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The Japanese Species of the Genera *Diurnea* HAWORTH and *Cheimophila* HÜBNER (Lepidoptera: Oecophoridae)

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Synopsis The Japanese female-brachypterous oecophorid species are revised. Two species, *Diurnea cupreifera* (BUTLER) n. comb. and *Cheimophila fumida* (BUTLER), are redescribed, and *D. issikii* is described as new. An account of the immature stages of *D. cupreifera* is given. *Xenomicta* MEYRICK is newly placed in synonymy with *Diurnea* HAWORTH.

In 1879, BUTLER described two oecophorid species, *Sciaphila fumida* and *S. cupreifera*, both taken at Yokohama, Japan. One of these, *cupreifera*, was placed by MEYRICK in 1914 in the genus *Xenomicta* which was erected for this species. The other, *fumida*, was transferred by MEYRICK in 1922 to *Xenomicta*, and later, in 1939, by GAEDE to the genus *Cheimophila* HÜBNER. Since, *Xenomicta* has been known as a monotypic genus. The Japanese genus *Xenomicta* differs from the European genus *Diurnea* HAWORTH in the fused veins, M_3 and Cu_{1a} of the female forewing, however, there are no marked differences between the two genera in the wing venation of the male and in the genitalia of both sexes. Besides, the modified larval metathoracic leg in *cupreifera* indicates that the species is referable to *Diurnea*. In view of these facts, I have been convinced that *Xenomicta* is congeneric with *Diurnea*.

In the present paper, these two species are redescribed in detail and a description of a new Japanese species of the genus *Diurnea* is given.

Diurnea HAWORTH

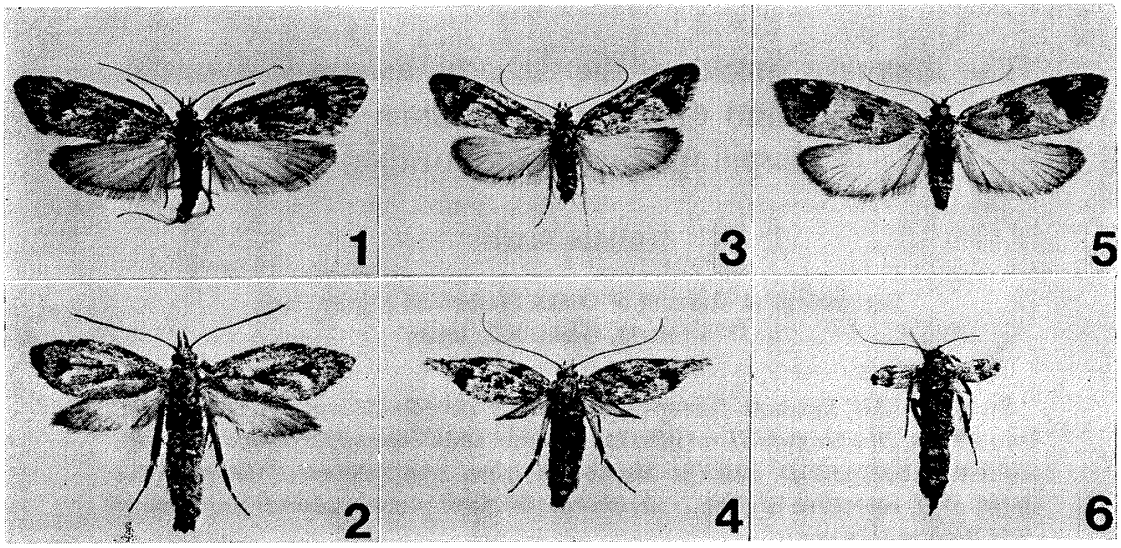
Diurnea HAWORTH, 1811, p. 501.

Type-species: *Tinea fagella* [DENIS & SCHIFFERMÜLLER], 1775.

Xenomicta MEYRICK, 1914, p. 248, n. syn. —— MEYRICK, 1922, p. 113. —— FLETCHER, 1929, p. 236. —— GAEDE, 1938, p. 192. —— ISSIKI, 1957, p. 51. —— CLARKE, 1963, p. 466.

Type-species: *Sciaphila cupreifera* BUTLER, 1879.

Head loosely scaled. Ocellus absent. Tongue very short. Antenna ciliated in ♂, and simple in ♀; pecten absent. Labial palpus nearly porrect or subascending; second segment sometimes with roughened scales; terminal segment less than half the length of second. Maxillary palpus 4-segmented. Hind tibia with long hairs in ♂. Abdominal tergite suffused with fine scales on each segment. Wings normal in ♂, and brachypterous in ♀. Forewing with 12 veins in ♂: R_1 from middle, R_4 and R_5 stalked, R_5 to apex or termen, and M_3 and Cu_{1a} separated; in ♀ 11 or 12 veins; R_1 from or beyond middle, R_5 to costa, apex or termen, M_3 and Cu_{1a} connate or coincident, and accessory cell defined. Hindwing 8 veins; M_3 and Cu_{1a} separated or connate, 1A+2A sinuate,



Figs. 1–6. Adults. —— 1. *Diurnea issikii* n. sp., ♂, holotype. —— 2. *ditto*, ♀, paratype. —— 3. *D. cupreifera*, ♂. —— 4. *ditto*, ♀. —— 5. *Cheimophila fumida*, ♂, —— 6. *ditto*, ♀.

parting vein preserved.

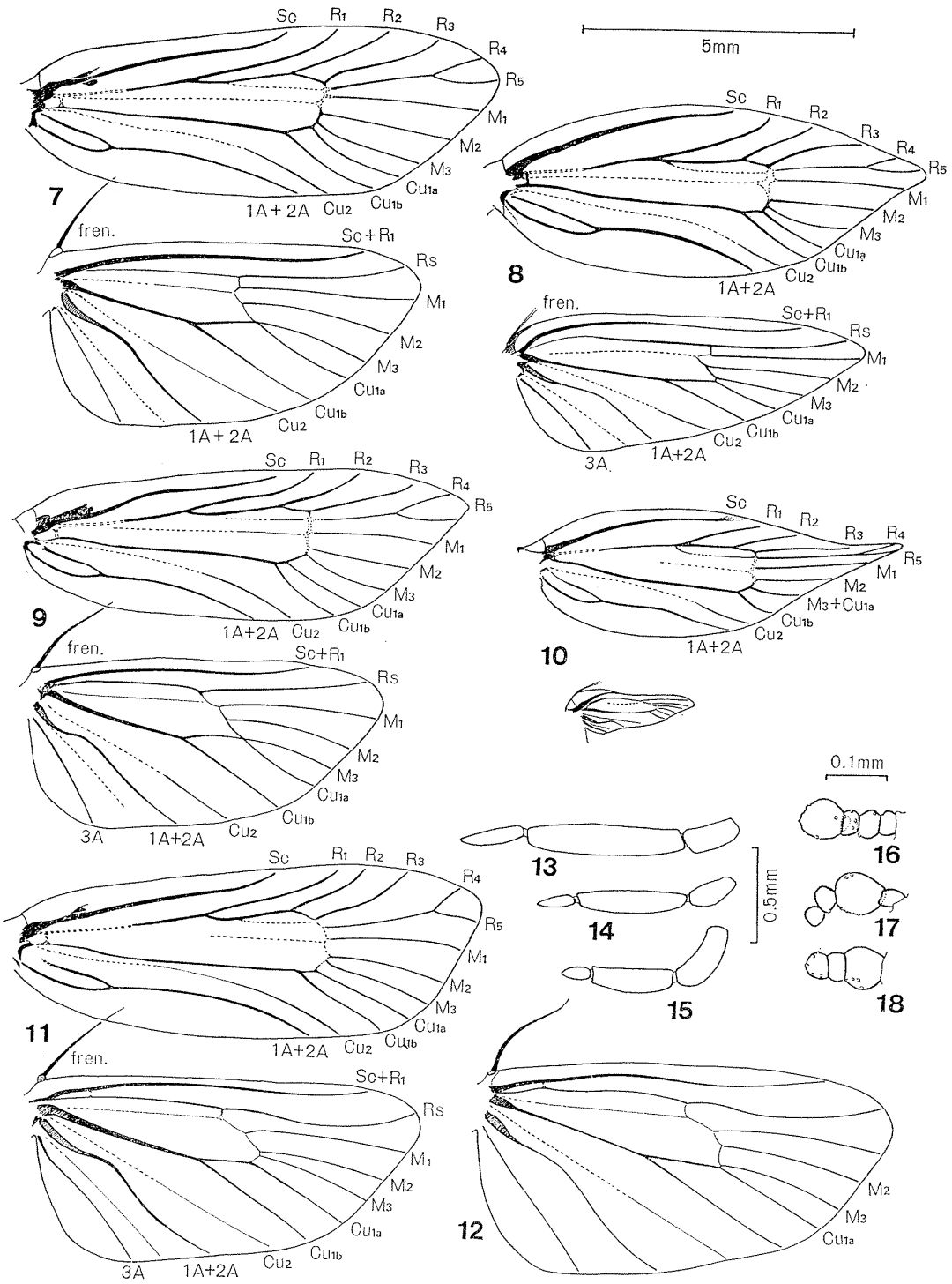
Male genitalia: Uncus developed, not pointed at apex. Gnathos rudimentary, forming a pair of small screlotized arms. Transtilla with a well-developed, heavily screlotized lobe which tapers distally. Juxta with a pair of lateral lobes. Valva broadly attached at base, with a pointed apex. Vinculum U- or V-shaped. Aedeagus stout, with or without cornutus.

Female genitalia: Papilla analis rather long. Intersegmental membrane between papilla analis and 8th abdominal segment fairly extended. Apophysis anterioris long, slender, and much longer than apophysis posterioris. Apophysis posterioris massive. Antrum funnel-shaped. Ductus bursae membranous, variable in length. Corpus bursae ovate; signum present or absent.

Diurnea issikii n. sp.

(Figs. 1, 2, 7, 8, 13, 16, 19–21, 29–31)

♂. 17–22 mm. Head blackish fuscous, mixed with ochre. Antenna 2/3, blackish fuscous, speckled with ochre on nearly basal half above; scape mixed with ochre below; ciliations ochreous. Labial palpus nearly porrect, fuscous, except for ochreous basal segment, the second segment being somewhat roughly scaled, mixed with light ochre dorsally and internally, and suffused with ochre toward base below, and the terminal with ochreous tip. Thorax and tegula blackish fuscous, mixed with ochreous and brown scales. Fore and mid legs blackish fuscous, mixed with ochre on undersides and each of femora; ochreous bands at apical, median and subbasal portions of tibiae, and at both ends of 1st and 2nd tarsal segments. Hind tibia light ochreous, slightly mixed with blackish brown externally. Abdomen fuscous above, and ochreous, mixed with pale fuscous beneath; a pair of long fuscous hair-like scales at sides of posterior segments. Forewing broadly lanceolate; costa rather curved toward base and straight in middle; apex obtusely pointed; termen slightly curved, oblique; R_5 to apex, Cu_{1a} approximated to M_3, from angle; pale grey, wholly scattered with brown and blackish scales, and consequently brownish grey at a glance; a blackish fuscous small tuft of raised scales, mixed with brown and ochre, on base of fold; two brownish transverse fasciae partially edged inwardly with somewhat raised blackish fuscous scales, one from 1/4 of costa to 1/2 of dorsum, somewhat dilated toward dorsum, the inner area being narrowly suffused with ochre, and



Figs. 7–12. Wing venation. 13–15. Labial palpi, denuded. 16–18. Maxillary palpi. —— 7, 13 & 16. *Diurnea issikii* n. sp., ♂, paratype. —— 8. *ditto*, ♀, paratype. —— 9, 14 & 17. *D. cupreifera*, ♂. —— 10. *ditto*, ♀. —— 11, 15 & 18. *Cheimophila fumida*, ♂. —— 12. *ditto*, ♂, hindwing.

the other from 2/3 of costa to before tornus, preceded by a light ochreous obscure spot on its inner lower margin; two blackish fuscous spots between these fasciae; several ill-defined fuscous mixed with brown subterminal spots; a series of fuscous spots at the end of veins from apex to tornus along termen; cilia fuscous, partially mixed with ochre, on tornus ochreous. Hindwing broadly lanceolate; fuscous, becoming paler basally; cilia pale fuscous, with a paler basal line.

Genitalia: as shown in Figs. 19–21. Uncus triangular, slightly concave at apex. Valva very broad at base, and abruptly narrowed before a pointed apex; dorsal margin weakly concave, and ventral margin gently curved. Juxta with lateral lobe long and slender. Transtilla with lateral process considerably sclerotized. Vinculum U-shaped. Aedeagus stout, bending near base, with a weak thorn-like cornutus.

♀. 16–21 mm. Much darker than in ♂. Head blackish fuscous, mixed with light ochre. Antenna 4/5, black, with light ochreous annulations on nearly basal half, and with a broad white apical band; scape lightly mixed with ochre. Labial palpus longer than in ♂, nearly porrect, and slightly downcurved; blackish except for light ochreous basal segment, the second segment being slightly mixed with light ochre above and toward base below. Fore and mid legs nearly black, with ochreous-ringed as in ♂; femora mixed with ochre; hind tibia nearly black, mixed with light ochre toward base, the tip with light ochreous ring. Thorax and tegula almost concolorous with head. Abdomen fuscous above, and pale ochreous mixed with blackish brown beneath. Forewing rather broadly lanceolate, broadest at middle; costa gently curved, with obtusely pointed apex; termen slightly sinuate, oblique; 12-veined, R_5 to near apex, M_3 and Cu_{1a} approximated, and Cu_{1b} from angle; ochreous, densely scattered with blackish scales; two blackish transverse fasciae with somewhat raised scales, one from before 1/3 of costa to 1/2 of fold, nearly straight, followed by a blackish spot with raised scales just beneath 1/2 of fold, and the other from 2/3 of costa to tornus, preceded by an ill-defined ochreous spot with raised scales on its inner lower margin; cilia ochreous, mixed with nearly black. Hindwing lanceolate, with pointed apex; fuscous, paler toward base; cilia pale fuscous, mixed with light ochre.

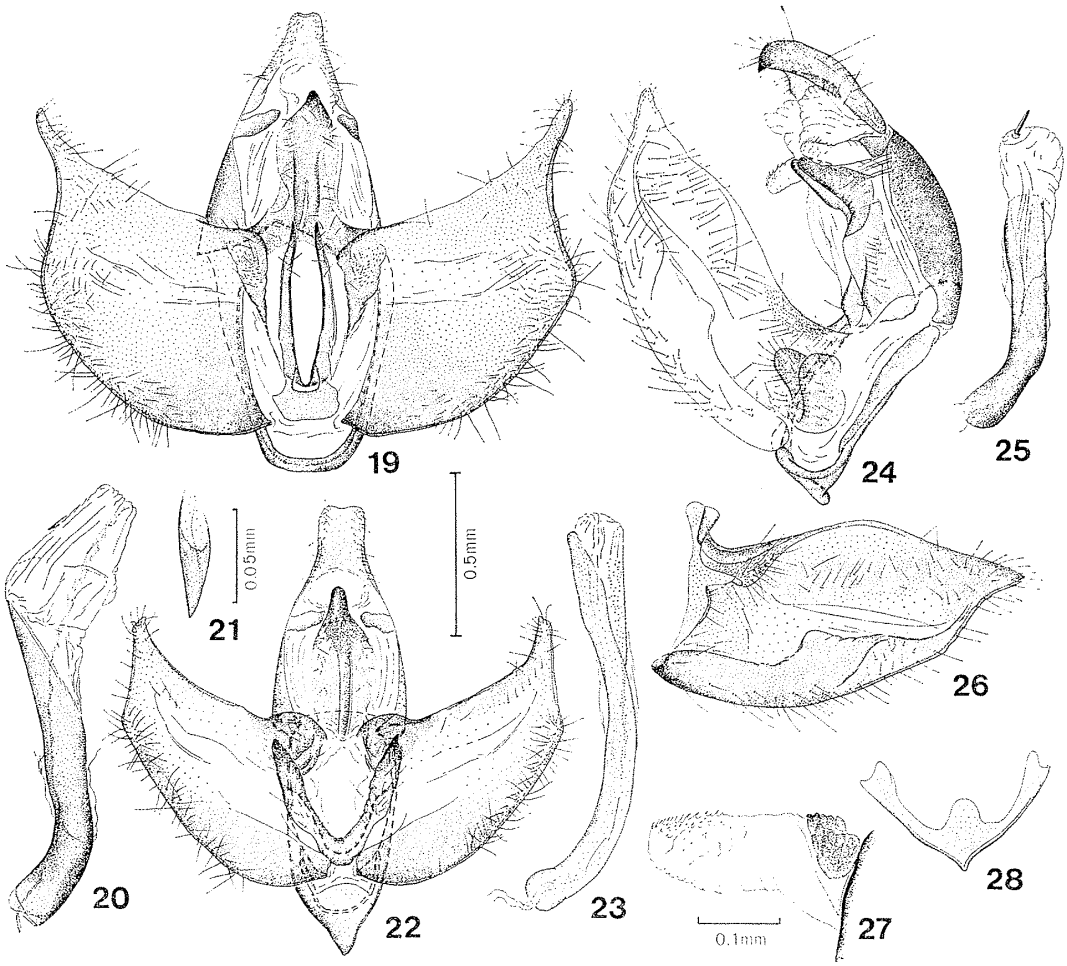
Genitalia: as shown in Figs. 29–31. Lamella postvaginalis with a pair of longitudinal slender sclerotized bands. Apex of apophysis posterioris rather slender. Signum weakly sclerotized; the shape as shown in Fig. 31.

Specimens examined: 66 ♂♂, 3 ♀♀. Holotype: ♂, Izumi-Katuragisan, Ôsaka Prefecture, Honsyû, 24. IV. 1961 (T. SAITO). Paratypes: same locality and same collector as holotype; 6 ♂♂, 11, 20. IV. 1961; 5 ♂♂, 22. IV. 1965; 10 ♂♂, 2 ♀♀, 21, 25, IV. 1968; 2 ♂♂, 1 ♀, 13. IV. 1969; 5 ♂♂, 15. IV. 1970; 4 ♂♂, 20, 24. IV. 1971; 5 ♂♂, 15. IV. 1972; 7 ♂♂, 24, 27. IV. 1978. Honsyû—1 ♂, Tazawako, Akita Pref., 13. IV. 1951 (A. MUTUURA); 1 ♂, Tatesina, Nagano Pref., 11. V. 1957 (T. YASUDA); 1 ♂, Sigakôgen, Nagano Pref., 30. IV. 1959 (T. KODAMA); 4 ♂♂, same locality, 11. V. 1975 (T. SAITO); 6 ♂♂, Kongôsan, Ôsaka Pref., 22. IV. 1977 (T. SAITO); 6 ♂♂, Hyônosen, Hyôgo Pref., 30. IV. 1973 (T. SAITO); Sikoku—1 ♂, Siratue, Ehime Pref., 5. V. 1965 (Y. ARITA); Kyûsyû—1 ♂, Yamaguni, Ôita Pref., 21. IV. 1955 (H. KUROKO). All in the collection of the Entomological Laboratory, University of Osaka Prefecture.

Distribution. Japan (Honsyû, Sikoku and Kyûsyû).

Host-plant. Unknown. It seems probable that the larva feeds on beech, *Fagus crenata* BLUME (Fagaceae).

Remarks. In superficial appearance of the male, this species is very similar to *D. cupreifera*, but is distinguished from the latter by the larger size, by the more ciliated antenna, and by the longer labial palpus. In the female, this species differs evidently from *D. cupreifera* in the shape of wings. It also seems to be closely allied to *D. fagella*, occurring in Europe, in the male genital structure, but differs from the latter in the much smaller size.



Figs. 19–21. *Diurnea issikii* n. sp., paratype, 22–23. *D. cupreifera,* and 24–28. *Cheimophila fumida,* ♂ genitalia. —— 19. Ventral aspect. —— 20. Adedeagus, lateral aspect. —— 21. Cornutus. —— 22. Ventral aspect. —— 23. Aedeagus, lateral aspect. —— 24. Ventro-lateral aspect. —— 25. Aedeagus, lateral aspect. —— 26. Right valva, ventral aspect. —— 27. Gnathos, right side, lateral aspect. —— 28. Vinculum, ventral aspect.

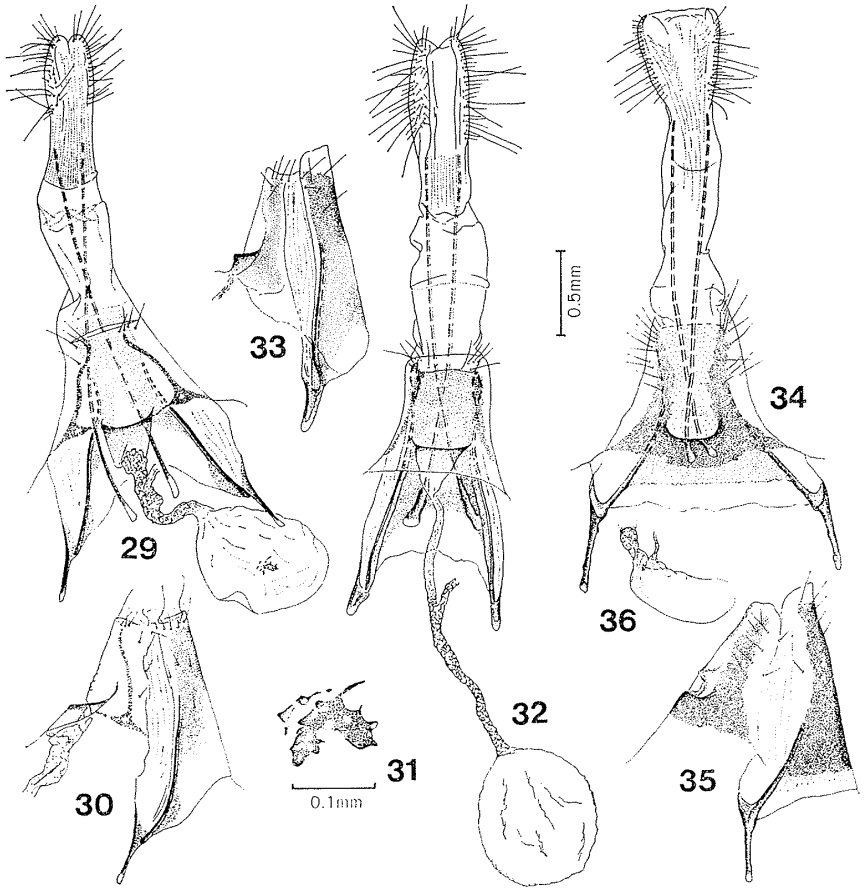
Diurnea cupreifera (BUTLER) n. comb.

(Figs. 3, 4, 9, 10, 14, 17, 22, 23, 32, 33, 37–54)

Sciaphila cupreifera BUTLER, 1879, p. 79, t. 60, f. 6.

Xenomicta cupreifera: MEYRICK, 1914, p. 248. ——, 1922, p. 113. —— ISSIKI, 1932, p. 1470, f. 2910. —— GAEDE, 1938, p. 192. —— ISSIKI, 1950, p. 475, f. 1289. —— INOUE, 1954, p. 61, no. 294. —— ISSIKI, 1957, p. 51, pl. 8, f. 231–232. — OKANO, 1959, p. 272, pl. 180, f. 21 a, 21 b. —— CLARKE, 1963, p. 466.

The adult was figured by BUTLER (1879), ISSIKI (1932, 1950, 1957), OKANO (1959) and CLARKE (1963). The male genitalia were illustrated by CLARKE (1963), but the female genitalia have not hitherto been described and figured.



Figs. 29–31. *Diurnea issikii* n. sp., paratype, 32–33. *D. cupreifera*, and 34–36. *Cheimophila fumida*, ♀ genitalia. —— 29. Ventral aspect. —— 30. Lateral aspect. —— 31. Signum. —— 32. Ventral aspect. —— 33. Lateral aspect. —— 34. Ventral aspect. —— 35. Lateral aspect. —— 36. Corpus bursae.

♂. 14–20 mm. Head, thorax and tegula dark fuscous, mottled with light ochre. Antenna 2/3, dark fuscous, dotted with light ochre above and nearly black below; scape dark fuscous, mixed with ochre ventrally; ciliations fuscous. Labial palpus rather short, slightly ascending; light ochreous; second segment mixed with fuscous above, and fuscous beneath apically; terminal segment speckled with blackish brown. Fore and mid legs dark fuscous, mixed with light ochre on undersides and each femur; with light ochreous annulations at apical, median and subbasal parts on each tibia, and at both extremes of 1st and 2nd tarsal segments. Hind leg light ochreous, inconspicuously ringed with pale blackish brown on each tarsal segment. Abdomen fuscous, with ochreous lateral hairs and narrow posterior segmental margins above, and ochreous mixed with pale fuscous ventrally. Forewing lanceolate; apex tolerably rounded; termen nearly straight, oblique; R_5 to termen, M_3 and Cu_{1a} well separated; light ochreous, sprinkled with brown and fuscous scales; a blackish fuscous dash on Sc from near base; two brown transversely oblique fasciae partially edged with blackish brown inwardly, one from 1/4 of costa to 1/3 of wing-length in disc, containing a conspicuous blackish fuscous longitudinal streak in disc, followed a blackish fuscous dot of raised scales just beneath fold at 1/2, and the other from 2/3 of costa to tornus, preceded an ill-defined light ochreous spot on pretornus; two blackish spots between these fasciae along costal margin of cell; a brown

blotch mixed with blackish brown just below costa before apex; a terminal series of blackish fuscous spots at the end of veins around termen; cilia fuscous partially mixed with ochre, on tornus somewhat paler. Hindwing broadly lanceolate; fuscous, paler basally; cilia pale fuscous with a darker median shade and a dark fuscous basal line.

Genitalia: as shown in Figs. 22–23. Uncus rather broad, with apex slightly concave in ventral aspect. Juxta with heavily screlotized lateral process. Valva rather broad, with a pointed apex. Vinculum V-shaped. Aedeagus evenly curved, without cornutus.

♀. 16–20 mm. Head, thorax, tegula and labial palpus light grey, mixed with brown and blackish scales; labial palpus with basal segment ochreous. Antenna 3/4, black with light ochreous dots above and beneath. Fore and mid legs much darker than those of ♂. Hind leg blackish, except for ochreous femur and basal half of tibia, with light ochreous rings at apex of tibia and at both ends of each tarsal segment. Abdomen blackish fuscous, sparsely mixed with light ochre, the ventral side being paler. Forewing lanceolate, with abruptly acute apical 1/3; 11 veins; R_1 beyond middle, R_5 to termen, M_3 and Cu_{1a} coincident; light ochreous, sprinkled with nearly black; a blackish fuscous spot with raised scales beneath fold near base; two blackish transverse fasciae of raised scales faintly mixed with brown, one from 1/4 of costa to before 1/2 of dorsum, and the other from 2/3 of costa to tornus, sometimes interrupted with upper 1/3, somewhat expanded toward tornus; cilia considerably reduced, light ochreous, mixed with blackish brown. Hindwing much abbreviated, lanceolate with pointed apex; pale fuscous.

Genitalia: as shown in Figs. 32–33. Lamella postvaginalis divided into longitudinal screlotized parts on each side. Ductus bursae rather long. Signum absent.

Specimens examined: 58 ♂♂, 15 ♀♀. Honsyû—1 ♂, Utukusigahara, Nagano Pref., 19. V. 1953 (A. MUTUURA); 1 ♂, Tengudake, Nagano Pref., 29. IV. 1958 (S. MORIUTI); 2 ♂♂, Nisitama, Tôkyô Pref., 4. III. 1958 (A. KAWABE); 9 ♂♂, Hakusantyô, Mie Pref., 20. III. 1977 (T. SAITO); 2 ♂♂, 11 ♀♀, same locality, emerged 20. II–12. III. 1978 (T. SAITO), reared from larvae feeding on leaves of *Quercus serrata* THUNB. and *Castanea crenata* SIEB. et ZUCC.; 9 ♂♂, Hanase, Kyôto Pref., 24. IV. 1962 (T. SAITO); 5 ♂♂, same locality and same data, (S. MORIUTI); 1 ♂, Yase, Kyôto Pref., 16. IV. 1952 (A. MUTUURA); 2 ♂♂, Hieizan, Kyôto Pref., 13. IV. 1957 (M. OKADA); 2 ♂♂, Tukigase, Nara Pref., 30. III. 1957 (T. KODAMA); 2 ♂♂, Kasugayama, Nara Pref., 5. IV. 1956 (S. MORIUTI); 7 ♂♂, Inunakisan, Ôsaka Pref., 2. IV. 1956 (T. KODAMA); 3 ♂♂, Izumi-Katuragisan, Ôsaka Pref., 11. IV. 1961 (T. SAITO); 4 ♂♂, same locality and same collector, 22. IV. 1965; 2 ♀♀, ditto, 15. IV. 1970; 2 ♂♂, Iwawakisan, Ôsaka Pref., 7. IV. 1961 (T. SAITO); 1 ♂, Minoo, Ôsaka Pref., 17. IV. 1974 (T. SAITO); 1 ♀, same locality, 25. III. 1978 (T. SAITO); 1 ♂, Hyônosen, Hyôgo Pref., 30. IV. 1973 (T. SAITO); 2 ♂♂, Sandankyô, Hirosima Pref., 18. IV. 1957 (M. OKADA); Sikoku—1 ♂, Sugitate, Ehime Pref., 29. III. 1956 (M. OKADA); 1 ♂, 1 ♀, Siratue, Ehime Pref., 5. V. 1965 (Y. ARITA).

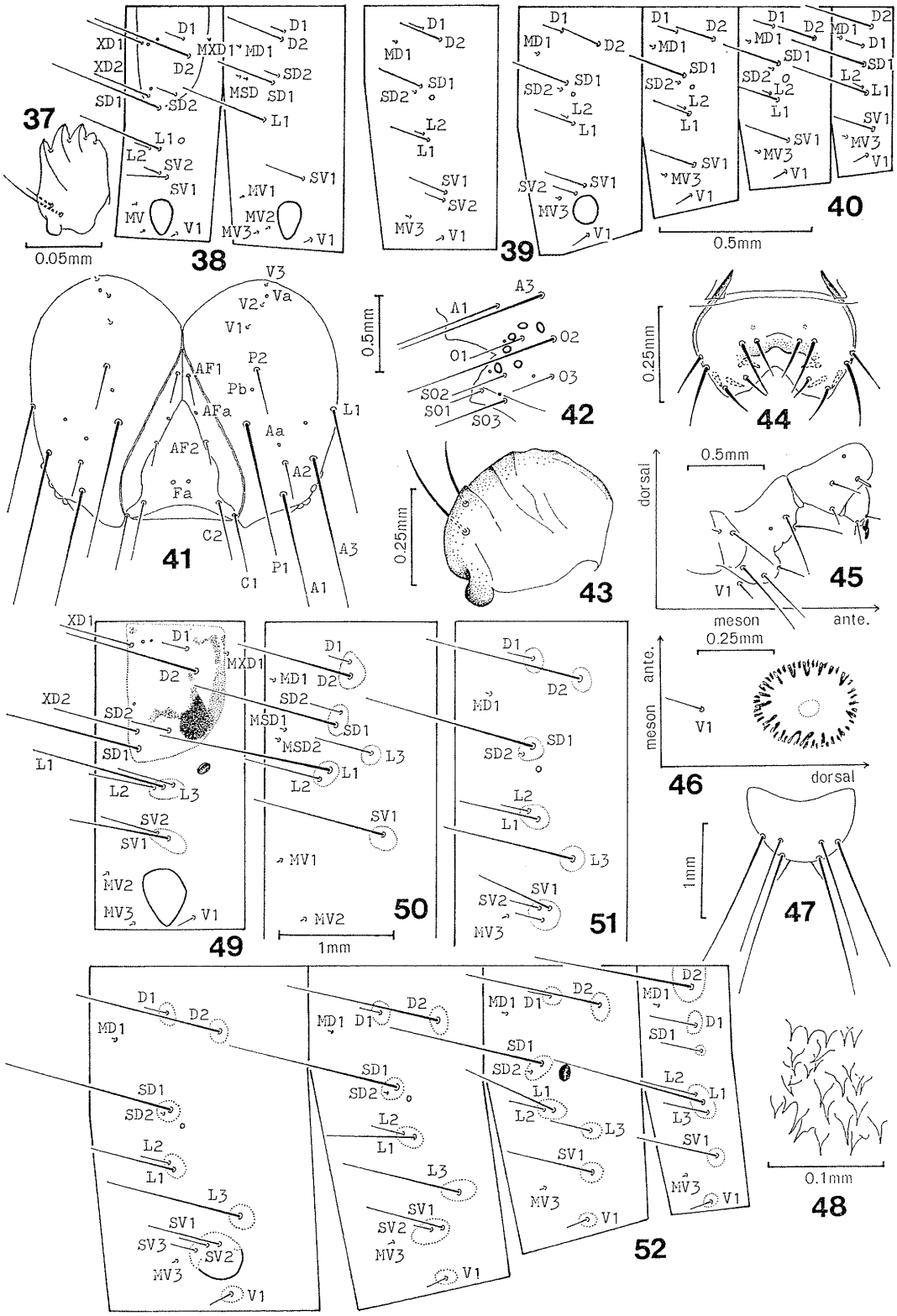
Distribution. Japan (Honsyû and Sikoku).

Host-plants. *Quercus serrata* THUNB., *Q. aliena* BL., *Castanea crenata* SIEB. et ZUCC. (Fagaceae), *Styrax japonica* SIEB. et ZUCC. (Styracaceae), and *Prunus yedoensis* MATSUM. (Rosaceae).

Remarks. This species is very similar to *D. issikii* in the male superficial characters; the distinguishing characters have been noted under the latter species. In the male genitalia, *D. cupreifera* is closely allied to the European *D. phryganella*, but differs from the latter in the much smaller size, in the absence of cornutus and in the absence of apical teeth on aedeagus.

Egg. Somewhat elongate oval, finely reticulated on surface. About 0.63 mm in long axis and 0.38 mm in short axis. At first cream yellow but about three days later tinged with pale orange.

First instar larva. Body length about 1.0 mm (just after hatching). Head nearly black. Body dark yellow; prothoracic shield blackish brown; thoracic legs concolorous with body; metathoracic



leg normal in form. Ventral proleg with 7–9 crochets, and anal proleg with 7–8 in number. Chaetotaxy as in Figs. 38–40. Mandible with five teeth as shown in Fig. 37.

Mature larva. Average length 10 mm in ♂, and 15 mm in ♀. Head light brown, with fine irregular reticulations on its surface, the ventral side being paler; eye-spot nearly black; mandible blackish brown. Body pale creamy; prothoracic shield pale ochreous, reticulated as in head, with a nearly black marking on postero-ventral area; thoracic legs concolorous with body, with blackish brown claws; pinacula flat, almost of body color; peritreme of spiracles brown; setae pale ochreous. Head much broader than long; adfrontals almost extending to vertical triangle; fronto-clypeal suture invisible, the arrangement of ocelli as shown in Fig. 42; mandible as in Fig. 43; labrum as in Fig. 44. Spiracles oval; that of prothorax slightly smaller than that of 8th abdominal segment and about twice as large as those of 2nd–7th abdominal ones; that of 1st abdominal one somewhat larger than those of 2nd–7th ones. Metathoracic tibia extremely modified and greatly expanded, as shown in Fig. 45. In ventral proleg (Fig. 46) crochets triordinal (partially biordinal), arranged in a complete circle, with about 52 crochets. Anal proleg with crochets triordinal, semicircular, and about 38 in number. Dorsal areas on anal proleg and anus bearing many microscopic spines as illustrated in Fig. 48. Chaetotaxy*: Cranial setae as shown in Figs. 41–42; puncture Pb on a straight line joining to P2 and P1, and nearer P2 than P1. In prothorax XD2 approximated to SD1 than to XD1; L group setae trisetose. Abdomen as in Figs. 51–52; on 9th segment D2 of right and left sides on same pinaculum; on 1st to 8th segments SD1 and SD2 (microscopic) with same pinaculum; SD1 on 9th segment very slender and rather short; SV group of 1st and 7th segments bisetose, of 2nd to 6th trisetose, and of 8th and 9th unisetose. L group of 9th segment trisetose on a common pinaculum. Anal shield as shown in Fig. 47.

Specimens examined: 6 exs. feeding on *Quercus serrata* THUNB., Hakusantyô, Mie Pref. (T. SAITO), fixed on 16. X. 1977.

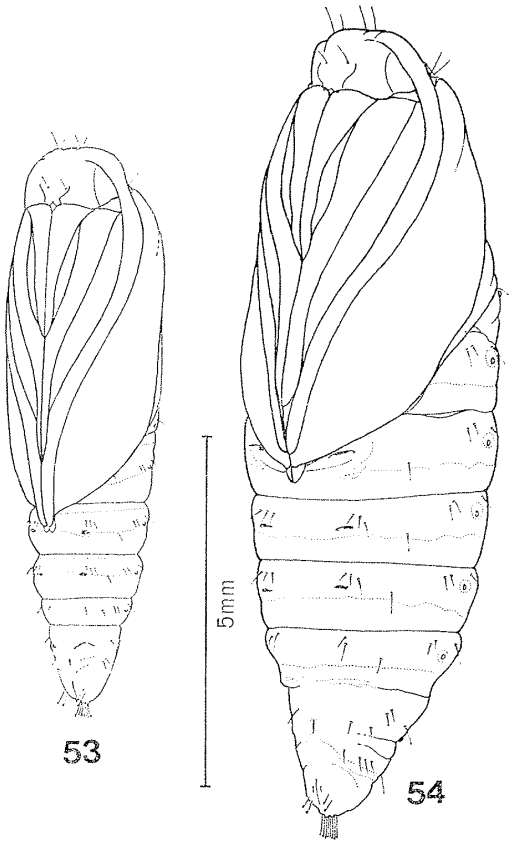
Pupa. Average length 7 mm in ♂, and 12 mm in ♀: pale to dark brown. Clypeus with a pair of straight setae. Clypeo-labral suture never distinct. Labial palpus slightly exposed. Maxilla reaching beyond 1/2 the length of metathoracic leg. Maxillary palpus scarcely reaching to proximolateral angle of maxilla in ♂, and not reaching in ♀. Antenna extending beyond tip of forewing in ♂, and before in ♀. Forewing tips not touching on meson in ♂, and touching in ♀. Coxa of prothoracic leg exposed. Tips of metathoracic leg slightly exposed, and reaching to 6th abdominal segment in ♂, and not reaching to 5th segment in ♀. Proleg scars visible. Tenth abdominal segment with four pairs of hooked setae on caudal end, and two pairs on ventral surface. Cremaster absent.

Specimens examined: 5 ♂♂, 4 ♀♀. All specimens reared from larvae on *Quercus serrata* THUNB., Hakusantyô, Mie Pref. (T. SAITO); fixed on 16. X.—21. XI. 1977.

Biological notes. Univoltine. In the Kinki districts, the adults appear from middle of March to the end of April. The eggs are laid singly in cracks on bark of host plants, where they hatch in about 17 days. The young larvae are photopositive, and feed for a short time on the leaves of bud. Later instar larva ties together with adjascent two leaves, forming a shelter. In the middle of October, the larva

Figs. 37–52. *Diurnea cupreifera*, 1st instar larva (37–40) and mature larva (41–52). —— 37. Right mandible. —— 38. Pro- and mesothorax. —— 39. First abdominal segment. —— 40. Sixth to 9th abdominal segments. —— 41. Head, dorsal aspect. —— 42. Ocellar region of head. —— 43. Right mandible. —— 44. Labrum, dorsal aspect. —— 45. Left metathoracic leg. —— 46. Crochets on 4th abdominal, left, ventral proleg. —— 47. Anal shield. —— 48. A part of microscopic spines on anal proleg. —— 49. Prothorax. —— 50. Metathorax. —— 51. Second abdominal segment. —— 52. Sixth to 9th abdominal segments.

* The system of HINTON (1946) was used in naming the setae of the larva.



Figs. 53–54. *Diurnea cupreifera*, pupa. —— 53. ♂, ventro-lateral aspect. —— 54. ♀, ventro-lateral aspect.

becomes fully grown and pupation takes place in the shelter. In November, the shelter falls to the ground with the other dead leaves, and then the pupa hibernates.

Cheimophila HÜBNER

Cheimophila HÜBNER, 1825, p. 402.
Type-species: *Tinea salicella* HÜBNER, 1796.

This genus is closely related to *Diurnea*, from which it may be separable by the presence of ocellus, the 3-segmented maxillary palpus, the pointed apex of uncus, the bilobed transtilla, the shape of antrum, *etc.*

Cheimophila fumida (BUTLER)

(Figs. 5, 6, 11, 12, 15, 18, 24–28, 34–36)

Sciaphila fumida BUTLER, 1879, p. 79, t. 60, f. 5 (*fumosa*).
Xenomicta fumida: MEYRICK, 1922, p. 113. —— ISSIKI, 1932, p. 1471, f. 2911. —— MEYRICK, 1935, p. 79. —— INOUE, 1954, p. 61, no. 293.

Cheimophila fumida: GAEDE, 1939, p. 402.

The adult male was described and figured by BUTLER (1879) and ISSIKI (1932), but the adult female and genitalia of both sexes have not previously been described and figured.

♂. 19–22 mm. Head roughly haired; dark fuscous mixed with light ferruginous. Antenna 2/3, ciliated; dark fuscous with light ferruginous dots above, and wholly blackish below; scape mixed with light ferruginous beneath; ciliations pale fuscous. Labial palpus short, porrect, clothed with long rough spreading hairs; second segment slightly longer than basal, and about twice as long as terminal; fuscous mixed with light ferruginous. Thorax and tegula almost concolorous with head, the former being clothed with long hairs ventrally. Fore and mid legs blackish fuscous, with light ferruginous rings at apex, middle and near base of tibiae, and at both ends of 1st and 2nd tarsal segments; femora mixed with light reddish brown. Hind tibia light ochreous, with long hairs above and beneath. Abdomen fuscous, suffused with fine blackish fuscous scales dorsally, mixed with pale ochre, except for blackish 1st segment. Forewing broadly lanceolate; 12 veins; R_5 to apex or termen; M_3 unstable, *i. e.*, well separated from Cu_{1a} or approximated to, or in some specimens connate with M_2; light ferruginous; a weak longitudinal blackish streak on Sc from base, followed a pinkish dash just beneath it; a blackish suffusion, mixed with fuscous and pinkish scales, on base of dorsum; two, rather broad, inconspicuous blackish fuscous fasciae, one from 1/3 of costa to 1/2 of dorsum, and the other from 2/3 of costa to tornus; inner area of the former, interspace between these two fasciae, and area beneath costa before apex scattered with pale grey scales, which are sometimes obsolate; a blackish discal dash with somewhat raised scales; costa narrowly edged with pinkish tinge from near base to before apex; an ill-defined dark fuscous terminal series from apex to tornus; cilia fuscous, partially mixed with pale ochre. Hindwing broadly lanceolate; M_3 considerably unstable, *i. e.*, approximated to M_2 or to Cu_{1a}; fuscous, paler toward base; cilia pale fuscous with a slightly paler basal line.

Genitalia: as in Figs. 24–28. Uncus developed, triangular in ventral aspect, with a pointed apex. Gnathos undeveloped, with a pair of short membranous processes, which are variable in size and shape. Transtilla strongly screlotized and bilobed distally, and with densely spinulate and sparsely hairy lateral lobe. Juxta with a pair of lateral processes. Valva broad, with a pointed tip; dorsal margin slightly arched, and ventral margin gently curved; succulus well defined. Vinculum variously V-shaped. Aedeagus bending near base. Cornutus a short straight spine.

♀. Head roughly scaled; light ochreous, mixed with black brown. Antenna blackish fuscous with light ochreous annulations. Labial palpus short, nearly porrect; light ochreous, mottled with blackish brown; basal segment with long rough hairs beneath. Thorax and tegula almost concolorous with head. Legs blackish fuscous, mixed with pale ochre on femora; light ochreous rings at both ends and middle of tibiae, at both extremes of 1st tarsal segment, and at apical of 2nd and 3rd tarsal segments; hind tibia without long hairs. Abdomen blackish fuscous, mixed with light ochre above and with dark ochreous beneath. Forewing extremely abbreviated; light ochreous, mottled with blackish brown; two blackish transverse bands before apex and in middle. Hindwing strongly reduced, almost hyaline.

Genitalia: as in Figs. 34–36. Papilla analis slightly dilated to apex. Intersegmental membrane between papilla analis and lamella postvaginalis extended. Lamella antevaginalis and lamella postvaginalis heavily screlotized. A small signum present.

Specimens examined: 26 ♂♂, 1 ♀. Honsyû—1 ♂, Sigakôgen, Nagano Pref., 3. V. 1959 (T. KODAMA); 1 ♂, same locality, 13. V. 1960 (T. KODAMA); 1 ♂, same locality, 15. V. 1953 (A. MUTUURA); 1 ♂, Utukusigahara, Nagano Pref., 18. V. 1953 (T. KODAMA); 1 ♂, Tatesina, Nagano Pref., 11. V. 1957 (T. KODAMA); 1 ♂, Tengudake, Nagano Pref., 30. IV. 1958 (S. MORIUTI); 2 ♂♂, Kamikôti, Nagano Pref., 5–6. V. 1962 (R. INOUE); 1 ♂, Kaidakôgen, Nagano Pref., 2. V. 1977 (Y. ARITA): 1 ♂, Nisitama, Tôkyô Pref., 10. IV. 1951 (M. HOSHINO); 3 ♂♂, 1 ♀, Hanase, Kyôto Pref., 24. IV.

1962 (T. SAITO); 3 ♂♂, same locality and same data (S. MORIUTI); 1 ♂, Tukigase, Nara Pref., 30. III. 1957 (T. KODAMA); 3 ♂♂, Inunakisan, Ôsaka Pref., 2. IV. 1956 (T. KODAMA); 1 ♂, Izumi-Katuragisan, Ôsaka Pref., 22. IV. 1965 (T. SAITO); 1 ♂, same locality, 25. IV. 1968 (T. SAITO); 2 ♂♂, Hyônosen, Hyôgo Pref., 30. IV. 1973 (T. SAITO); 1 ♂, Daisen, Tottori Pref., 25. IV. 1976 (T. SAITO); Kyûsyû—1 ♂, Kuzyû, Hukuoka Pref., 17 & 18. V. 1953 (NAKAMURA).

Extra-limital specimens: 2 ♂♂, Is. Che ju do (1000 m), S. Korea, 5–6. IV. 1972 (Y. ARITA). This is the first record of this species from Korea.

Distribution. Japan (Hokkaidô, Honsyû and Kyûsyû), S. Korea and China.

Host-plant. Unknown.

Remarks. In superficial appearance and genital characters of both sexes, this species is very closely allied to *C. salicella*, occurring in Europe, but differs from the latter in the male wing venation as follows: in the forewing, the veins M_3 and Cu_{1a} are stalked or coincident in *salicella*, but they are well separated in *fumida*; in the hindwing, veins M_2 and M_3 are short-stalked or coincident in *salicella*, but they are separated in *fumida*.

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