. "In deference to the wishes of the Editors I have not objected to the use of capital initials for special names derived from persons, although my preference is strongly opposed to a practice involving inconsistencies almost unavoidable."

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Augustus Duxbury

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ASIATIC TORTRICIDÆ.

BY

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ASIATIC *TORTRICIDÆ*.

By the Rt. Hon. LORD WALSINGHAM, M.A., LL.D., F.R.S.

THE *Tortricidæ* of Asia present several points of interest to the students of European *Tineina* through the great resemblance exhibited by many of their number to species with which we are already well acquainted. Although at present the amount of material available is scarcely sufficient to justify any general conclusions, it is apparent that there is in this case, as in parallel instances on both sides of the Equator, a strong tendency to what may be called bands of alliance running east and west within the range of certain degrees of latitude; and that although these bands throw out some few projections to north or south in exceptional instances, such projections are more intimately connected with the question of elevation and temperature than with that of mere geographical distribution. Through the very generous help of my friend Mr. J. H. Leech, I am in possession of valuable series of many Chinese, Japanese, Corean, and Himalayan species collected by himself and hitherto undescribed. These series he has most kindly supplemented by collections made by Mr. and Mrs. Pratt in Central China, by Mr. Pratt in Asiatic Turkey, by Mr. Manley in Japan, and by natives in China, Japan, and Asiatic Turkey. The acquisition of the collection of *Tineina* and *Pterophoridæ* made by the late Mr. H. J. S. Pryer has afforded me some insight into the extension of European and North-American as well as Asiatic continental and Malaysian forms into the Islands of Japan. The alliance of the *Tortricidæ* of Japan with those of Western Europe is perhaps even more strongly marked than that of the intermediate Asiatic species, but perhaps the larger proportion received

from the smaller area of Japan may in some degree account for an impression which further research may prove erroneous. A curious instance of structural divergence, scarcely amounting to special difference, occurs in the familiar *Olethreutes arcuella*, Clerck. The late Dr. Clemens founded the North-American genus *Exartema* on the strength of a lobe depending from the limbus in the hind wings, a character not occurring in the genus *Penthina*, Tr. (Stgr. Cat.). The Japanese specimens of *arcuella*, although identical with British examples in colour and markings, have a short lobe in the position occupied by that of *Exartema*, and a careful examination of English specimens reveals the fact that the same excrescence exists here in an aborted (or undeveloped) form: thus the Japanese *Olethreutes* closely approaches *Exartema* and tends to connect our *arcuella* with the species of that genus existing in the Western and Eastern States of America, some of which occur also in Japan.

In sending for publication a few descriptions of new Asiatic Tortricidæ, I renew the expression of my grateful thanks to my numerous correspondents.

In all cases where specimens have been purchased from Dr. Staudinger, I have adopted his or Herr Bang Haas's MS. names with a view to facilitate identification, although I had previously named the species differently in my own MS. descriptions from specimens already in my collection.

OXYGRAPHA, Hb.

n. syn.=RHACODIA, Hb.

§PERONEA, Crt.,=†OXYGRAPHA, Hb. †OXYGRAPHA, Wilk.,=RHACODIA, Hb.,=TERAS, Tr.,=*TERAS, Hein.,=*ACALLA, Meyr.

In the European lists the emargination of the costa in the fore wings is relied upon as a generic character for separating *Rhacodia*, Hb. (=Teras, Tr.) from *Teras, Hein., &c. Prof. Fernald in his Catalogue of North-American Tortricidæ (1882) included both forms in *Teras*, Tr., evidently regarding the amount of excavation as only a special character. If any doubt existed as to the correctness of Prof. Fernald's action, full justification will be found among the species now described, some of which are intermediate between *Rhacodia*, Hb., and *Teras*, Hein., and might be referred to either.

649 (1). *Oxygrapha quadridentana*, sp. n.

Antennæ dull fawn-grey. [*Palpi* missing.] *Head* pale fawn-colour. *Thorax* reddish fawn-colour, posteriorly paler. *Fore wings* reddish green; the convexity on the costa adorned with four conspicuous teeth or tufts of scales, the first and

largest immediately before the middle of the costa, the second and smallest immediately after the middle, the third on vein 10, and the fourth at the end of vein 9 where the wing is bent down to the pointed and depressed apex; the spaces between these teeth, especially on each side of the second tooth, are narrowly clear white, which is also indicated on the underside; the whole surface of the wing is striated with narrow lines of slightly raised fuscous scales, of which the most conspicuous are four—the first from the costa at one-fifth from the base running obliquely outwards to the fold, the second at two-fifths from the base bulging obliquely outwards and reaching the dorsum a little beyond the middle, the third from the second tooth to the tornus, the fourth a short one enclosing the angular apex, these are all more or less interrupted and irregular; cilia reddish fawn, tipped with whitish ochreous above and below the apex, and slightly shaded with ochreous along the tornus. *Exp. al.* 20 mm. *Hind wings* brownish grey; cilia the same colour, but paler at their ends and having a narrow subochreous line running along their base. *Abdomen* grey. *Legs* pale whitish ochreous.

Type, ♀ (60192) Mus. Wlsm.

Hab. CHINA—Chang Yang (Ichang), 4000–6000 feet (Pratt). Unique.

649 (2). *Oxygrapha cærulescens*, sp. n.

Antennæ pale cinereous. *Palpi* greyish brown externally, pale cinereous internally. *Head* pale cinereous. *Thorax* bluish grey. *Fore wings* shining blue-grey, with four transverse lines of greyish brown, containing a few raised brown scales distributed along them; the costa is marked at the depression with a conspicuous creamy white patch preceded and followed by chestnut-brown, and a little beyond it is a second smaller patch of creamy white; the four greyish brown bands are situated thus:—one from near the base running obliquely to the fold and crossing it to the dorsum, this band contains a strong spot of raised chestnut-brown scales below the fold; the second from the anterior margin of the first costal patch, curving obliquely outwards and reaching the dorsum beyond the middle, contains three spots of raised chestnut-brown scales above the fold; the third, from the chestnut patch between the two pale costal patches, runs to the dorsum before the tornus and contains some raised chestnut-brown scales above the middle of the wing; the fourth before the termen, approaches it about the middle but runs parallel to it towards the tornus; cilia pale cinereous beyond the brown

line along their base except at the tornus. The pale costal patches are both visible on the underside. *Exp. al.* 24 mm. *Hind wings* greyish brown; cilia slightly paler. *Abdomen* greyish brown. *Legs* pale cinereous.

Type, ♀ (70290) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886). Unique.

If held in certain lights the shining blue-grey of the fore wings can be made to appear entirely greyish brown.

649 (3). *Oxygrapha paradiseana*, sp. n.

[*Teras paradiseana*, Stgr. List, XXXVI. (1892-3) MS.]

Antennæ cinereous. *Palpi*, *head*, and *thorax* pale yellowish green; the last with a greyish sheen. *Fore wings* with the costa abruptly rounded at the base, thence sinuate nearly to the apex, termen excavate beneath the falcate apex; with oblique alternate bands of pale yellowish green and pale shining leaden grey (giving a general pale olive appearance); a large bright golden yellow tornal patch, slightly reticulated with reddish fuscous, is diffused inwardly along the dorsum, where it blends with and almost obliterates the green bands, this contains a large triangular purplish fuscous blotch at about three-fourths from the base; the base is pale grey; the first green band from near the base crosses the fold obliquely outwards; the second, from before the depression of the costa, is dilated obliquely as far as the apex of the purplish fuscous triangle; the third and fourth green bands go to the upper edge of the bright golden yellow patch, the upper margin of which is straightly bounded by vein 6; the extreme apex of the wing is shining leaden grey, having a dark fuscous reflection in certain lights; the cilia, which are well developed on the costa before the depression are up to that point greyish brown, for the remainder of the costa creamy whitish, at the apex bright chestnut, and below the apex along the termen nearly to the tornus white, with a strong bright ferruginous line along their base, at and about the tornus they are bright golden yellow with a ferruginous tinge. On the underside the costa is whitish and the terminal cilia distinctly white. *Exp. al.* 22-23 mm. *Hind wings* reddish brown; cilia pale cinereous, inclining to whitish along the termen, a greyish brown shade near their base. *Abdomen* reddish brown, anal tuft paler. *Legs* shining creamy white.

Type, ♀ (60193); ♂ (5067) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886); *Yesso*—Hakodate, VIII. 1886 (*Leech*). AMUR (one specimen received from Staudinger). Five specimens.

649 (4). *Oxygrapha delicatana*, Chr.

Teras delicatana, Chr. Bull. Soc. Imp. Nat. Mosc. LVI. 60-1. No. 96 (1881)¹: *sep.* 148-9 (1882)¹.

Hab. AMUR—Wladiwostok¹, VII.—VIII.¹ JAPAN—HONDO—Oiwake (Pryer, 1885).

650. *Oxygrapha cristana*, Schiff.

Teras cristana, Stgr. & Wk. Cat. Lp. Eur. 232. No. 650 (1871).

Hab. EUROPE. JAPAN—HONDO—Oiwake (Pryer, 1885).

650 (1). *Oxygrapha tunicatana*, sp. n.

Antennæ greyish cinerous, paler beneath. *Palpi* greyish fuscous, very pale ochreous beneath. *Head* and *thorax* dark purplish fuscous. *Fore wings* rather narrow; dark purple, or purplish fuscous, with scattered groups of raised scales, the largest and most conspicuous crossing the middle of the fold, with a few greyish cinereous scales at its outer end and a small group of detached similar scales above it; the costa strongly fringed before the middle with mixed purplish fuscous and greyish cinereous scales, giving it a more than naturally depressed appearance; at and beyond the middle of the costa are some groups of greyish cinereous scales, and from the tornus to the apex a large patch of greyish cinereous extends widely to above the middle of the wing and narrowly to the costa before the apex, this patch is strongly mixed with rich brown scales, the lines of the veins running through it being slightly indicated; cilia chestnut-brown, tipped with pale cinereous, a reduplicated pale cinereous line along their basal half, a small purplish grey dot at the tip of the apical cilia, with a slightly paler one below it. *Underside* with the costa streaked obliquely with pale cinereous and fuscous alternately. *Exp. al.* 22 mm. *Hind wings* pale, shining, whitish grey, tinged with very pale cinereous towards the apex; cilia very pale cinereous. *Abdomen* pale cinereous. *Legs* whitish ochreous, hind tarsal joints shaded above with bands of grey.

Type, ♂ (60195) Mus. Wlsm.

Hab. JAPAN—Ikao (Leech, 1886); HONDO—Oiwake, X. 1886 (Leech). Two specimens.

This is probably a variable species: the specimen from Oiwake is almost certainly a variety in which the dark purplish fuscous colour is confined to a dark basal patch, and having a roseate suffusion over the middle of the wing extending to the tornus; the raised tufts are in the same position as in the type.

653 (1). *Oxygrapha hispidana*, Chr.

Teras hispidana, Chr. Bull. Soc. Imp. Nat. Mosc. LVI. 61-2. No. 97 (1881)¹; *sep.* 149-50 (1882)¹.

Hab. AMUR—Radeffka¹, Nikolsk¹, Wladiwostok¹, IV.-V.¹
JAPAN—YESSO (Pryer, 1882); HONDO—Yokohama (Manley, 1888).

The characters by which Christoph distinguishes this species from *abietana*, Hb., and *hastiana*, L., are certainly recognizable; the species is, however, extremely variable, and had it not been for the careful manner in which the differences are described I should have hesitated to separate it from *abietana*.

660 (1). *Oxygrapha japonica*, sp. n.

Antennæ cinereous. *Palpi*, *head*, and *thorax* white, the last with a strong conical crest above posteriorly. *Fore wings* very clear white to beyond the middle, with two small greyish spots on the costa; three strong raised tufts of clear white raised scales about the fold, two before the middle, on each side of it, and one on the fold beyond the middle; a minute coal-black spot near the base of the dorsum; the outer edge of the white part of the wing runs obliquely outwards from the costa to the dorsum, and beyond it the apical portion of the wing is bright ferruginous mixed with chocolate-brown and fuscous scales, with some spots and streaks of shining metallic leaden grey and some raised tufts of brown scales; a whitish spot on the costa before the apex; cilia cinereous, tinged with brown, especially towards the apex, and with a slender pale line along their base. *Exp. al.* 15-16 mm. *Hind wings* pale cinereous; cilia slightly paler, with a slender subochreous line running along their base. *Abdomen* cinereous. *Legs* very pale cinereous, hind tarsal joints faintly spotted.

Type, ♀ (70301); ♂ (70302) Mus. Wlsm.

Hab. JAPAN—HONDO—Oiwake (Pryer, 1885). Five specimens.

This species is allied to *Boscana*, F., *variiegana*, Schiff., &c., &c., but it has the thoracic tuft and raised scales more conspicuous.

660 (2). *Oxygrapha undulana*, sp. n.

[=*Teras undulana*, Bang Haas, in Stgr. List, XLII. 23 (1898-9) MS.]

a. undulana + *undulana*, n. var.

Antennæ greyish fuscous. *Palpi* short, the terminal joint

almost concealed; pale cinereous, shaded with fuscous externally. *Head* pale cinereous. *Thorax* pale greyish cinereous. *Fore wings* pale greyish cinereous, with greyish fuscous transverse shading; several spots of raised scales accompany a faint ill-defined shade at about one-fourth, being conspicuous immediately above and below the fold, other groups accompanying a rather more visible oblique shade about the middle, of these the strongest are on the cell and just below the fold; the shading on the terminal and apical area converges on the termen above the tornus (in some specimens there are short blackish dashes, one below the costa before the middle, one above the fold before its middle, and another from the cell to the middle of the termen); cilia pale greyish fuscous, with tawny reflections, a darker shade running along their base. *Exp. al.* 12-14 mm. *Hind wings* brownish grey, darkening towards the apex and termen; a dark dividing line near the base of the brownish grey cilia. *Abdomen* pale cinereous, with some pale fuscous shading. *Legs* pale cinereous, the tarsi spotted with fuscous.

Type, ♂ (7281) Mus. Wlsm.

Hab. ASIATIC TURKEY—*HALEB*—Shar Devesy (*Native Coll.* 1893); Zeitun (received from *Staudinger*). Six specimens.

β. undulana + coprana, n. var.

In one variety a large snow-white basal patch appears, reaching further along the costa than along the dorsum, its outer extremity marked by a patch of raised black scales on the cell. The tegulæ of this specimen are also snow-white; in other respects it presents no appreciable difference from the typical form, indeed on the outer two-thirds of the wing, with the exception of a few scattered white scales, the position and extent of the shading is precisely similar to that of the others. *Exp. al.* 14 mm.

Type, ♂ (61557) Mus. Wlsm.

Hab. ASIATIC TURKEY—*HALEB*—Shar Devesy (*Native Coll.* 1893). Unique.

662 (= 663). *Oxygrapha Boscana*, F.*

I. *Teras Boscana*, Stgr. & Wk. Cat. Lp. Eur. 233. No. 662 (1871).

II. *Teras parisiana*, Stgr. & Wk. Cat. Lp. Eur. 233. No. 663 (1871).

Teras scabrana, Fern. Tr. Am. Ent. Soc. X. 5. No. 5 (1882).

Hab. EUROPE. UNITED STATES. JAPAN—*HONDO*—*Oi-wake* (*Pryer*, 1885).

* In deference to the wishes of the Editors I have not objected to the use of capital initials for special names derived from persons, although my preference is strongly opposed to a practice involving inconsistencies almost unavoidable.—WLSM.

A single specimen of brood I. from Oiwake.

Prof. Fernald records brood II. from New York and Pennsylvania, and suggests that *trisignana*, Rbsn., may be identical with brood I. In Staudinger and Wocke's 'Catalog' the name *parisiana*, Gn., is adopted for brood II., while Prof. Fernald designates this brood *scabrana*, Crt. Curtis referred Fabricius's *Pyralis scabrana* to the genus *Leptogramma*, and Stephens referred the same name to the genus *Acleris*. Neither of these authors published a new species as *scabrana*, and as their names are now regarded as "erroneous in adoption," they cannot be accepted as valid.

Leptogramma parisiana, Gn. (1845), must sink as a synonym of *Glyphiptera ulmana*, Dp. (1834), the validity of which is in no way affected by the earlier *Tortrix* (*Eudemis*) *ulmana*, Hb. Should it be desirable to refer to the second brood under a varietal name it should be called *Boscana*, F. [II. *ulmana*, Dp.].

(663). *Oxygrapha nivisellana*, Wlsm.

Teras nivisellana, Wlsm. Ill. Lp. Het. B. M. IV. 2, Pl. LXI. 3 (1879)¹;
Fern. Tr. Am. Ent. Soc. X. 8. No. 16 (1882)².

Hab. UNITED STATES—Maine², New York², California¹, Oregon¹, V.¹, VIII.¹ JAPAN—*KIUSIU* (two specimens received from Mr. J. H. Leech).

664. *Oxygrapha literana*, L.

Teras literana, Stgr. & Wk. Cat. Lp. Eur. 233-4. No. 664 (1871).

γ. *literana*, L. + *squamana*, F.

Hab. EUROPE. ASIATIC TURKEY—*HALEB*—Shar Devesy (Native Coll.).

670 (1). *Oxygrapha albiscapulana*, Chr.

Teras albiscapulana, Chr. Bull. Soc. Imp. Nat. Mosc. LVI. 63-4. No. 98 (1881)¹: sep. 151-2 (1882)¹.

Hab. AMUR—Wladiwostok¹, V.¹ COREA—Gensan (Leech, 1886).

A single specimen, which appears to be a dark variety of this species, distinguished from others of the genus by the distinct division of the tegulæ into a dark anterior and a pale posterior half; in the specimen before me the paler portion cannot be called clear white, as in the original description, but I am not acquainted with any other species possessing the same peculiarity, and in a genus so variable I cannot venture to describe it as distinct without access to the type or some further reliable evidence.

676 (2). *Oxygrapha Pryerana*, sp. n.

Antennæ, *palpi*, and *head* varying from greyish brown to pale ochreous; *palpi* short, with the terminal joint scarcely exposed. *Thorax* pale brownish grey or whitish ochreous. *Fore wings* pale brownish grey or whitish ochreous, with a red-brown or grey-brown triangular costal patch, on which the costa is perceptibly depressed; this patch is often mottled with fuscous, the pale ground-colour of the wing sometimes showing on its upperside; several small flecks of slightly raised blackish scales are scattered about the wing-surface, especially at the basal fourth and about the apex of the costal triangle, and there are also some blackish dots on the apical fourth; the costal patch is generally mottled with greyish fuscous; *cilia* pale reddish brown, ochreous, or whitish ochreous, sometimes with a slight shade along their middle. The underside shows some mottling on the costa. *Exp. al.* 17-18 mm. *Hind wings* very pale brownish grey; *cilia* shining white, with a grey line running through them near their base. Underside freely reticulated along the costa and towards the apex. *Abdomen* dark grey; anal tuft whitish ochreous. *Legs* whitish ochreous, hind tarsal joints slightly spotted above.

Type, ♀ (70328); ♂ (70329) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886); HONDO—Yokohama (*Manley*, 1888). Twenty-two specimens.

A variable species nearly allied to *ferrugana*, Tr., but differing chiefly in the perceptibly depressed costa, which in the western species is straight; the raised scales are also more perceptible in *Pryerana*.

679 (1). *Oxygrapha platynotana*, sp. n. ✓

Antennæ greyish cinereous, basal joint chestnut. *Palpi* short, terminal joint scarcely showing beyond the densely clothed median joint; chestnut. *Head* and *thorax* chestnut. *Fore wings* shining chestnut, inconspicuously spotted and striated with slender lines of pale whitish ochreous, enclosing pale streaks and spots of the ground-colour; these are especially visible along the dorsum and on the basal third about the middle of the wing; two distinct, straight, slender, oblique lines cross the wing, pointing outwards from the costa to the dorsum; the first leaving the costa at one-third from the base reaches the dorsum at nearly two-thirds from the base, and is very slightly sinuated outwards at about its middle; the second from the costa at nearly two-thirds from the base,

runs straight to the tornus; these lines are pale whitish ochreous, and the chestnut ground-colour of the wing is slightly intensified immediately adjacent to their outer margins; cilia chestnut, with a slender whitish-ochreous line along their base and another before their middle, they are also tipped with whitish ochreous. *Exp. al.* 22 mm. *Hind wings* grey; cilia scarcely paler. *Abdomen* grey; anal tuft very pale brownish. *Legs* pale whitish ochreous.

Type, ♂ (60196) Mus. Wlsm.

Hab. JAPAN—Ikao (*Leech*, 1886). Unique.

A peculiar and distinct species, in which the two transverse lines, shaded on their outer margins, present the appearance of raised streaks and at first sight recall to mind the American genus *Platynota*, Clem., which, however, differs in neuration.

680 (1). *Oxygrapha affinitana*, Snell.

Teras affinitana, Snell. Tijds. v. Ent. XXVI. 185-7, Pl. XI. 2, 2 a (1883)¹.

Antennæ greyish fawn. *Palpi* short, terminal joint projecting but little beyond the densely clothed median joint; brownish ochreous, slightly paler than the head. *Head* and *thorax* brownish ochreous; face slightly paler. *Fore wings* bright brownish ochreous, with a faint roseate sheen, interrupted by straggling lines of raised brownish ochreous scale-spots (to the number of 12 or 13), the majority of these are on the apical half of the wing; cilia pale brownish ochreous. *Exp. al.* 15 mm. *Hind wings* brownish grey; cilia pale cinereous, with a slender ochreous line at their base, followed by a narrow brownish grey shade. *Abdomen* brownish ochreous. *Legs* very pale whitish ochreous.

Hab. N. ASIA—Chingan-gebergte¹, VII.¹ JAPAN (*Pryer*, 1886); *Krusiv*—Nagasaki, VI. 1886 (*Leech*).

683 (1). *Oxygrapha fuscotogata*, sp. n.

Antennæ cinereous. *Palpi* short, terminal joint exposed; reddish ochreous. *Head* pale yellowish ochreous above, tinged with reddish brown at the sides. *Thorax* mixed yellowish ochreous and reddish brown. *Fore wings* bright yellow-ochreous on the basal half, reddish brown beyond, much reticulated and striated throughout; on the pale basal portion of the wing is a brown patch at the base of the costa, showing a dark leaden grey sheen in some lights; a reddish brown angulated slender line runs from the end of this patch obliquely outwards nearly to the fold, whence it is bent back

to the dorsum, the reticulations on this part of the wing are reddish brown; from the apical half of the wing the darker colouring encroaches upon the basal half along the costa, and from its origin a slender line of mixed blackish and reddish scales divides the darker from the paler half; beyond this line a dark leaden grey suffusion extends from near the costa to the dorsum, a narrower suffused fasciaform band running parallel to it after a second line of blackish scales on the brown ground-colour; again beyond this on the brown ground-colour is a third line of blackish scales running from the costa at two-thirds obliquely outwards and bent down to the tornus; a third curved dark leaden grey band crosses the wing before the apex, and the apex itself is of the same colour preceded by reddish brown; the extreme costa on the outer half is narrowly pale ochreous; cilia dark leaden grey tipped with whitish ochreous, except at the tornus; the leaden-grey bands are slightly glossy in certain lights. Underside pale brownish fuscous, the costa and outer half of the cilia on the termen very pale ochreous. *Exp. al.* 14–15 mm. *Hind wings* brownish fuscous; cilia very pale cinereous, with a darker shade running through them before their middle. *Abdomen* brownish fuscous. *Legs* ochreous, smeared and barred with fuscous.

Type, ♂ (70305) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886). Two specimens.

This species is allied to *reticulata*, Ström, but is somewhat smaller and more distinctly divided into two colours on the fore wing, and, moreover, the hind wings are very decidedly darker than in that species.

ARCHIPS, Hb.

= *CACÆCIA*, Hb., = *PTYCHOLOMA*, Stph., = *LOZOTENIA*, Stph.

684 (1). *Archips*? *longicellanus*, sp. n.

Antennæ, ♂ slightly pubescent; brownish cinereous. *Palpi* rather slender, closely appressed to the face, terminal joint short, exposed; cinereous brown. *Head* cinereous brown, rather densely clothed above. *Thorax* rather robust; cinereous brown, clouded with greyish fuscous posteriorly. *Fore wings*, ♂ with a long costal fold, abruptly terminated at some distance from the base; cinereous brown; a large basal patch, enclosed on its outer edge by a slender greyish ochreous line, is wider on the dorsum than on the costa, and is mottled with reddish brown, it has also a strong patch of greyish fuscous scales on the dorsum near the tornus; a

transverse fascia from the middle of the costa to the tornus is bounded on its inner edge by a narrow greyish ochreous line, and is much mottled with reddish brown, it has also a few fuscous scales at its upper end about the edge of the costal fold, and others at its lower extremity adjacent to the tornus; a subapical patch of the same colour is diffused with some slender streaks along the termen; between the basal patch and the central fascia the wing is much shaded with greyish fuscous scales, and the outer edge of the fascia itself is scarcely defined, almost blending with the general colour of the wing-surface; indeed, the markings throughout are not very conspicuous; cilia pale shining cinereous, tinged with brownish towards the apex. *Exp. al.* ♂ 22-25, ♀ 23-29 mm. *Hind wings* brownish fuscous; cilia shining whitish. *Abdomen* rather robust, brownish fuscous. *Legs* whitish ochreous.

Type, ♂ (70384); ♀ (70385) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886). HONDO—Yokohama (*Manley*, 1888). CHINA—Chang Yang, 4000-6000 feet (*Pratt*, 1886). Twenty specimens.

The female has the wings much more elongate than the male, the apex produced, the termen concave below the apex and bulging in the middle; the costa is much arched as in the usual forms of *Archips*, which the male also strongly resembles. The neururation agrees with that of *Archips* in having all the veins separate in the fore wings; the neururation of the hind wings is also similar; but it differs from all species with which I am acquainted in its unusually long discal cell in the fore wings, which reaches to four-fifths the wing-length; the discal veins are therefore very short, vein 3 from near the lower angle of the cell being much recurved, a difference which might well be regarded of generic value. The cell in the female is scarcely, if at all, longer than in the ordinary forms of *Archips*, but vein 3 arises rather nearer to vein 4 than is usual.

685 (1). *Archips similis*, Btl. ✓

Cacæcia similis, Btl. Ill. Typ. Lp. Het. B. M. III. 79, Pl. LX. 4 (1879)¹.

Hab. COREA—Fusan, 24. VI. 1886 (*Leech*). JAPAN—HONDO—Yokohama¹; Oiwake, VI.-VII. 1887 (*Pryer*).

Extremely nearly allied to, if not identical with, *piceanus*, L.; it is distinguished only by its larger size and brighter coloration. This is probably the species recorded in Staudinger and Wocke's 'Catalog' (235. No. 685) as *piceana*, L., from East Siberia.

685 (2). *Archips ingentanus*, Chr. ✓

n. syn. = *subrufana*, Snell.

Tortrix ingentana, Chr. Bull. Soc. Imp. Nat. Mosc. LVI. 64-6. No. 99 (1881)¹; *sep.* 152-4 (1882)¹. *Tortrix subrufana*, Snell. Tijds. v. Ent. XXVI. 187-9, Pl. XI. 3, 3 a (1883)².

Hab. AMUR—Askold¹; Suifun²; Wladiwostok, VII.¹ COREA—Gensan, VI. 1886 (*Leech*). CHINA—Chang Yang (*Pratt*); Che-tou; Omei-shan, VI.-VII.; Pantze Fang, VI.-VII. JAPAN—YESSO (*Pryer*, 1882); Hakodate, VIII. 1886 (*Leech*). HONDO—Fushiki, VII. 1887 (*Leech*); Oiwake (*Pryer*, 1885); Tsuruga, VII. 1886 (*Leech*); Yokohama (*Manley*, 1888). KASHMIR—Scinde Valley, 7000 feet, VI. 1887 (*Leech*).

This species appears to vary considerably in size and in the extension of the markings, as also in the amount of shading and of yellowish colouring in the hind wings, but it never possesses a tuft of darkened scales on the costa before the apex of the hind wings in the female; thus it is allied to *podanus*, Sc., rather than to *decretanus*, Tr.

686 (1). *Archips asiaticus*, sp. n. ✓

Antennæ smoky greyish. *Palpi* short, closely appressed to the face; greyish ferruginous. *Head* and *thorax* smoky greyish. *Fore wings*, ♂ with the costal fold somewhat wider and more strongly developed than in the European *podanus*, Sc.; tawny reddish, with a triangular streak from the base of the dorsum pointing obliquely outwards and terminating in a patch of blackish scales on the upper edge of the fold, the base of the triangle being developed into a projecting tuft on the flexus; a large costal patch of a darker shade than the ground-colour, and having a somewhat purplish hue, spreads downward to the fold, covering almost the entire middle third of the wing, its inner edge narrowly pale-margined at the apex (which is somewhat more strongly falcate than in *podanus*), the costa being much depressed before it; a streak of blackish scales runs downward along the upper third of the termen, and within it is a second group of similar scales blending with a tawny shade which is continued along the lower half of the termen to the tornus; cilia tawny reddish, tipped at the apex with black, paler at the tornus. Under-side brownish ferruginous on the costal fold, with a greyish shade along the dorsum, the apical third of the wing bright orange-ochreous, without reticulations. ♀ with the costa deeply impressed on the outer half, the termen strongly sinuate beneath the produced apex; tawny, with a strong

vinous or purplish tinge, with three or more oblique transverse lines, the first two running outward from the costa before the middle, the first evenly convex, the second almost straight as far as the fold, thence bent back to the dorsum; another before the apex reaches the termen above the tornus; an elongate ferruginous costal patch lies along the depressed portion of the costa, a purplish fuscous patch on the dorsum, within the first transverse line, and an apical streak of mixed blackish and ferruginous scales from the apex reaches halfway down the termen; cilia tawny, blackish at the apex, touched with ferruginous below it, paler at the tornus. Underside pale ochreous, shading to rich orange-ochreous on the apical third, without reticulations. *Exp. al.* ♂ 20—♀ 26 mm. *Hind wings*, ♂ reddish ochreous on the upper half, smoky greyish on the lower half, the cilia corresponding in colour: underside corresponding to the fore wings in its different shades of colouring, but without the brown streak at the base of the costa, also without reticulations. ♀ orange-ochreous, the costa whitish ochreous, without a projecting tuft of scales, within vein 1c shaded with greyish, cilia corresponding: underside pale ochreous, shading to rich orange-ochreous on the apical third, without reticulations. *Abdomen*, ♂ smoky greyish, anal tuft with an ochreous tinge; ♀ greyish at the base, touched with orange-ochreous posteriorly. *Legs* ochreous.

Type, ♂ (60403); ♀ (60404) Mus. Wlsm.

Hab. COREA—Gensan, VI. 1886 (*Leech*), VII.—IX. 1887 (*Ito*). Eight specimens.

This species differs from *podanus*, Sc., in the male having a larger costal fold, in the absence of reticulation, and in the much brighter orange-ochreous colour of the wing; also on the upperside in the somewhat more diffused and ill-defined pattern of the markings.

689. *Archips crateganus*, Hb. ✓

Tortrix (*Cacæcia*) *crategana*, Stgr. & Wk. Cat. Eur. 235. No. 689 (1871).

Hab. EUROPE. JAPAN—HONDO—Oiwake (*Pryer*, 1885); Yokohama (*Manley*, 1888). W. CHINA—Omei Shan, VI.—VII.

One specimen from Oiwake (♂, 70398 Mus. Wlsm.) has the neuration abnormal. In the left fore wing veins 7 and 8 are stalked and 6 separate, while in the right wing 6 and 7 are stalked and 8 is separate.

691 (1). *Archips breviplicanus*, sp. n.

Antennæ cinereous. *Palpi* short; reddish ochreous. *Head* dull reddish ochreous. *Thorax* greyish fuscous above, touched with reddish at the sides. *Fore wings* rather straight, with a very short costal fold at the base, termen straight, slightly concave below the apex, tornus rounded; reddish ochreous, with a reddish fuscous patch near the base of the dorsum, a large reddish fuscous patch from beneath the costa at one-third, widened and diffused outwards on the middle of the wing, and thence more or less connected with a paler reddish fuscous patch beyond the middle of the costa, which does not reach the dorsum, except by a narrow line at its inner edge; the pale ground-colour of the wing is reticulated with irregular waved reddish fuscous striæ; a small reddish brown spot at the extreme apex, and the costal fold is also reddish brown; cilia reddish brown, pale cinereous at the tornus. *Exp. al.* 17 mm. *Hind wings* yellowish ochreous, shaded with greyish fuscous on their inner half and having a bright red-brown gloss at the apex; cilia pale cinereous. *Abdomen* pale cinereous, with a slight ochreous tinge. *Legs* whitish ochreous.

Type, ♂ (60426) Mus. Wlsm.

Hab. COREA—Gensan (Ito, 1887). Unique.

This species is distinguished by its short costal fold and narrower wings from *ingentanus*, Chr., some varieties of which it slightly resembles in general appearance.

692. *Archips sorbianus*, Hb. ✓

Tortrix (*Cacæcia*) *sorbiana*, Stgr. & Wk. Cat. Lp. Eur. No. 692 (1871).

Hab. EUROPE—ASIATIC TURKEY—HALEB—Shar Devesy 13-14, VI. 1890 (*Native Coll.*).

692 (1). *Archips adumbratanus*, sp. n.

Antennæ brownish fuscous. *Palpi* recurved, not closely appressed to the head, somewhat roughly clothed on the median joint, terminal joint exposed; brownish fuscous externally, pale cinereous on their inner sides. *Head* brownish cinereous. *Thorax* dark greyish brown. *Fore wings*, ♂ with a rather long and very narrow costal fold, scarcely reaching to the base; greyish brown, with a slight rufous tinge in some lights; a basal patch, central fascia, and apical patch dark greyish brown, inclining to reddish brown, and more or less defined by reddish brown streaks along their

margins; the basal patch is wider on the dorsum than on the costa, the central fascia is oblique from the middle of the costa to the dorsum before the tornus, the apical patch, beginning on the costa at two-thirds from the base, is diffused along the termen and is accompanied by some dark brown streaks nearly to the tornus; between these markings the wings have a decidedly greyish tinge accompanied by a slight reddish or vinous gloss; cilia greyish brown. *Exp. al.* ♂ 26, ♀ 34 mm. *Hind wings* brownish fuscous; cilia pale cinereous. *Abdomen* brownish fuscous, anal tuft cinereous. *Legs* pale cinereous.

Type, ♂ (70396); ♀ (70393) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886). Two specimens.

The female is much larger than the male, it has a rather more ochreous tinge, and there is some reddish ochreous about the apex of the hind wings.

692 (2). *Archips Lafauryanus*, Rag.

Tortrix Lafauryana, Rag. Bull. Soc. Ent. Fr. 1875, lxxii; Ann. Soc. Ent. Fr. XLV. (5 s. VI.: 1876) 403-5 (1876), pl. VI. 2 (1877).

Hab. EUROPE—France, England. COREA—Gensan (*Ito*, 1889).

Eleven specimens, which I cannot separate from this species, have the same characteristic costal fold, and the somewhat faintly indicated markings are placed in precisely similar positions to those of the European species. The Korean specimens are somewhat larger, and of a generally lighter colour, but I see no sufficient distinction to justify me in describing it as a separate species.

692 (3). *Archips liratana*, Chr.

Tortrix liratana, Chr. Bull. Soc. Imp. Nat. Mosc. LVI. 68-9. No. 102 (1881)¹: *sep.* 156-7 (1882)¹.

Hab. AMUR—Askold¹. COREA—Fusan, 24, VI. 1886 (*Leech*); Gensan (*Ito*, 1887). JAPAN (*Pryer*, 1886). HONDO—Tsuruga, VII. 1886 (*Leech*). KUSIV—Satsuma, V. 1886 (*Leech*).

693. *Archips semialbanus*, Gn.

Tortrix (Cacæcia) semialbana, Stgr. & Wk. Cat. Lp. Eur. 236. No. 693 (1871)¹. *Cacæcia semialbana*, Swinh. & Cotes, Cat. Moths Ind. 695. No. 4740 (1889)².

Hab. Europe¹. COREA—Gensan, VI. 1886 (*Leech*).

CHINA—Chang Yang (*Pratt*). KASHMIR—Dras Ladak, 7000 feet, 20 VI. 1887 (*Leech*); Scinde Valley, 7000 feet, VI. 1887 (*Leech*); Goorais Valley, 7000 feet, VIII. 1887 (*Leech*). PUNJAB—Dharmasala (*Hocking*). NEPAL—Dana, VI. 1888 (*McArthur*). SOLUN². SIKKIM².

703 (1). *Archips circumclusanus*, Chr.

Tortrix circumclusana, Chr. Bull. Soc. Imp. Nat. Mosc. LVI. 66-7. No. 100 (1881)¹: *sep.* 154-5 (1882)¹.

Hab. AMUR—Wladiwostok, VI.¹ JAPAN—Yesso (*Pryer*, 1882).

704 (2). *Archips fuscocupreanus*, sp. n.

Antennæ dark brown. *Palpi* ochreous brown. *Head* umber-brown. *Thorax* dark umber-brown, with a slight purplish tinge. *Fore wings* dark umber-brown, with a cupreous gloss between the dark reddish brown basal patch and the oblique central fascia, of the same colour, which runs from before the middle of the costa to near the tornus; the basal patch is rounded on the termen about the middle of the wing and dilated outwards on the dorsum, it is partly overspread with purplish and is margined externally by a slender brownish ochreous line; the central fascia is also dilated outwardly below the middle and is margined on its inner side by a narrow waved pale brownish ochreous line; before the apex of the wing is a third fasciaform patch of dark brown; cilia purplish cinereous. *Exp. al.* ♂ 18, ♀ 20 mm. *Hind wings* dark brown; cilia shading to pale brownish cinereous. *Abdomen* umber-brown, anal tuft brownish cinereous. *Legs* whitish ochreous.

Type, ♂ (60178); ♀ (60086) Mus. Wlsm.

Hab. JAPAN—Kiusiu—Satsuma, V. 1886 (*Leech*). Six specimens.

The female is paler than the male, the ground-colour inclining to cinereous, but with a reddish gloss, decidedly paler than the purplish tint of the male.

705 (2). *Archips imitator*, sp. n.

Antennæ, ♂ ciliated; reddish brown. *Palpi* very short, not reaching to the front of the head, terminal joint almost concealed; reddish brown. *Head* reddish brown. *Thorax* reddish brown, mixed with yellowish ochreous. *Fore wings*, ♂ with a long narrow costal fold from the base; shining pale canary-

yellow reticulated with golden red, with two red-brown (or purplish brown) narrow fasciæ—the first from about the middle of the costal fold to the middle of the dorsum, adjacent to which it is considerably widened, the second from the outer end of the costal fold to the tornus widened at each extremity; a reddish brown streak along the termen to the apex; the costal fold is reddish brown, transversely striated with darker reddish brown; cilia shining pale yellow, clouded with brownish fuscous at the tornus. *Exp. al.* 25 mm. *Hind wings* brownish grey; cilia shining whitish cinereous. Under-side paler than the fore wings. *Abdomen* greenish grey. *Legs* pale ochreous.

Type, ♂ (70422); ♀ (70424) Mus. Wlsm.

Hab. JAPAN—Yesso (Pryer, 1882). HONDO—Oiwake (Pryer, 1885). Four specimens.

Had I not fortunately possessed a male of *Pandemis sinapina*, Btl., I should have regarded this as Butler's species, but it differs in its much stouter palpi and in the male having a costal fold; these characters would place *imitator* in the genus *Archips*, Hb., but it very strongly resembles *sinapina*, Btl., and *quercifolia*, Fitch (an American species).

706. *Archips æriferanus*, H.-S.

Tortrix (*Ptycholoma*) *æriferana*, Stgr. & Wk. Cat. Lp. Eur. 236. No. 706 (1871).

Hab. EUROPE. JAPAN—HONDO—Oiwake (Pryer, 1885).

714. *Archips striganus*, Hb.

Tortrix (*Lozotænia*) *strigana*, Stgr. & Wk. Lp. Eur. 237. No. 71 (1871)¹. *Tortrix strigana*, Chr. Hor. Soc. Ent. Ross. XII. 224 (1876)².

Hab. EUROPE¹. COREA—Gensan, VI. 1886 (Leech); Fusan, 9 VI. 1886 (Leech). JAPAN—KIVSIU (Leech). PERSIA—Kasumkent².

In one strongly marked variety the oblique line of spots which crosses the fold coalesce to form a fascia reaching three parts across the wing, all the markings being of a rich red chestnut-brown, and the hind wings also are somewhat darker than in the ordinary forms; but I cannot regard this as more than a local variety, since in the Corean specimens the markings tend to be more pronounced and browner than in European specimens.

PANDEMIS, Hb.

698. *Pandemis ribeana*, Hb. ~~7~~,

Tortrix (*Pandemis*) *ribeana*, Stgr. & Wk. Cat. Lp. Eur. 236. No. 698 (1871).

Tortrix (*Pandemis*) *cerasana*, Stgr. & Wk. Cat. Lp. Eur. 236. No. 699 (1871).

β . *ribeana*, Hb. + *cerasana*, Hb.

Hab. EUROPE. KASHMIR—Scinde Valley, 7000 feet, VI. 1887 (*Leech*).

701. *Pandemis heparana*, Schiff.

Tortrix (*Pandemis*) *heparana*, Stgr. & Wk. Cat. Lp. Eur. 236. No. 701 (1871).

Hab. EUROPE. COREA — Gensan, VI. 1886 (*Leech*).
CHINA—Omei Shan, VI.-VII.; Che-tou, 12,000 feet, VI.-VII. JAPAN (*Pryer*, 1886).

[To be continued.]