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NOTES ON SEVEN SPECIES
OF THE GENUS *ACLERIS* HUEBNER FROM JAPAN
WITH DESCRIPTIONS OF TWO NEW SPECIES

(Lepidoptera: Tortricidae)

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As far as the writer is aware, twenty species belonging to the genus *Acleris* HUEBNER (1825) have been recorded from Japan. In the present paper to the fauna are added seven other species, two of which are new to science.

On this occasion, the writer acknowledges his great indebtedness to Professor Dr. T. UCHIDA and Professor Dr. C. WATANABE for their kind direction. Cordial thanks are also due to Messrs. H. ANDO, H. HASEGAWA, M. KIKUCHI, T. KUMATA, M. OKANO, and S. TAKAGI, who present him valuable specimens or literature, and to Mr. S. KATO who kindly gives him the opportunity to examine the collection of the National Institute of Agricultural Sciences, Tokyo.

1. *Acleris quadridentana* (WALSINGHAM) (Figs. 1-2)

Oxygrapha quadridentana WALSINGHAM, Ann. Mag. Nat. Hist., VII, 5: 369 (1900).

Peronea quadridentana CARADJA, Acad. Rom. Sect. Stiint, Ser. 3, 3 (7): 119 (1925).

Hab.: China; Japan (Hokkaido, Honshû).

Specimens examined: Sapporo, Hokkaido, 6♂♂ (IX 12, 1917; IX 27, 1918; X 9, 1931) S. MATSUMURA leg.; 1♂ (IX 22, 1954) T. KUMATA leg.; 2♂♂, 3♀♀ (VI 18, VI 24, VI 28, VII 1, X 30, 1955) T. OKU leg.; Ônuma, Hokkaido, 1♀ (X 17, 1955) S. TAKAGI leg.; Iwate Pref., Honshû, 1♀ (X 28, 1949) M. OKANO leg.; 2♂♂ (VI 17, VI 19, 1956) T. OKU leg.; Nojiri, Honshû 1♀ (X 2, 1937) A. KAWADA leg.; Kami-kochi, Honshû, 1♂ (VI 27, 1930) A. KAWADA leg.

Notes: Among the specimens examined some ones have a brownish orange dorsal line on the fore wing. This species is similar to *A. emargana* (F.) but distinct from the latter by the smaller size, the whitish costal patch of fore wing and the genital characters. The larvae are found in the spun leaves of *Populus Sieboldii* MIQ. in June and August in Sapporo. The larval characters are as follows:—

Head black; body, cervical shield, and anal shield bright green; thoracic legs black. Pi group on the first, second, seventh and eighth abdominal segments bisetose. Mandible with the outermost tooth separated from the others and declined.

2. *Acleris albiscapulana* (CHRISTOPH)

Terax albiscapulana CHRISTOPH, Bull. Soc. Nat. Mosc., 56: 68 (1881).

Oxygrapha albiscapulana WALSINGHAM, Ann. Mag. Nat. Hist., VII, 5: 375 (1900).

Acalla albiscapulana, KENNEL, Pal. Tort.: 79, t. 4, f. 47 (1910).

Peronea albiscapulana ISSIKI, Dobuts. Zasshi, 34 (401): 282 (1922); FILIPJEV, Ann. Mus. Zool. Acad. Sci. URSS, 31: 516, t. 24, f. 3, t. 32, f. 1 (1930).

Hab.: Amur; Korea; Japan (Honshū).

Specimen examined: Nikkō-Yumoto, Honshū, 1 ♀ (V 31, 1955) T. OKU leg.

3. *Acleris grisea* (FILIPJEV) (Figs. 3-4)

Peronea grisea FILIPJEV, Ann. Mus. Zool. Acad. Sci. URSS, 31: 519, t. 27, f. 1 (1930).

Hab.: Amur; Japan (Hokkaido).

Specimens examined: Jōzankei, Hokkaido, 1 ♂ (X 4, 1956) T. OKU leg.; 1 ♀ (VII 15, 1955) T. OKU leg.

Notes: According to the original description the male of this species has 2 spine-like cornuti, but there are 5 cornuti, one of which is a little longer than the others in the present single male.

As far as the writer is aware, the female of this species has yet been undescribed. In the female specimen examined the fore wing is broader than that of the male, the costa of the fore wing is strongly sinuate beyond the middle, and the raised scale-tufts are much prominent at 1/3 from the base and the middle on the dorsal area. The other external characters agree with those of the male. The female genitalia of this species are somewhat similar to those of *A. roscidana* (HUEB.) and *A. hispidana* (CHR.) but the present species is distinguishable from *A. roscidana* by the slender lateral projection of the limen, and from *A. hispidana* by the longer chitinized portion of the ductus bursae.

4. *Acleris exsucana* (KENNEL) (Figs. 5-5a)

Rhacodia exsucana KENNEL, Pal. Tort.: 98, t. 5, f. 53 (1910).

Peronea exsucana CARADJA, Acad. Rom. Mem. Sect. Stiint., Ser. 3, 3 (7): 119 (1925); FILIPJEV, Ann. Mus. Zool. Acad. Sci. URSS, 31: 524 (1930).

Hab.: Amur; China; Japan (Hokkaido).

Specimens examined: Jōzankei, Hokkaido, 1 ♂ (IX 22, 1955) T. OKU leg.; 2 ♂ ♂, 1 ♀ (X 4, 1959) T. OKU leg.; Ōnuma, Hokkaido, 1 ♀ (X 14, 1955) S. TAKAGI leg.

5. *Acleris expressa* (FILIPJEV)

Peronea expressa FILIPJEV, Ann. Mus. Zool. Acad. Sci. URSS, 31: 517, t. 24, f. 4, t. 31, f. 2 (1930).

Hab.: Amur; Japan (Hokkaido).

Specimen examined: Sapporo, Hokkaido, 1 ♀ (IX 7, ?) S. MATSUMURA leg.

6. *Acleris alnivora* sp. nov. (Figs. 6-7)

♂, ♀. 21-23 mm. Antennae brownish grey, ringed with blackish brown.

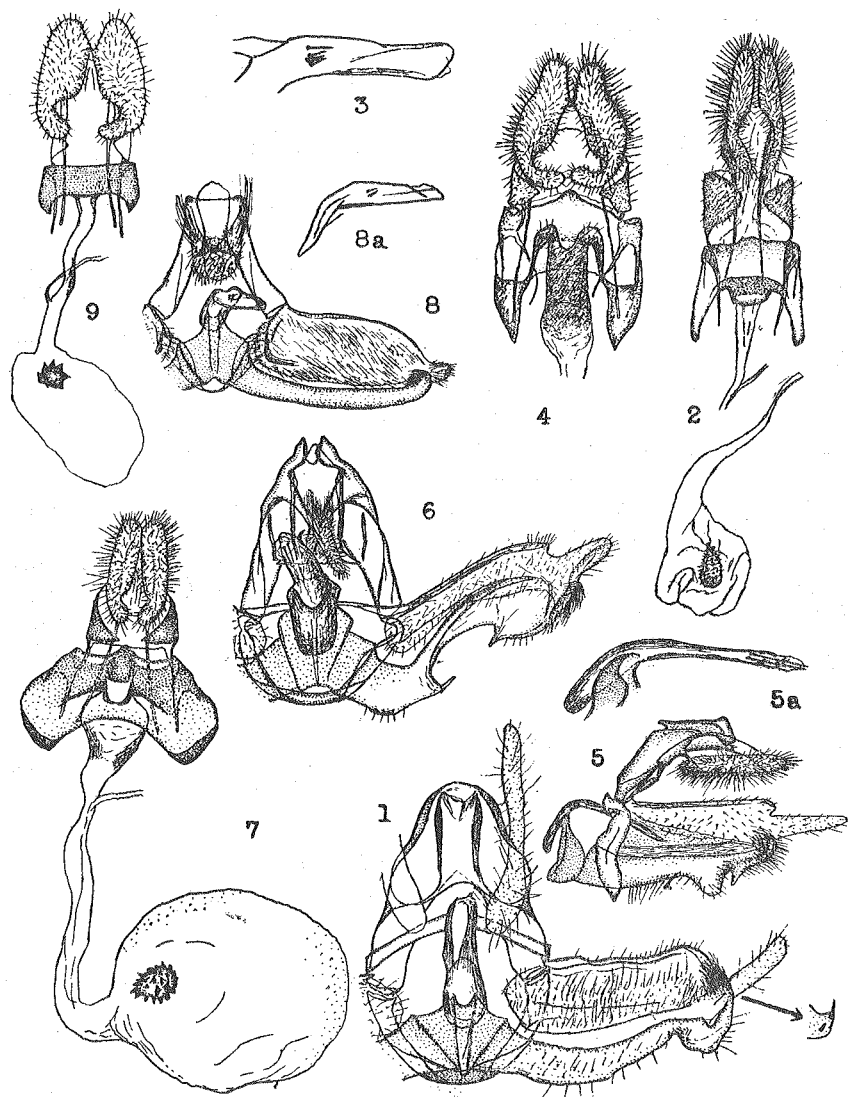


Fig. 1. *Acleris quadridentata* (WALS.) ♂ genitalia. Fig. 2. *ibid* ♀ genitalia. Fig. 3. *A. grisea* (FILIPJ.) aedeagus. Fig. 4. *ibid* ♀ genitalia. Fig. 5. *A. exsucana* (KENN.) ♂ genitalia (lateral view); 5a, *ibid* aedeagus. Fig. 6. *A. alnivora* sp. nov. ♂ genitalia. Fig. 7. *ibid* ♀ genitalia. Fig. 8. *A. elegans* sp. nov. ♂ genitalia; 8a, *ibid* aedeagus. Fig. 9. *ibid* ♀ genitalia.

Palpi rather long, grey somewhat mixed with brown and whitish grey, pale ochreous internally. Head grey. Thorax grey, somewhat mixed with brown; tegulae more brownish than thorax. Legs pale grey to whitish ochreous; tarsal joints spotted above with grey. Abdomen silver-grey.

Fore wings somewhat dilated posteriorly; costa strongly arched near base. fringed with rough scales before middle; apex pointed; termen rather oblique, faintly sinuate. Colour grey in ground, with pearly gloss, scattered with many blackish striae especially on basal half; greyish or brownish raised-tufts on basal area and middle of wing; veins indicated by narrow dark greyish lines towards termen; several short, oblique, blackish streaks crossing costal area, shorter and obscure on outer 1/3; sometimes faint fasciae from the costal dark streaks, indicating edge of costal triangular patch; brownish mottlings about middle of wing in some specimens; blackish band from base towards middle, usually obscure, but sometimes much prominent, narrow, reaching middle and followed by another similar black band which occurs from above end of the preceding band to before apex; cilia dark brownish grey, paler towards tip, with paler basal and median lines.

Hind wings shining dark brownish grey, almost black on termen, much paler towards base; cilia pale grey with a darker basal line.

In colour this species much variable, and the following forms are recognized.

a. Ground colour of fore wing much paler, nearly whitish grey; markings considerably reduced, except a broad blackish band from base to beyond middle.

b. Fore wing of typical colour, except a bunch of orange-yellow lines from base to middle.

c. Fore wing evenly covered with black, grey and brown scales, except orange-yellow band along dorsum.

d. Fore wing evenly pale brownish grey, except blackish scale-tufts at 1/4 from base and middle on dorsal area.

♂ Genitalia: Tegumen bilobed at top. Socii drooping, slender. Transtilla present. Valva moderate; sacculus strongly bent at 1/5 from base, prominently excavated about middle of lower margin, forming opposite angles on either side of the excavation; a slender short projection on the basal angle. Brachiola moderate. Aedoeagus curved, with a pointed projection at top. Cornuti of strong 3 spines.

♀ Genitalia: Ovipositor lobes slender, curved. Limen very broad, projecting at middle of caudal margin, with broad lateral lobe projecting obliquely. Ostium narrow, semioval, situated near middle of limen. Ductus bursae swelling and very weakly chitinized at the entrance. Bursa copulatrix elliptical. Signum of a stellate plate.

Larva: Head black; cervical shield pale greenish yellow; body green; anal shield pale green. Thoracic legs black. Pi group on the first, second, seventh and eighth abdominal segments bisetose. Mandible with the outermost tooth separated from the others and declined.

Holotype: ♂, Sapporo Hokkaido (VII 5, 1956) bred by T. OKU.

Allotype: ♀, Sapporo Hokkaido (VII 7, 1956) bred by T. OKU.

Paratypes: Sapporo, Hokkaido, 1♂, 1♀ (IV 20-23, 1956) T. OKU leg.; 1♀ (IX 28, 1955) T. KUMATA leg.; 6♂♂, 1♀ (VII 5-7, 1956) T. OKU leg.; 1♂, 1♀ (without exact data) S. MATSUMURA leg.

The types are deposited in the Entomological Institute, Hokkaido University.

Host plant: *Alnus hirsuta* TURCZ.

Notes: It seems that this species has been erroneously identified as *A hispidana* (CHR.) by KENNEL (1910) (Pal. Tort., t. 4, f. 51 nec 50). The difference between them is quite apparent in the genital characters. The genitalia of *A. hispidana* have been figured by FILIPJEV (1930) (Ann. Mus. Zool. Acad. Sci. URSS, 31: t. 24, f. 2, t. 27, f. 1).

7. *Acleris elegans* sp. nov. (Figs. 8-9)

♂, ♀. 13 mm. Antennae, head and thorax sulphur yellow. Palpi; median joint dilated towards top with rough scales; terminal joint exposed. Abdomen pale greyish yellow. Legs pale yellow.

Fore wings rather narrow, somewhat ovate; costa gently arched, depressed towards apex; termen little oblique, not sinuate; apex optuse. Vein 2 from point before basal 2/3 of cell, vein 7 to costa. Colour bright yellow in ground, minutely strigulated with orange-brown; a band running along costa and termen, dark orange-brown, scattered with many blackish brown scales; 4 irregular fasciae orange-brown, the first near base, the second from point of basal 1/3 of costa to before middle of dorsum, the third from point about basal 2/3 of costa to beyond middle of dorsum, the fourth diverging from point about costal 1/4 of the third fascia to before tornus; the band and the fasciae showing violet metallic reflection in certain lights; a blackish raised scale-tuft on fold between the second and third fasciae; cilia yellow, somewhat paler towards tip.

Hind wings dark greyish brown; cilia pale greyish yellow, with a dark shade near base.

♂ Genitalia: Top of tegumen not bilobed, angulated on both sides. Socii drooping, dilated and rounded towards top. Transtilla absent. Valva simple; sacculus dilated towards base. Brachiola rather short. Aedoeagus rather small, curved. Cornuti of 2 short spines.

♀ Genitalia: Ovipositor lobes very large, broad, curved. Limen very weak, broad, with short, pointed lateral projection; caudal margin of limen straight. Ostium narrow, situated on anterior margin of limen. Ductus bursae without chitinized portion. Bursa copulatrix ovate. Signum of a stellate plate.

Holotype: ♂, Jōzankei, Hokkaido (VII 22, 1955) T. OKU leg.

Allotype: ♀, Jōzankei, Hokkaido (VII 22, 1955) T. OKU leg.

Paratypes: 1♂, Jōzankei, Hokkaido (VII 22, 1955) T. OKU leg.; 1♀ (without exact data) S. KUWAYAMA leg.

The types are deposited in the Entomological Institute, Hokkaido University.

Notes: This species is allied to *Croesia bergmanniana* (L.) in the colour of fore wing and in the male genitalia which have the rather small aedoeagus and the simple valva, but it may be referred to the genus *Acleris* HUEB.; because the vein 7 of fore wing reaches distinctly to the costa.