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# A REVISION OF THE PALAEARCTIC AND ORIENTAL *TYPHLOCYBID*-GENERA WITH DESCRIPTIONS OF NEW SPECIES AND NEW GENERA

BY

PROF. S. MATSUMURA

(Pt. II)

## Div. II Typhlocybaria

### Gen. 19. ***Eupteryx*** Curt. (Pl. II, f. 4, a, b)

*Eupteryx* CURT. Ent. Mag. I, p. 192 (1833).
*Diomma* MOTSCH., Bull. Soc. Imp. Nat. Mosc. p. 102 (1863).
*Typhlocyba* FIEB., Cicad. p. 415 Gen. 105, (1863).

"Vertex at front semiglobular, half as long as at the posterior margin broad, shorter than pronotum. Gena very narrow, from clypeus to the posterior ocular angle becoming broader, scarcely excavated. Eye triangularly round. Frons long, narrow, twice or $2\frac{1}{3}$ times as long as broad at front. Pronotum as long as or somewhat longer than broad. The outer apical sector of elytron higher or deeper forkedly stalked, the inner one being simple. Sometimes instead of the stalked sectors the outer 2 sectors near to each other, so that with 4 apical cells, of which the 2nd is triangular. Apical 3 sectors of wing nearly parallel, any one not branched at the apex, before the end each connected with a cross-vein. 3rd sector sends an oblique cross-vein to before the apex, opening at the marginal vein" (MELICHAR).,,

Genotype—*Euptleryx picta* F. (=*atropunctata* GOEZE).

We have in Japan 7 species, of which the following 3 are new.

#### ***Eupteryx niisimai*** n. sp.

White. Vertex in the middle as long as at the hind margin broad, at the front rounded and much produced than on the sides. Pronotum scarcely longer than at the vertex. Elytron subhyaline, white, at the costa near the apex with 3 black dots, 2 of which are on each end of the cross-veins and the other is between them, at the apex with a similar dot, but of somewhat larger size, a much larger dot also visible at the dorsum in the 4th apical cell.

♂. Genital plates somewhat rectangular, towards the apices somewhat broadened, upturned, pygofor at the apex infuscated.

[Ins. Mats., Vol. VI, No. 3, February 1932]

♀. Last ventral segment triangularly rounded, about 1/3 the length of the coleostron, vagina scarcely protruding beyond the apex.

Length—2.8 mm.

Hab.—Hokkaido; one male was collected at Sapporo by the author and one female at Tomakomai by Prof. Y. NIISIMA.

***Eupteryx takasagonis*** n. sp.

♀. Body above black, beneath yellowish white, vertex with 2 dots near the top, a medial fine stripe yellowish. Scutellum at the apex with a whity dot. Elytron black, at the costa hyaline, but near the middle with a black patch, a dot in the middle and a spot at the apex of clavus and another dot at the dorsum just above the apex of clavus white, some veins near the apex being whity.

♀. Last ventral segment large, at the hind margin straight, about by 1/3 shorter than the coleostron which is black and whity pubescent, vagina being paler.

Length—2.8 mm.

Hab.—Honshu; 2 female specimens were collected at Takasago near Kobe in August by the author.

***Eupteryx triangularis*** n. sp.

♀. Pale yellowish. Vertex as long as the breadth between the eyes. Pronotum on the sides broadly black. Scutellum dark brown, at the base with a yellowish patch. Elytron hyaline, in the middle with a broad fuscous stripe, apical cross-veins, and 3 veins which are emitted from these cross-veins by a short way, whitish, at the apex black, with 2 hyaline patches, respectively each at the costa and dorsum; hind wings hyaline, veins largely fuscous, the 3rd sector, and the cross-veins, except the 1st, white. Abdomen on the dorsal part black, the last ventral segment long, at the hind margin straight, near the middle infuscated, about twice as long as coleostron which is black and white pubescent, vagina and coleostron at the bases whitish.

Length—4 mm.

Hab.—Honshu; one female specimen was collected at Kii by the author.

This comes near to *E. vittata* L. from Europe.

***Eupteryx u-nigrum*** n. sp.

Yellowish white. Vertex in the middle distinctly longer than at the hind margin broad. Pronotum on the side black, scutellum dark brown, so that both uniting together presented one U-shaped marking. Elytron opaque, pale

yellowish white, in the middle with a broad black stripe which runs from near the base at costa to beyond the apex of clavus, and from the middle on after bow-like excurving, unites with the apical black patch, at the costa with 3 oblique and one transverse black band, near the apex at the hind margin with 2 or 3 whity patches. Abdomen black on the dorsal part, at the venter pale yellow. Last ventral segment straight at the hind margin, on each side scarcely notched, coleostron along the vagina testaceous, the latter at apex fuscous, not protruding beyond the coleostron.

Length—4mm.

Hab.—Honshu; 2 females were collected in October, 1902, by the late Y. NAWA at Gifu and one female by M. SUZUKI at Kyoto.

## Gen. 20. ***Typhlocyba*** GERM. (Pl. II, f. 3, a, b)

*Typhlocyba* GERM. Silb. Rev. ent. I. p. 180 (1833).
*Anomia* FIEB. Verh. K.-K. Zool.-Bot. Gess. Wien. p. 508-9, pl. VII, f. 27 (1866).
*Empoa* FITCH., Cat. 4 Ann. Rep. Reg. Univ. N. Y. on State (ab. Nat. His. p. 63 (1851)).

"Vertex more or less obtuse-angular, shorter or a little longer than at the hind margin broad. Frons elongated, only 1/3 the length of frons. Antennal groove below the ocular line. Pronotum semiglobularly rounded, protruding anteriorly between the eyes, as long as or longer than half the length of the hind margin. Inner apical sector of elytron simple, ending at the inner side before or after the middle of it, the outer forked, sometimes instead of the fork the 2 converging at the base, so that presented 4 apical cells, building the outer and the largest cell by a short cross-vein which runs to the outer margin, irregularly pentagonal, the 2nd apical cell triangular, often stalked, the 4th being the smallest. Both anterior sectors of wing before the apex connected into a fork, simply ending at the apical margin, the 2nd sector short before the fork sending a cross-vein rightangularly, also a similar vein between the 3rd and 4th (marginal vein) sectors (MELICHAR).

Genotype—*Typhlocyba quercus* F.

We have in Japan 15 species as in the list, of which the following 14 are new to science.

### ***Typhlocyba aino*** n. sp.

Closely allied to *T. 6-punctata* FALL., but differs from it in the following points:

Frons above the antenna with each a fuscous dot, genae infuscated. Pronotum at anterior margin with only a black spot. Elytron at the costa about equidistantly with 4 black spots, that of the outmost is oblique and upon the cross-vein, at the hind margin along the clavus with 3 fuscous spots, corium also with some fuscous markings, membrane at the apex scarcely infuscated, beyond the cross-veins with a transverse fuscous marking.

♂. Genital plate long, linear, nearly in the same diameter throughout,

at the apex upturned, the last ventral segment scarcely longer than the foregoing.

♀. Last ventral segment about as long as broad, coleostron about 1½ times as long as broad at the base, coleostron black, along the vagina with a row of whity hairs, the latter scarcely protruding beyond the apex of coleostron.

Length—3.5 mm.

Hab.—Hokkaido, Honshu; numerous specimens were collected at Sapporo, and Takasago near Akashi in the Prov. Harima.

***Typhlocyba centrorubida*** n. sp.

Pale yellowish white, vertex, pronotum, scutellum, and abdomen at the dorsum broadly vermilion-red. Vertex in the middle roundly produced, somewhat shorter than at the hind margin between the eyes broad. Pronotum about 1½ times as long as vertex in the middle. Elytron nearly hyaline, white, iridescent, the 1st and 2nd apical sectors with a quite long stalk. Legs white, all the claws fuscous.

♂. Genital plate filamentous, towards the base somewhat broader, bow-like upturned, much longer than the pygofor, the anal tube spindle-shaped, at the base being strongly constricted.

♀. Last ventral segment at the hind margin somewhat roundly produced; coleostron about 2½ times as long as at the base broad, scarcely protruding beyond the apex of coleostron, at the extreme apex somewhat infuscated.

Length—4 mm.

Hab.—Hokkaido; 2 (1 ♂, 1 ♀) specimens were collected on August 22, 1906, at Sapporo (Jozankei) by the author.

***Typhlocyba giranna*** n. sp.

Closely allied to *T. 6-punctata* FALL., but differs from it as follows:

Vertex with 2 black spots nearer to the disc; gena near the apex with a round black spot; pronotum at the anterior margin with one and on each side with 3 black spots, the latter are disposed triangularly; elytron at the costa with 3 black spots about equidistanly disposed, from the basal spot sending an oblique fuscous stripe to the middle of clavus and 2 concolorous transverse bands near the apex, the extreme apex and a basal spot also fuscous, the extreme basal margin being infuscated.

♂. Vertex in the middle with a black patch; genital plates filamentous, bow-like upturned, about 3 times as long as the breadth at bases when both closed together.

♀. Last venteral segment at the hind margin with 3 shallow incisions;

coleostron about twice as long as broad at the base, vagina black, scarcely protruding beyond the apex.

Length—3 mm.

Hab.—Honshu, Formosa; 4 (1 ♂, 3 ♀) specimens at our University-museum, collected at Hakone, Koshun and Giran by T. SHIRAKI, I. NITOBE and the author.

***Typhlocyba hoso*** n. sp.

♀. Yellowish white. Vertex blunt-conically produced, in the middle distinctly shorter than pronotum. Elytron pale yellowish, corium along the suture with a yellowish stripe, also a similar one in the clavus, above the apex of clavus with a fuscous spot, membrane infuscated, the veins of which are whitish. Abdomen on the back with 5 black bands, the last ventral segment short, about 1/3 the length of coleostron, at the hind margin straight, coleostron about twice as long as the breadth at base, vagina scarcely protruding beyond the tip of coleostron, at the tip being infuscated.

Length—3.5 mm.

Hab.—Honshu; one female specimen was collected by M. SUZUKI at Kyoto.

***Typhlocyba subtilis*** n. sp.

Closely allied to *T. hoso* MATS., but differs from it in having membrane not infuscated, lacking yellowish stripes to elytron, having the last ventral segment longer, vagina much protruding beyond the apex of coleostron.

Length—3 mm.

Hab.—Honshu; 2 female specimens were collected by M. SUZUKI at Kyoto.

***Typhlocyba internalis*** n. sp.

♀. White. Vertex blunt-conically produced, about as long as at the hind margin between the eyes broad. Pronotum scarcely longer than vertex. Elytron whity, subhyaline, at the claval margin with a yellow stripe, at the inner-side of cross-veins with an oblique row of 3 fuscous spots; membrane infuscated, the veins white, the 1st and 2nd apical sectors with a short stalk, in the 1st cell with a hyaline spot. Last ventral segment at the hind margin broadly rounded, in the middle with a small incision, coleostron scarcely longer than at the base broad, vagina somewhat protruding beyond the apex of coleostron, at the extreme apex fuscous.

Length—4 mm.

Hab.—Kiushu; one female specimen was collected on December 29 at Jôno by S. YANO.

***Typhlocyba ishidai*** n. sp. (Pl. II, f. 3, a, b)

Closely allied to *T. candidula* KB., but differs from it as follows:

Body milky white, shiny, not pruinose; vertex more blunt-conical; pronotum transversely very finely aciculated; elytron distinctly longer, the stalk of the 1st and 2nd apical sectors shorter; last ventral segment in the middle somewhat produced, coleostron much longer, about 3 times as long as the breadth at base, vagina more protruding beyond the apex of coleostron, being black at the extreme apex.

Length—4 mm.

Hab.—Hokkaido; 2 female specimens were collected on September 30, 1931, at the Maruyama Park (Sapporo) on *Quercus grandifolia* by M. ISHIDA and H. KÔNO.

***Typhlocyba kiiensis*** n. sp.

Pale testaceous. Vertex bluntly conical, in the middle about as long as broad at the base. Pronotum with 3 obsolete dirty yellow stripes. Scutellum at each basal side with a fulvous spot. Elytron white, subhyaline, clavus with a yellowish stripe, a similar stripe being visible also upon the medial sector, near the membrane with 3 obsolete fuscous spots at the innerside of cross-veins, at the apex infuscated, at the veins whity.

♂. Genital plate filamentous, from the middle on suddenly rightangularly upturned, with very fine short hairs; lateral lobes of pygofor large, reni-from, the anal tube broad and short.

Length—3.2 mm.

Hab.—Honshu; one male specimen was collected on August 25, 1911, at Prov. Kii on *Quercus acutissima.*

***Typhlocyba koreacola*** n. sp.

Closely allied to *T. giranna* MATS., but differs from it as follows:

Pronotum lacks the lateral spots except at the humeral angle; elytron at the costa with only 2 black spots, that of the outer is much larger and not touching the costa, the basal one oblique, touching the costa.

♂. Genital plates broader, together conical, at the apical 1/3 black, with a few bristly hairs, the anal tube shorter.

♀. Last ventral segment in the middle with a shallow incision; coleostron dirty yellow, protruding somewhat beyond the apex and where is of a black colour.

Length—3 mm.

Hab.—Korea; 3 (1 ♂, 2 ♀) specimens were collected at Kankyonando by

H. OKAMOTO.

***Typhlocyba lyraeformis*** n. sp.

♂. Dirty yellow. Vertex with 2 round black spots, in the middle somewhat conically produced, being nearly parallel to the hind margin; face largely testaceous, genae black, clypeus brownish. Pronotum on each side with a black spot, in the middle with 5 large black spots which are confluent together at the hind margin. Scutellum with 2 large black spots. Elytron subhyaline, at the apical one-third somewhat infuscated, on the costa with a fuscous dot at the end of cross-vein. Last ventral segment at the hind margin somewhat triangularly incised, genital plates filiform, black, at the bases yellowish, at the apices lyre-like excurved and pointed, with fine white hairs; pygofor seen from the side obconical, black, the anal tube reddish brown.

Length—4 mm.

Hab.—Formosa; one male specimen was collected by I. NITOBE on April 16 at Kammutsu.

***Typhlocyba nakanensis*** n. sp.

White. Vertex about as long as at the hind margin broad, in the disc with 2 grayish spots, pronotum distinctly longer than at the hind margin of vertex broad. Elytron with about 17 black dots, respectively one at the costa near the base, 2 in the middle near the costa, 6 at about 2/3 parts of elytron in 2 transverse rows, the remainder at the membrane especially at the margin, but the number of dots being variable according to individual.

♂. Last ventral segment about $1\frac{1}{2}$ times as long as the foregoing, genital plates linear, somewhat broader towards the bases, upturned, seen from the side rounded.

♀. Last ventral segment long, at the hind margin straight, about half the length of coleostron which is about twice as long as broad at the base, vagina not protruding.

Length—3.6 mm.

Hab.—Honshu; numerous specimens were collected in July and August at Tokyo, Hakone and Tateyama by the author.

***Typhlocyba nitobella*** n. sp.

♂. Yellowish testaceous. Vertex with 2 black dots, at the hind margin reddish, with 2 triangular fuscous spots at the anterior border; labrum, clypeus and gena black. Pronotum on each side with a black dot, in the middle with one T-shaped black marking which is confluent with the concolorous hind

margin; scutellum with 2 black spots. Elytron subhyaline, grayish white, at the costal margin with 3 black dots, being placed nearly equidistantly, at the hind margin also with 3 fuscous patches, one of which is at the base, the middle one the largest, the other beyond the end of clavus. Genital plate linear, at the apical half black, pointed and somewhat upturned, pygofor fuscous, the anal tube testaceous, protruding scarcely beyond the tip of genital plate.

Length—3.5 mm.

Hab.—Formosa; one male specimen was collected on April 14, 1910, at Kammutsu by I. NITOBE.

***Typhlocyba nopporensis*** n. sp.

Body above olivaceous green. Vertex yellowish brown, at the anterior part and face altogether pale yellowish, the upper part of gena below the antenna darker. Pronotum at the side pale yellowish. Elytron yellow, at the middle longitudinally hyaline, membrane fuscous, veins whitish, the 1st and 2nd apical sectors with a short stalk. Hind wing hyaline, at the middle and the 1st apical vein yellowish brown, the rest whitish, the cross-veins nearly in a straight line. Abdomen sometimes black, mostly yellowish, on the back infuscated.

♂. Last ventral segment at the hind margin straight, in the middle longitudinally keeled; genital plates somewhat linear, upturned, grayish, about as long as broad at the base, the anal tube of pygofor triangular.

♀. Last ventral segment at the hind margin somewhat produced and rounded, in the middle longitudinally keeled, coleostron more than twice as long as broad at the base, vagina paler, with a row of white bristles, scarcely protruding beyond the apex of coleostron and where is infuscated.

Length—3.5 mm.

Hab.—Saghalien (Toyohara), Hokkaido (Sapporo, Nopporo), Honshu (Gifu), Kiushu (Kagoshima); numerous specimens were collected upon *Alnus alnobetula* by H. KÔNO, S. ISSIKI, T. ADACHI, and the author.

***Typhlocyba punicea*** n. sp.

♀. Rosy red. Vertex obconical, in the middle somewhat shorter than the breadth at the hind margin between the eyes, with a white dot near each eye at the front. Pronotum and scutellum with no marking. Elytra rosy red, membrane subhyaline, with a light brownish tinge, the 1st and 2nd apical veins with a long stalk.

Face, legs, except the hind tibia which is dirty white, and abdomen largely black, in the middle of venter paler.

Last ventral segment long, towards the hind margin narrower, truncated at the end, coleostron about twice as long as the last segment, with a longitudinal

row of whitish hairs; vagina testaceous, somewhat protruding beyond the apex.

Length—3.8 mm.

Hab.—Hokkaido and Honshu; numerous female specimens were collected in August and September at Sapporo and Towada (Aomori); no male.

***Typhlocyba takizawai*** n. sp.

♂. Black. Vertex yellow, near the anterior margin with 2 black spots, in the middle of frons with one V-shaped fuscous marking, at the lower part of gena and clypeus black, the former at the upper part with a black stripe. Pronotum reddish yellow, at the anterior margin with 4 black spots in a transverse row, a larger black spot on each side near the hind angle; scutellum with a black spot on each side, near the apex with a black transverse groove. Elytron subhyaline, grayish, veins whitish, at the costa orange-yellow, on the costal region with 3 black patches, respectively one near the base, one just above the 1st cross-vein, the rest near the apex; each ulnar cell filled in with black, the 2nd apical cell at the base black. Legs with fuscous markings, the hind tibia largely black. Abdomen with each hind margin of the segments narrowly yellow. Genital plates yellow, rectangular, nearly twice as long as broad, at the apices infuscated.

Length—3.5 mm.

Hab.—Hokkaido; one male specimen was collected at Sapporo on October 21, 1931, by M. TAKIZAWA.

## Gen. 21. ***Zyginella*** Löw (Pl. III, f. 15, a, b, 22, a, b)

*Zyginella* Löw, Verh. K.-K. Zoo.-Bot. Gess. Wien. 25, p. 346 (1886).

Vertex about as long as broad at the base between the eyes, blunt-conically produced. No ocelli. Eyes oval, somewhat narrower towards the hind margin. Pronotum trapezoidal, somewhat longer than the vertex, at the middle broader than the head with the eyes. Scutellum about as long as pronotum. Elytron with 2 sectors in corium, from about the middle on to the cross-veins somewhat distinct, costal crossvein long, the 1st and 2nd apical sectors stalked, with only 3 apical cells, the 3rd sector short, excurved, 2 claval nerves being visible.

Hind wing with the 1st and 2nd sectors united into a fork, sending a stalk to the apical margin, the 2nd sector (inner branch) unites with the 3rd by a straight cross-vein, the 4th unites with the 3rd beyond the cross-vein after curving much.

This resembles somewhat to *Typhlocyba* GURT., but differs from it in the venation of hind wings, especially lacking the 2nd cross-vein. (Redescribed by the author).

Genotype—*Zyginella pulchra* Löw.

We have no species belonging to this genus in Japan. The present author has the specimens of *Z. pulchra* Löw and *Z. albifrons* HORV. from Europe.

## Gen. 22. ***Hiratettix*** MATS. (n. g.)

*Hiratettix* n. g.—Form just like that of *Naratettix* MATS. Ocelli present at the front; 1st and 2nd apical sectors with a long stalk; hind wing with no marginal nerve, the venation just the same with that of *Typhlocyba* CURT.

Genotype—*Hiratettix arisanellus* MATS.

We have in Formosa only one species.

### ***Hiratettix arisanellus*** n. sp. (Pl. III, f. 3, 4, a, b)

♀. Black, shiny. Vertex dark brown, somewhat blunt, conically produced, in the middle distinctly shorter than broad at the hind margin between the eyes. Pronotum about as long as the vertex, very finely transversely aciculated. Elytron opaque, fuscous, at the costa black, with a sulphur-yellow patch at the middle of the claval margin, beyond the cross-veins with 2 white patches, respectively on each margin. Hind-wing infuscated, subhyaline. Abdomen dark brown, at the hind margin of each segment whity. Legs white, at the apex of the hind tibia with a fuscous part. Last ventral segment and coleostron black, the former about twice as long as the foregoing segment, at the hind margin rounded, on both sides somewhat excavated; coleostron about $2\frac{1}{2}$ times as long as the last segment.

Length—4 mm.

Hab.—Formosa; one female specimen was collected on May 25, 1907.

## Gen. 23. ***Nesopteryx*** MATS. (n. g.)

Vertex rounded, longer than broad at the hind margin between the eyes, with 2 large oblong ocelli between the antero-external angles of the eyes. Clavus ends at the middle of elytron, just above it with a transverse vein; at the apex with 4 sectors, building 5 apical cells, the 4th cell being the longest and the broadest, from the 1st ulnar cell sending 3 apical sectors. Hind-wing with a short cross-vein between the 1st and 2nd sectors, a branch of the 2nd and another branch of the 3rd by uniting send off a 3rd apical sector.

Genotype—*Nesopteryx arisana* MATS.

We have in Formosa the following 2 species.

### ***Nesopteryx arisana*** n. sp. (Pl. II, f. 5, 6, a, b)

♂. Black, beneath with the legs whitish. Head yellowish, vertex at the anterior border with a rhomboidal black spot, at the hind margin with 3 black spots united together, a middle line narrowly also black. Elytron subhyaline,

infuscated, at the base and at the costal half black, along the middle part of costa with a long hyaline patch, membrane being paler.

Genital plate linear, whity, at the apex pointed and upturned, pygofor as long as the genital plate.

Length—5 mm.

Hab.—Formosa; one male specimen was collected on April 28, 1917, at Mt. Arisan by Prof. T. SHIRAKI.

***Nesopteryx kuyania*** n. sp.

Body above largely fuscous, beneath with the legs pale yellowish. Vertex at the anterior half pale yellowish, with 3 black dots, the middle one being the largest and sending backwards a fine fuscous filament from each side of it, together enclosing a fusiform pale yellowish part, at the hind margin with 2 triangular yellowish dots. Pronotum and scutellum in the middle with a yellowish stripe, becoming broader near the apex of scutllum. Elytron subhyaline, infuscated, costa till the cross-vein whitish, in the middle with a black patch, at the apex near the lower angle with a black spot; wings also infuscated, with brownish veins. Last ventral segment small, longer than the breadth, genital plates long, filamentous, at the apices upturned, with long fine hairs, pygofor as long as broad, shorter than the genital plate.

Length—4.8 mm.

Hab.—Formosa; one male specimen was collected on April 25, 1907, at Kuyania near Arisan by the author.

## Gen. 24. ***Platycyba*** MATS. (n. g.)

Closely allied to *Zygina* FIEB. on account of the venation except the 4th sector connected by a long oblique marginal vein, which opens in the middle of the apical cell; body with the head flat, vertex much longer than at the hind margin between the eyes broad, nearly in the same length with the pronotum, resembling somewhat *Togaritettix* MATS.

Genotype—*Platycyba bistriata* MATS.

We have in Japan only one species.

***Platycyba bistriata*** n. sp. (Pl. III, f. 18, 19, a, b)

Pale yellowish white. Vertex, pronotum and scutellum on each side with a yellowish red stripe which continues to a vermilion-red stripe of the elytron at the hind margin when the latter is closed together. Elytron pale yellowish, at the costa infuscated, with a reddish shade, equidistantly with 3 fuscous stripes, 2 of the outer being oblique, near the apex with one or 2 black dots,

veins of the membrane being whitish.

♀. Last ventral segment at the margin somewhat rounded, coleostron more than twice as long as at the base broad; vagina concolorous, at the extreme apex infuscated, not protruding.

Length—2.8 mm.

Hab.—Okinawa; 2 female specimens were collected on May 21, 1912.

## Gen. 25. ***Platytettix*** MATS. (n. g.)

Closely allied to *Zygina* FIEB., but differs from it as follows:

Body flat; vertex about as long as the hind margin between the eyes broad, blunt-conically produced, in the disc on each side with a puncture-like pit, no ocelli; frons vaulted, about as long as broad between the eyes; pronotum at the base broader than the head with eyes, scarcely shorter than the vertex in the middle, somewhat vaulted; scutellum in the disc with a shallow pit, just below it a transverse groove; elytron with the 1st cell being semicircular; hind wing lacking the oblique vein between the 3rd and 4th sectors, the 1st cross-vein obsolete.

Genotype—*Platytettix pulchrus* MATS.

We have in Japan only one species.

### ***Platytettix pulchrus*** MATS. (Pl. III, f. 13, 14, a, b)

*Motschulskia pulchra* MATS. Appl. Ent. Vol. I, p. 397 (1916).

♀. "Body yellowish white. Vertex with 4 black spots, 2 of the anterior being smaller, face fuscous, at the top orange-yellow. Pronotum and scutellum yellowish brown, at the posterior margin of the former with a triangular grayish white patch, defined by fuscous, at the lateral sides white. Elytron hyaline, veins largely fuscous, at the costa and 3 patches orange-yellow, respectively one near the base at costa, one in the clavus and the rest which is somewhat L-shaped in the middle of corium, membrane fuscous spotted, veins white. Abdomen black, on each segment at the hind margin narrowly white. Legs orange-yellow, tarsi black."

"Last ventral segment at the hind margin straight; coleostron about twice as long as at the base broad, near the apex with a few white hairs, at the apex fulvous; vagina black, not protruding beyond the apex of coleostron."

Length—3 mm.

Hab.—Honshu, Shikoku, Kiushu; numerous female specimens were collected by S. IGUCHI, M. SUZUKI and the author upon the orange-tree.

This is very common at Kagoshima.

## Gen. 26. ***Pyramidotettitx*** MATS. (n. g.)

Closely allied to *Zyginoides* MATS., but differs from it as follows:

Vertex pyramidally produced, longer than the hind margin between the

eyes broad, on the disc somewhat flat, at the sides suddenly sloping, at the apex somewhat upturned; frons much longer than the maximum-width; pronotum much longer than the scutellum; elytron with 5 apical cells, the 1st apical cell triangular, the 2nd the largest, the 5th semicircular, the hind wing with the venation nearly the same.

Genotype—*Motschulskia citri* MATS.

A beautifully coloured *Typhlocybid*-species.

We have in Japan only one species.

***Pyramidotettix citri*** MATS. (Pl. II, f. 17, 18, a, b)

*Motschulskia citri* MATS., Appl. Ent. Vol. 1, p. 397, pl. XVI, f. 10 (1916); Dainippon Gaichu Zensho Vol. 1. p. 305, pl. X, f. 10, pl. XII, f. 23 (1919).

♀. Body yellowish white. Vertex on each side with a black speck near each eye; face between the eyes with a black band. Pronotum with 2 black bands, one of which is situated at the anterior margin and the other near the middle, at the sides being fuscous. Scutellum near the apex with a black band. Elytra smoky, both when closed presenting in the middle on the back a large rhomboidal yellowish white patch, at the costa near the middle with 2 yellow patches, in the membrane with 3 white patches, respectively one at the costa between the 1st sector and the cross-vein, one in the 1st apical cell and the rest at the extreme tip, being provided with one black speck in the 2nd apical cell.

Last ventral and genital segments brownish, the former at the hind margin straight, the latter more than twice as long as at the base broad, vagina not protruding beyond the apex of coleostron.

Length—3.5 mm.

Hab.—Kiushu; 4 female specimens were collected on July 10, 1903, at Kagoshima by the author upon an Orange-tree.

## Gen. 27. ***Igutettix*** MATS. (n. g.)

Closely allied to *Naratettix* MATS., but differs from it as follows:

Vertex not flat, in the disc distinctly vaulted, on each side quite deeply excavated; frons about twice as long as the maximum-width, near the transit to vertex with 2 ocelli; pronotum much longer than the vertex, on each side with a puncture-like pit; scutellum much shorter than the pronotum, in the middle excavated, with an obsolete narrow transverse groove; elytron with the 1st and 2nd apical sectors short, stalked, 2 cross-veins only, one at the costa being long and another short; the hind wing nearly similar to that of *Dicraneura* HARDY.

Genotype—*Igutettix pulverosus* MATS.

We have only one species belonging to this genus.

***Igutettix pulverosus*** n. sp. (Pl. II, f. 11, 12, a, b)

Reddish brown. Vertex dirty yellow, with 4 fuscous spots, 2 of the pos-

terior being somewhat excavated, at the top of frons also with 4 fuscous spots, the lower 2 being wider separted than those of the upper, the lower 2/3 of face black. Pronotum on each side with a fuscous dot, being excavated somewhat; scutellum with a black patch on each side, in the middle with a triangular fuscous spot. Elytron vermilion-red, an oblong costal patch whitish, pruinose, membrane subhyaline, fuscous, veins paler. Legs reddish yellow, the anterior femur in the middle, and the middle and posterior ones at the apices fuscous. (Abdomen defect).

Length—3.8 mm.

Hab.—Honshu; one female specimen was collected by S. IGUCHI on the 7th in February at Harima.

## Gen. 28. ***Zyginoides*** MATS. (n. g.)

***Zyginoides*** n. g.

Closely allied to *Platytettix* MATS., but differs from it as follows:

Head with the eyes distinctly broader than the pronotum at the hind margin, the 1st and 2nd apical sectors stalked and the 1st opening at the costa much before the apex.

Genotype—*Zyginoides taiwanus* SHIR.

*Eupteryx taiwanus* SHIRAKI, Special Seport of Agr. Exp. St. Formosa, V, p. 95 (1910); MATS., Dainippon Gaichu Zensho, I, p. 297 (1919).

♀. "Pale testaceous. Vertex with 2 roundish black spots. Pronotum near the anterior margin with 2 oblong black spots, near the hind margin with 4 fuscous spots in a transverse row, 2 of which in the middle are paler in colour. Scutellum at each end of the transverse groove with a fuscous spot. Elytron nearly hyaline, whity, fuscous or black spotted as follows; at the costa with 3, about equidistantly situated, and that of the middle being situated on the cross-vein, 3 in the membrane in an oblique row, each in the cell, 3 in the clavus equidistantly and the other 4 in the corium, each on both ends of the ulnar cells. Hind-wing whitish, hyaline, veins being concolorous."

"Last ventral segment at the hind margin somewhat narrowed and rounded; coleostron somewhat longer than the last segment, near the apex with whitish hairs, vagina concolorous, distinctly protruding beyond the apex of coleostron, where is black in colour."

Hab.—Formosa, Okinawa; numerous specimens were collected by T. SHIRAKI and K. KUROIWA, but no male.

This is very injurious to the cotton-tree and *Choudria crassicautis*.

## Gen. 29. ***Aidola*** MELICH.

*Aidola* MELICH. Notes Leyden Museum, p. 142, XXXVI (1912).

"Vertex 3 times as broad as long, rounded, in the middle as long as next the eyes. Frons long, narrower towards the clypeus, moderately vaulted. Clypeus small, rostrum short; the 1st and 2nd joints equal in length, each twice as long as wide, the apical bristle short. Pronotum at the anterior part rounded, at the hind part straight, at the sides rounded. Scutellum short, triangular, with a deep trans-

verse groove before the middle. Elytra long, protruding much beyond the apex of abdomen; 2nd and 3rd sectors at the bases with large and deep punctures, the 1st sector being not distinct, clavus at the basal half with the similar punctures, claval nerve obsolete; with 4 apical cells, the anterior cell of which sending a cross-vein to the costa, 1st and 2nd sectors of wings unite into a fork, the 3rd sector unites by an oblique cross-vein with the inner branch, both sectors open at the apical margin. (MELICHAR).

Genotype—*Aidola orbata* MELICH.

We have no species belonging to this genus in Japan.

The present author has not seen this species.

## Gen. 30. ***Zygina*** FIEB. (Pl. III, f. 20, 21, a, b)

*Zygina* FIEB., Verh. K.-K. Zool.-Bot. Gessell. p. 500, pl. VII, f. 28 (1866).
*Idia* FIEB., Verh. K.-K. Zool.-Bot. Gessell. p. 509, VII, f. 29 (1866).

"Body elongate, slender, very soft. Vertex, face and pronotum similar to *Typhlocyba* GERM., 2 inner apical sectors of the elytron near to each other, parallel or divergent, so that building a very narrow middle cell (3rd cell), the 1st apical cell small, short, widely separated from the apex of the elytron, the 2nd irregular. Veins of the wing similar to *Typhlocyba*, only the cross-vein, which runs from the 3rd sector to the marginal nerve, not rightangularly but acute-angularly." (MELICHAR).

Genotype—*Zygina nivea* MULS.

*Zygina* FIEB. synonymized by GILLETTE with *Typhlocyba* GERMAR and VAN DUZEE with *Erythroneura* FITCH. The type species of *Erythroneura* FITCH, Cat. Fourth Ann. Rep. Reg. Univ. N. Y. on State Cabinet Nat. Hist. p. 63 (1851) was not designated until 1892, when OSHANIN chose *E. tricincta* FITCH.

Europian Homogterogists use mostly now *Zygina* instead of *Erythroneura*, so the present author tabulating Palaeartic genera used also the former and waits a further study on account of the synonym. DISTANT use this genus as a subgenus of *Typhlocyba*, while MELICHAR* and SCHUHMACHER** treat this as an independent genus.

We have in Japan as in the list 39 species of which 28 are new.

### ***Zygina akashiella*** n. sp.

Whitish to pale yellowish, no marking. Vertex obconically produced, in the middle scarcely shorter than broad at the hind margin between the eyes. Pronotum somewhat longer than the vertex in the middle. Elytron whitish, at the costal margin equidistantly with 2 black dots, that of the inner longer and being situated somewhat obliquely; membrane with 3 similar dots, 2 of which are situated at the costa and the other at the hind margin.

♂. Genital plates together somewhat cylindrical, at the apices rounded, the last ventral segment straight at the hind margin.

♀. Last ventral segment at the hind margin on each side somewhat in-

*MELICHAR—Notes from the Leyden Museum, Vol. XXXVI. p. 145 (1912).
**SCHUHMACHER—Mitt. Zool. Mus. Berlin, 8, p. 109 (1915).

cised, at the middle somewhat projected and in its middle somewhat notched; coleostron about 2½ times as long as broad at the base, vagina concolorous, with very few hairs.

Length—2.5 mm.

Hab.—Honshu, Hachijo, Kiushu; numerous specimens were collected by the author.

This recembles somewhat *Z. onukii* MATS., but the genital plate of the male differs entirely.

***Zygina akazu*** n. sp.

♀. Closely allide to *Z. suzukii* MATS., but differs from it as follows:

Vertex with no black spot, at the apex with a reddish yellow patch; pronotum at the anterior margin with no marking; elytron with a whitish gray shade, an oblong costal patch white; abdomen black, the last ventral segment at the hind margin less produced, in the middle with a small notch; coleostron along the sides of vagina with white hairs, at the apex black and much protruding beyond the apex of coleostron and where is black in colour.

Length—2.9 mm.

Hab.—Honshu; one female specimen was collected at Harima by S. IGUCHI.

***Zygina albisoma*** n. sp.

White. Vertex and the anterior part of pronotum somewhat grayish, the former in the middle distinctly shorter than the breadth at hind margin, in the male at the apex of scutellum with 2 fuscous dots. Elytron hyaline, towards the apex iridescent, all the veins obsolete but not fading.

♂. Genital plate linear, at the base somewhat broader, bow-like upturned and at the apex rounded.

♀. Last ventral segment about as long as broad, at the hind margin triangularly rounded; coleostron about twice as long as broad at the base, along the vagina at the apical half with a row of whitish bristly hairs.

Length—3.7 mm.

Hab.—Formosa; 4 (3♂, 1♀) speciemens collected in July, at Shoka and Heito (Ako) by the author.

***Zygina arachisi*** MATS.

*Zygina arachisi* MATS., Appl. Ent. Vol. 1, p. 397 (1916); Dainippon Gaichu Zensho Vol. 1, p. 294 (1919).

Body white, with a faint yellowish tinge. Vertex blunt, conically produced, with no marking. Elytron whit,e subhyaline, with carmine-red spots in the following places: one at the clavus near the base, one or 2 near the middle of suture, one near the base of corium, one near the middle of costa

and the rest at the base of the 2nd apical vein, but the number of spots are variable in number.

♂. Genital plate somewhat cylindrical, scarcely broader, at the base upturned, at the apex rounded, longer than the pygofor.

♀. Last ventral segment roundly produced at the hind margin, somewhat shorter than at the base broad; coleostron about 2½ times as long as at the base broad, with a row of whity hairs, vagina concolorous, at the apex carmine-red, scarcely protruding.

Length—2.8 mm.

Hab.—Formosa; numerous specimens were collected on October 4, 1908, by I. NITOBE upon *Arachis hypogaea* at Taihoku.

***Zygina basiflava*** n. sp.

Whity. Vertex at the front rounded, distinctly longer than the breadth at base. Pronotum and scutellum with no marking. Elytron nearly hyaline, yellowish, at the base deeper in colour. All the claws of the legs fuscous.

♂. Genital plate long, somewhat razor-shaped, upturned, at the base broader than at the apex where is somewhat rounded, about 8 times as long as broad at the base, with whity bristly hairs; pygofor much shorter than the genital plate, the anal tube slender and long.

♀. Last ventral segment at the hind margin somewhat produced and rounded; coleostron about 2½ times as long as broad at the base, vagina distinctly protruding beyond the apex of coleostron.

Length—4.8-5 mm.

Hab.—Formosa; 2 (1 ♂, 1 ♀) specimens were collected at Kammutsu on April 16, 1910, by the late I. NITOBE.

One of the largest *Zygina*-species in the Oriental region.

***Zygina bisignatella*** n. sp.

♀. Testaceous. Vertex whity, in the middle somewhat shorter than at the hind margin between the eyes broad, at the top with 2 oblong black spots. Pronotum at the hind margin distinctly broader than the head with eyes, at the hind margin paler. Elytron subhyaline, at the costal margin with a long dirty yellowish patch, the 2nd and 3rd sectors distinct. Hind wing with the cross-veins white, oblique, both nearly in a straight line. Abdomen dirty yellow, venter paler. Last ventral segment at the hind margin somewhat rounded, coleostron nearly in the same length with the rest of abdomen, with a row of whity bristly hairs, vagina distinctly protruding beyond the apex of the coleostron.

Length—3 mm.

Hab.—Formosa; one female specimen was collected on July 11, 1906, at Heito (Ako) by the author.

This has some resemblance to *Heliona constricta* MELICH. from Ceylon, but the hind wing with no marginal nerve.

***Zygina bokotonis*** n. sp.

♀. Pale yellowish white. Vertex blunt, conically produced, in the disk with 2 oblong black dots situated obliquely, scutellum at the extreme apex fuscous. Elytron white, subhyaline, at the costal margin with 2 black spots, somewhat equidistantly situated, at the hind margin with 3 fuscous spots and one or 2 similar spots in each apical cell, in the 2nd ulnar cell near the apex with also one similar spot, near the middle of corium with some irregular fuscous markings.

Last ventral segment in the middle at the hind margin scarcely incised, coleostron about $1\frac{1}{2}$ times as long as broad at the base, conical, with white hairs, vagina at the apex infuscated, not protruding beyond the coleostron.

Length—3 mm.

Hab.—Formosa; one female specimen was collected on April 26, 1920, at Bokoto by Prof. T. SHIRAKI.

***Zygina cerasi*** n. sp.

♂. Whity yellow. Vertex rounded, in the middle somewhat shorter than at the hind margin broad, with 2 obsolete reddish spots. Pronotum with 2 obsolete reddish stripes, not reaching to the hind margin, on each side also with 2 red spots. Elytron hyaline, veins in a certain light white, near the hind margin with 2 vermilion-red stripes, respectively one in the clavus and the other in the corium, ending at the tip of clavus, nearly parallel to each other, near the costa with 2 red spots about equidistantly to each other from the base, at the end of the lowest cross-vein with a red shade.

Genital plate at the apical 2/3 filamentous, somewhat bow-like uptuned, about twice as long as the last ventral segment.

Length—3 mm.

Hab.—Hokkaido; one male specimen was collected on September 25, 1931, by M. ISHIDA and H. KÔNO at Sapporo upon the cherry-tree.

***Zygina formosana*** n. sp,

Brownish, in the female dirty yellow. Vertex and the anterior margin of pronotum dirty white, the former in the middle about half as long as broad at the hind margin between the eyes, at the upper part of frons with 2 oblong brownish spots, each defined at the outer side by a paler excurved bar, below in the middle with an obscure broad stripe, scutellum at the base with 2 brownish spots. Elytron at the costa with an oblong white patch, difined on

the hind part by a fuscous long patch, at the costal half being infuscated. Abdomen on the back fuscous in the female. Legs pale testaceous.

♂. Genital plate bow-like upturned, at the base somewhat broader, from the middle on filiform, at the apex rounded; pygofor large, seen from the sides obconical.

♀. Last ventral segment at the hind margin straight, coleostron about twice as long as broad at the base, vagina by about 1/3 protruding beyond the apex of coleostron.

Length—3 mm.

Hab.—Formosa; 3 (1 ♂, 2 ♀) specimens were collected at Toroën, Heirin and Taikokan by the author.

***Zygina hirayamella*** n. sp.

White. Vertex in the disc with 2 black spots, blunt, conically produced, in the middle distinctly shorter than broad at the hind margin. Pronotum black, with 3 whity spots, one of the middle being the smallest; scutellum black, also with 3 spots, one of which at the anterior border is the largest. Elytron white, scattered with large fuscous spots, one of which at the middle of costa is black and when the elytra closed the marking in the middle is diamond-shaped, membrane being largely black. Abdomen at the dorsum black, at the sides whity.

♂. Genital plate towards the apex gradually slenderer, at the apical 1/3 linear, together enclosing an ellipsoidal space, pointed at the apex and upturned; the last ventral segment somewhat shorter than the breadth.

♀. Last ventral segment about as long as broad, at the hind margin straight, coleostron at the apical 1/3, except the margin, black, vagina distinctly protruding beyond the apex of coleostron.

Length—3 mm.

Hab.—Honshu; 3 (1 ♂, 2 ♀) specimens were collected by S. HIRAYAMA and the author. Somewhat resembles *Z. okamotonis* MATS.

***Zygina iguchiella*** n. sp.

♀. White. Vertex blunt, conically produced, distinctly shorter than broad at the base. Pronotum about as long as broad at the hind margin of vertex. Scutellum at the base on each side with a brownish conical spot. Elytron white, subhyaline, with 4 dark gray patches, respectively one near the base in the clavus, one in the middle of corium, one on the hind margin at the base of the 4th cell, the remainder at the tip of costa, at the dorsum near the middle being infuscated. Abdomen at the dorsal part somewhat fuscous. Last ventral segment

at the hind margin broadly rounded, coleostron about twice as long as broad at the base. Vagina distinctly protruding beyond the apex of coleostron.

Length—4 mm.

Hab.—Honshu; one female specimen was collected at Harima by S. IGUCHI.

***Zygina jonella*** n. sp.

Closely allied to *Z. bipunctula* MELICH., but differs from it as follows:

♀. Vertex in the middle distinctly longer than broad at the hind margin between the eyes, with a reddish stripe which continues to the frons and where expands into a fusiform spot, frons near the eyes with each a brownish spot, gena brownish, clypeus fuscous; pronotum at the anterior margin on each side with a fuscous dot; elytron much shorter, pinkish yellow, the veins of corium pinkish; abdomen fuscous.

Last ventral segment at the hind margin lobe-like produced and rounded, in the middle not notched; coleostron fuscous brown, along the vagina with a row of white hairs, about $2\frac{1}{2}$ times as long as broad at the base, vagina black, distinctly protruding beyond the apex of coleostron.

Length—3 mm.

Hab.—Kiushu; 3 female specimens were collected on April 25 at Jono (Bungo) by S. YANO.

This species may be a form of *Z. bipunctula* MELICH.,* but the author, on account of not seeing the typical specimen, can not well identify it by only the description.

***Zygina kagina*** n. sp.

♂. Grayish white. Vertex in the middle about $2\frac{1}{2}$ times as long as the width at the base, in the middle scarcely longer. Scutellum with 2 cuneate black spots. Elytra grayish white, subhyaline, towards the apices scarcely infuscated, the first 2 apical sectors parallel, broadly separated at the base; veins of the wings infuscated. Abdomen at the dorsum fuscous, at the hind margin of each segment narrowly whitish gray; venter infuscated, but paler than on the dorsum, genital plate nearly $2\frac{1}{2}$ as long as the segment, slender, from the middle on suddenly slenderer and to the apex nearly of the same width, in the middle somewhat inflated. Legs concolorous with the body, claws brownish.

Length—5 mm.

Hab.—Formosa; one male specimen was collected on April 26, 1907, at Kagi by the author.

*Hom. Faun. Ceylon, p. 320, Taf. VI, f. 3, a (1903).

***Zygina kakogawana*** n. sp.

Closely allied to *Z. suzukii* MATS., but differs from it as follows:

♀. Body entirely pale yellow; vertex distinctly narrower towards the apex and longer, the black spots being longer, and of an oblong form; elytron hyaline, a spot near the middle of corium and a stripe along the suture orange-yellow; last ventral segment blunt conically produced, at the hind margin distinctly narrower, coleostron and vagina concolorous with the body, the latter distinctly protruding beyond the apex of coleostron and where is somewhat infuscated.

Length—3 mm.

Hab.—Honshu; one female specimen was collected at Kakogawa near Akashi by the author.

***Zygina moiwana*** n. sp.

♀. White. Vertex blunt-conically produced, in the middle about as long as at the hind margin between the eyes broad, with 2 yellowish red stripes which continues to the pronotum, frons near each inner side of the eye with a transverse carmine-red speck; pronotum with a similar stripe also on each side at the pleura near the humeral angle, with a short carmine-red stripe. Elytron nearly hyaline, with a yellowish tinge, all the sectors near the base distinct. Last ventral segment at the hind margin blunt, conically produced; coleostron about $2\frac{1}{2}$ times as long as at the base broad, scarcely protruding beyond the apex of coleostron.

Length—3 mm.

Hag.—Hokkaido; one female specimen was collected on May 28 at Mt. Moiwa by the author.

***Zygina mori*** MATS.

*Zygina mori* MATS., Appl. Ent. Vol. I, p. 397, pl. XVI, f. 7 (1916); Dainippon Gaichu Zensho, Vol. 1, p. 291, pl. XII, f. 22 (1919).

Body pale yellow, markings carmine-red. Vertex with 2 interrupted stripes which unite at the anterior margin, face and pleura with spots. Pronotum with 2 excurved stripes which do not reach to the posterior margin. Scutellum at the apex red, at the base with 2 semi-rings. Elytron subhyaline, whity, with 3 longitudinal rows of spots, some of them uniting so as to form a zigzac line. Abdomen at the venter and legs whity.

♂. Genital plates somewhat cylindrical, somewhat slenderer towards the apices, upturned, at the extreme apices being infuscated; pygofor at the apex with a reddish shade, the anal tube whity and of a roundish shape.

♀. Last ventral segment at the hind margin somewhat produced and rounded; coleostron about $2\frac{1}{2}$ times as long as at the base broad, vagina with a reddish tinge, scarcely protruding beyond the apex of coleostron, at the extreme apex being carmine-red.

Length—2.8 mm.

Hab.—Honshu, Kiushu; numerous specimens were collected by Y. NAWA, S. NIWA and the author.

This is very injurious to the mulberry-tree.

### *Zygina multipunctata* MATS.

*Zygina multipunctata* MATS., Dainippon Gaichu Zensho Vol. I, p. 203, pl. X, f. 5 (1919).

Body yellow. Vertex triangularly rounded, at the hind margin often with 2 fulvous spots. Pronotum with 4 fulvous stripes, 2 of the middle are somewhat incurved, those of the other somewhat excurved, commonly with one fulvous spot on each side. Scutellum with 2 black stripes, sometimes at the apex and sometimes at each angle black. Elytron subhyaline, with a light shade of yellow, scattering numerous black dots, those at the base and the hind margin near the middle being often large. Body beneath and legs whity, rostrum at the apex carmine-red.

♂. Genital plate near the apex at the outside with a short tooth, at the apex pointed and upturned, pygofor longer than the genital plate, anal tube roundish, at the base being constricted.

♀. Last ventral segment at the hind margin produced, on each side shallowly excavated; coleostron about 2½ times as long as at the base broad, vagina concolorous, at the apex scarcely protruding beyond the apex of coleostron.

Length—3 mm.

Hab.—Honshu, Kiushu; numerous specimens were collected by S. YANO, Y. NAWA, M. SUZUKI and the author, the male being rare.

This is injurious to the mulberry-tree.

### *Zygina nigricans* n. sp.

Fuscous. Head yellow, vertex in the middle somewhat shorter than at the hind margin broad, with a large roundish black spot not touching the hind margin, frons especially in the male with one fuscous stripe on each side, labrum, clypeus and a part of the rostrum infuscated. Pronotum near the anterior border with whity spots or lines. Elytron subhyaline, at the costa towards the base near the middle with a long black patch, being somewhat pruinose; hind wing much paler than the elytron. Legs white.

♂. Last ventral segment about as long as the genital plate, towards the apices somewhat slenderer, strongly upturned from the middle, scarcely as long as the pygofor which has a yellowish spot in the middle.

♀. Last ventral segment with a shallow incision on each side, coleostron nearly twice as long as the breadth at base, in the middle somewhat paler, vagina somewhat protruding beyond the apex of coleostron.

Length—3.3 mm.

Hab.—Formosa; numerous specimens were collected at Koshun, Hoppo, Arisan by T. SHIRAKI and the author.

***Zygina okamotonis*** n. sp.

♀. Grayish. Vertex whity, in the disc with 2 roundish black spots, on the anterior border with a brownish spot, in the middle as long as the breadth at the hind margin, frons on each side with a fuscous patch which extends to the gena. Pronotum at the anterior margin with a black spot, defined posteriorly by white, at each side with a small white spot, at the hind margin largely whity. Scutellum at the base with 2 black spots, defined posteriorly by white. Elytron fuscous, at the costa subhyaline, white with 3 fuscous spots, at the clavus with 3 yellowish spots, veins white. Legs white. Abdomen black, at the sides narrowly whitish, venter fuscous, the last ventral segment about as long as the breadth, straight at the hind margin, coleostron about 3 times as long as breadth at the base, vagina somewhat protruding beyond the apex of coleostron.

Length—3.2 mm.

Hab.—Korea; 2 female specimens were collected by H. OKAMOTO.

***Zygina onukii*** MATS.

*Zygina onukii* MATS., Appl. Ent. Vol. 1, p. 366 (1916).

*Zygina harimensis* MATS., Dainippon Gaichu Zensho Vol. 1, p. 292 (1919).

Body pale yellow. Vertex with or without 2 obscure yellowish spots. Pronotum with or without 2 reddish stripes; their apices somewhat incurving. Elytron hyaline, most spots yellowish red, in the clavus with 3 fulvous or black spots, one of which is sinuated at the apex, one in the middle and the other at the base.

♂. Genital plate distinctly longer than the last ventral segment, long triangular, at the apex black and upturned; pygofor relatively large, the anal tube small and roundish.

♀. Last ventral segment triangularly produced, at the apex rounded; coleostron about 2½ times as long as at the base broad, vagina darker, scarcely protruding beyond the apex. Length—2.5 mm.

Hab.—Honshu, Shikoku, Kiushu, Okinawa; numerous specimens were collected by S. ONUKI, K. KUROIWA, S. ISSIKI and the author.

The colours of the spots on elytron are quite variable. This is very injurious to the mulberry-tree.

***Zygina rubriclavus*** n. sp.

White with a very light shade of rosy colour. Vertex about as long as at the hind margin between the eyes broad. Pronotum somewhat longer than the vertex in the middle. Elytron white, nearly hyaline, in the middle of clavus with a vermilion-red stripe, nearly parallel to the suture, veins being concolorous.

Last ventral segment at the hind margin somewhat rounded; coleostron about twice as long as at the base broad, vagina concolorous, scarcely protruding beyond the apex of coleostron.

Length—3 mm.

Hab.—Honshu; one female specimen was collected on December 11 at Tokyo by the author.

***Zygina sachalina*** n. sp.

♀. Grayish white. Vertex in the middle distinctly longer than the hind margin broad, with a broad fuscous middle stripe. Pronotum in the middle with a fuscous patch, attenuated towards the anterior part, scutellum being fuscous. Elytron sulphur-yellow, the costal and apical parts being paler. Hind wing whity. Body beneath with the legs pale testaceous. Last ventral segment about as long as the breadth, at the hind margin straight, coleostron more than twice as long as the breadth at base, vagina somewhat protruding beyond the apex of coleostron.

Length—3.8 mm.

Hab.—Saghalien; 3 female specimens were collected by S. ISSIKI and J. ADACHI.

***Zygina sapporensis*** n. sp.

Closely allied to *Z. alneti* DAHLB., but differs from it in the following points:

Body paler, distinctly slenderer in shape; vertex at the anterior border more rounded.

♂. Genital plate at the apical half much slenderer, rightangularly upturned, at the apex being finely pointed, seen from the side rounded, the anal tube of somewhat hatchet-shaped.

♀. Last ventral segment at the hind margin more narrowly rounded, on each side with a roundish incision, vagina more protruding beyond the apex of coleostron.

Length—4 mm.

Hab.—Hokkaido; numerous specimens were collected in September on *Ulmus*, *Acer* and *Betula*-spp. by M. ISHIDA and H. KÔNO at Sapporo.

***Zygina satsumana*** n. sp.

Closely allied to *Z. sapporensis* MATS., but differs from it as follows:

White with no yellowish tinge; vertex more produced obconically; scutellum pale brownish; elytron at the costa near the base with a large white patch; abdomen testaceous brown, the last ventral segment in the middle distinctly produced, rounded, coleostron nearly twice as long as broad at the base, vagina scarcely protruding beyond the apex of coleostron and where is black in colour.

Length—3 mm.

Hab.—Kiushu; one female specimen was collected at Kagoshima on July 10, 1903, by the author.

***Zygina sawashibae*** n. sp.

♀. Yellowish white. Vertex in the middle scarcely shorter than at the hind margin, in the disc with 2 reddish yellow stripes. Pronotum with 2 reddish stripes, both opening at the costa near the base and being to each other nearly parallel, at the middle of costa with one black dot and near the apex with 2 similar dots, respectively one at the costa and the other at the hind margin, at the apex with a black transverse bar.

Last ventral segment and ovipositor nearly the same with *Z. aceri* MATS., but vagina at the apex not infuscated.

Length—2.5 mm.

Hab.—Hokkaido; 2 female specimens were collected on October 6, 1931, by H. KÔNO and the author on *Sarpinus cordata* at Sapporo.

This is one of the smallest *Zyginid*-species in Japan.

***Zygina shinshana*** n. sp.

Whitish testaceous. Vertex in the middle somewhat longer than at the sides, about 3 times as broad as the length, at frons with a black spot. No marking on the pronotum and scutellum. Elytra subhyaline, glassy, veins pale yellowish, the 1st and 2nd apical sectors parallel with each other to the tip. Body beneath with legs concolorous, claws being fuscous.

♂. Genital valvula lacking. Genital plates sharp conical, about $1\frac{1}{2}$ as long as the breadth in the middle, to the middle flat and then suddenly upturned at the apical half; last ventral segment somewhat shorter than the foregoing.

♀. The last ventral segment conical, at the hind margin rounded, coleostron about $2\frac{1}{2}$ times as long as the last ventral segment, vagina scarcely protruding beyond the apex.

Length—3.5 mm.

Hab.—Formosa; numerous specimens were collected on July 24, 1906, at Shinsha by the author.

***Zygina shokensis*** n. sp.

Closely allied to *Z. shinshana* MATS., but differs from it as follows:

Vertex with no black spot; scutellum at the apex black; 1st and 2nd apical nerves diverge towards the apical margin, the 1st opening at the costa, being far away from the apex.

♂. Genital plates together linear, upturned, about 2½ times as long as the breadth at the base.

♀. Last ventral segment about twice as long as the breadth, at the hind margin truncated, vagina at the apex infuscated, a little protruding beyond the coleostron.

Length—3.2 mm.

Hab.—Formosa; numerous specimens were collected on July 21, 1906, at Shaka by the author.

***Zygina suzukii*** MATS.

*Zygina suzukii* MATS., Appl. Ent. Vol. 1, p. 396 (1916); Dainippon Gaichu Zensho Vol. 1, p. 296 (1919).

Closely allied to *Z. jonella* MATS., but differs from it as follows: Body pale yellowish; vertex with two black spots on the vertex nearer to each other than to the eyes; no other marking at the vertex as well as in the face; elytron with or without a reddish shade, membrane scarcely infuscated, veins yellowish; propectus, abdomen on the back and venter at the base largely black. Last genital segment nearly the same with that of *jonella* MATS., but the coleostron pale yellow, the vagina in the middle brown, on each side being black.

Length—3.8–4 mm.

Hab.—Honshu, Kiushu; 5 female specimens were collected by M. SUZUKI at Kyoto and by S. YANO at Jono (Buzen).

***Zygina takaonella*** n. sp.

♂. White. Vertex conically produced, about as long as at the hind margin between the eyes broad, at the top with 2 grayish oblique bars, antenna at the base with a fuscous speck. Elytron white, subhyalin, with 4 carmine-red dots, respectively one at the hind margin about in the middle of clavus, one in the middle of suture, one in the middle near the costa and the rest at the stalk of the 1st and 2nd apical sectors.

Last ventral segment at the hind margin triangularly rounded; coleostron about 4 times as long as at the base broad, vagina concolorous, distinctly protruding beyond the apex of coleostron, at the extreme apex being reddish.

Length—3 mm.

Hab.—Formosa; one female specimen was collected on April 4, 1907, at Takao by the author.

***Zygina takasagonis*** n. sp.

Form and marking closely allied to *Z. maculifrons* MOTSCH., but differs from it as follows:

♀. Body about twice larger in size, the colour largely brownish fuscous; head yellowish, frons at the apical ½ on the side and at the apex fuscous,

scutellum on each side at the base with a large fuscous patch; elytron somewhat suffused, in the middle longitudinally transparent, on the basal half at the costa with a long brownish patch; last ventral segment long, conically produced and at the apex rounded, coleostron about twice as long as at the base broad, vagina by about $\frac{1}{4}$ protruding beyond the apex of coleostron.

Length—3.8 mm.

Hab.—Honshu; one female specimen was collected in August at Takasago (near Akashi) by the author.

***Zygina teizonis*** n. sp.

♀. White. Vertex about as long as at the hind margin broad, in the disc with 2 grayish spots. Pronotum with about 6 simillar spots. Scutellum near the apex with 3 black spots. Elytron white, the claval suture and 3 spots at the claval margin yellowish, scattering about 15 black small dots which are most numerous in the middle and near the apex.

Last ventral segment about twice as long as in the foregoing, at the hind margin on each side with a shallow incision, coleostron about $2\frac{1}{2}$ times as long as the breadth at base, vagina not protruding beyond the apex.

Length—3.5 mm.

Hab.—Honshu; one female specimen was collected on September 1, 1908, by TEIZO OGASAWARA at the Prov. Iwate.

***Zygina yamashiroensis*** MATS.

*Zygina yamashiroensis* MATS., Appl. Ent. Vol. I, p. 396 pl. XVI, f. 9 (1919).

Pale yellow, marking carmine-red. Vertex with 2 stripes which are connected at the end with each other by a cup-like concolorous marking, at the front with an interrupted bow-like narrow marking. Pronotum with 6 stripes, on each side with a bar. Elytron hyaline, white, marking zigzac, being interrupted, the 3rd apical sector at the base as a continuation of the zigzac marking by a short way also carmine-red.

♂. Last ventral segment at the hind margin somewhat rounded, genital plates gradually slenderer towards the apices, which are upturned and rounded; pygofor about as long as the genital plates, the anal tube being constricted at the base.

♀. Last ventral segment at the hind margin straight, coleostron about $2\frac{1}{2}$ times as long as the breadth at the base, vegina at the apex infuscated and where is somewhat protruded, with a row of white hairs along the innerside of coleostron.

Length—3 mm.

Hab.—Hokkaido, Honshu, Kiushu; numerous specimens were collected by M. ISHIDA, H. KÔNO, S. YANO and the author upon *Acer pictum*, *Morus bombycis* and *Populus balsamina*.

***Zygina yanonis*** n. sp.

♀. Closely allied to *Z. okamotonis* MATS., but differs from it as follows:

Vertex with 4 black spots, 2 anterior of which are smaller; one V-shaped patch at the end of frons fuscous; pronotum fuscous, with 4 whitish spots, at the sides paler; scutellum with 3 spots at the base, the middle one being pointed; elytron at the costal margin with 3 and at the claval region with 2 whity patches, the longitudinal veins reddish, the cross-veins, and a part of the longitudinal veins connected with them, white. Abdomen entirely black; last ventral segment and coleostron nearly the same.

Length—3 mm.

Hab.—Honshu, Kiushu; one female specimen was collected on August 13 by S. YANO at Eihikosan, and 2 other females at Tokyo by S. HIRAYAMA.

## Gen. 31. ***Motschulskia*** KIRK.

*Conometopius* MOTSCH., Bull. Soc. Nat. Mosc. XXXVI, 3, p. 103 (1865). nom. Praeocc.
*Motschulskia* KIRK., Wien ent. Zeit. xxiv, p. 266 (1905).

"In form elongated and slender as in *Typhlocyba*, but with the vertex distinctly triangular, strongly excavate at base; ocelli none, eyes elongate, by no means projecting but appearing conical seen from above; antennae setaceous, not extending beyond the pronotum, which is transverse, a little attenuated in front, as broad as the base of the head, the angles rounded; mesonotum trapezoidal, distinctly separated from the scutellum which is triangular; tegmina shining, a little transparent, of delicate consistence throughout and uniformly coloured to their apices, veins invisible; legs slender but not very long." (MOTSCHULSKY translated by DISTANT).

According to the diagnosis this belongs to Div. *Typhlocybaria*, but no homopterogist has seen this insect.

(END)