A new species of *Trioza* from the western Japan
(Homoptera: Psylloidea, Triozidae)

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抄録：西日本産トガリキシラミの1新種
（同翅亜目：キシラミ上科，トガリキシラミ科）

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Abstract: *Trioza horii* is newly described from the western part of Honshu, Shikoku, and Kyushu. It seems to be an inhabitant at the cool-temperate zone and related to *Trioza nigra*, *T. esakii*, *T. kasugaensis*, and *T. magna* in structures and the host-relationships.

Key words: Triozidae; *Trioza horii*; cool-temperate; new species; Japan.

A somewhat remarkable species of the genus *Trioza* has been known from the mountainous regions of W. Honshu, Shikoku and Kyushu mostly in the cool-temperate zone since more than thirty years ago. It appears to be related to *T. nigra*, *T. esakii*, *T. kasugaensis* and *T. magna* in the morphological structures (MIYATAKE, 1975), but can be easily distinguished from the other species by several characteristics. It is, therefore, described new to science in the present paper. As for the host-relationships it seems to be related to the species mentioned above, which are associated with the plants of Styracaceae and Symplcocaceae, since its teneral forms were obtained on *Styrax shiraiana* of Styracaceae at Mt. Saragamine, Ehime Prefecture, although its host plant had not been strictly confirmed yet.

The exact biology of the present new species is still unknown, but it seems to be an univoltine species. Adults emerge in early July and pass the subsequent seasons in the forest in the form of adult. Overwintered females may lay eggs on the host plant in late spring to early summer and nymphs may grow rather rapidly.

The holotype and a large part of the type series treated in this paper will be kept at the Osaka Museum of Natural History, and some of paratypes will be deposited at the Entomological Laboratory, College of Agriculture, Ehime University as shown in the latter part of

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this paper.

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*Trioza horii* sp. nov.

*Color:* General color pale yellowish to light yellowish brown, sometimes orange with stripes and markings of yellowish brown dorsad. Antenna pale beige to light yellowish brown, with X black and IX black or dark brown. Vertex yellowish. Genal cones whitish. Eyes light brown to brown; ocelli yellow or orange. Thorax with distinct stripes of paler color dorsad; metathorax usually reddish brown or brown. Forewing transparent except for the area around apex of clavus, where membrane is more or less tinted brownish, posterior margin with 5 distinct black or brown spots as shown in figure (Fig. 1-A), each at medial cell, between apices of M_4+4 and Cu_1, at cubital cell, at apex of clavus and near base, veins yellowish brown, R_1 and Cu_2 more or less dark brown apically. Legs yellowish brown, claws and apical spurs of posterior tibia black. Abdomen often greenish.

Overwintered adults (Fig. 2-A) mostly reddish brown to dark brown in general color. Vertex and genal cones brown or dark brown. Antenna mostly brown, with II yellowish and two apical segments black. Forewing with brown veins. Legs brown, femora dark brown.

*Structure:* Head (Fig. 1-C) small, but nearly as wide as thorax, deflexed; vertex longer than half as long as wide, rounded down to genal cones anteriorly, with deep impressions posteriorly on each side of median line, with long pubescence throughout. Genal cones (Fig. 1-C) short and stout, 2/3 as long as vertex, depressed from plane of vertex, divergent, pubescent, blunt apically. Antenna slender, 1.3 to 1.4 times as long as width of head, with 1 long and 1 short setae at apex, each segment with a pair of setae at apex, relative length of each segment as 1 : 1 : 5 : 2.5 : 2 : 2 : 2 : 2 : 1 : 1.

Thorax large, strongly arched, densely pubescent; pronotum deflexed, distinctly hairy, broad medially in dorsal aspect; praeascutum long, nearly 6/7 as long as wide; mesoscutellum somewhat reverse triangular, 2/3 as long as wide, with long pubescence. Forewing (Fig. 1-A) long, longer than 1.5 times as long as body, 2.7 times as long as wide, narrow basally, angulate at apex, veins biseriately set with small setae; Rs very long, strongly bisinuate; M slightly arched; medial cell small, relative length of M_1+2 and M_3+4 as 7 : 5; cubital cell quite elongate, rectangular form. Hind wing (Fig. 1-B) long, 7/10 as long as forewing, 3 times as long as wide, narrowly rounded apically, venation triozine, but R and Cu obsolete basally, C+ Sc with several setae basally and 3 or 4 hooked frenulum medially. Legs long, massive, hairy; femora swollen; posterior tibia with 2 or 3 short basal spurs, with 1 outer and 3 inner apical spurs, with comb-like bristles along cephal margin; proximal segment of posterior tarsi without apical spurs; meracanthus moderately long, slender, projected ventro-caudad, acute at apex. Abdomen (excl. genital segment) short, less than 1/2 as long as thorax and head combined, bare dorsally and pubescent ventrally.
Male genitalia (Fig. 1–D) moderately large, 1/3 to 1/2 as long as the rest of abdomen; proctiger in lateral view long and stout, about 1.4 times as long as forceps, anterior margin sinuate, constricted near base, caudal margin strongly produced caudad, with short hairs apically and a row of long bristles along caudal margin in apical half, truncate obliquely at apex; forceps long, in lateral view curved slightly caudad, broad basally and tapered to subacute apices which are moderately sclerotized and curved cephalad, with hairs near apices and along both anterior and posterior margins, inner face bearing 6 rows of strong setae in basal half; aedeagus moderately long, the 2nd segment shorter than the 1st segment, with apical portion transformed as beak-like and apex subacute; subgenital plate high in lateral

Fig. 1. Trioza horii sp. nov. A, Forewing; B, Hind wing; ♀, Mt. Tsurugi, Tokushima Pref., 8.vi.1964. C, Head, ♂, frontal view; D, Male genitalia, lateral view; E, Female genitalia, lateral view; Komenono, Matsuyama, Ehime Pref., 19.vi.1968.
view, somewhat hemispherical, anterior and dorsal margins rather straight, rounded ventrally, with hairs ventrad and caudad. Female genitalia (Fig.1-E) large, nearly 2/3 as long as the rest of abdomen; dorsal valve longer than ventral, with apical portion attenuated and conspicuously upturned, apex subacute, pubescent mostly in apical half; ventral valve nearly as long as or scarcely shorter than inner valve, with apical portion slender, apex acute, heavily pubescent throughout.

Length of body ♂ 2.1 - 2.3 mm, ♀ 2.3 - 2.6 mm (to tip of folded wings ♂ 4.2 - 4.5 mm, ♀ 4.6 - 4.8 mm); length of forewing ♂ 3.5 - 3.8 mm, ♀ 3.8 - 4.1 mm; width of forewing ♂ 1.2 - 1.3 mm, ♀ 1.4 - 1.5 mm; length of antenna ♂ 0.9 mm, ♀ 0.8 - 0.9 mm.

Holotype (OMNH TI 32): ♂, Miyazuma-kyo, alt.ca 600 m, between Mt. Kamagatake (alt. 1,100 m) and Mt. Nyudodake (alt. 906 m), Miyazuma-cho, Yokkaichi City, Mie Prefecture, 1. xi.1987, T. OHKAWA leg. [Size: Length of body 2.1 mm; to tip of folded wings 4.2 mm; length of forewing 3.6 mm]

Paratypes: 1♂, Dorogawa — Mt. Inamuraga-dake, Yoshino-gun, Nara Pref., 23.vii.1967, Y. MIYATAKE leg. 1♀ (overwintered), 1 ex (overwintered, broken), Mt. Saragamine, Ehime Pref.,

Fig.2. Triosa kori sp. nov. A, ♂, overwintered, Mt. Saragamine, Ehime Pref., 3.v.1953; B, ♀, Mt. Kujuh, Oita Pref., 24.ix.1967.
New species of *Triosa*


**Distribution:** Japan (Mie Pref., Nara Pref., Ehime Pref., Tokushima Pref., Oita Pref.).

**Host plant:** "Ko-hakuuboku" - *Styrax shiraiana* Makino? [Styracaceae].

**Remarks:** Differs from *T. nigra* Kuwayama in being conspicuously larger in dimensions (nearly 2 times), in having Rs of forewing terminated much closer to apex of forewing, with M₁+₂ which is ended very close to apex of forewing and with a much more elongate (nearly 2 times) cubital cell, genal cones of which apices are rounded, sinuate male forcps and a dorsal valve of female genitalia which is conspicuously upturned at apex. Differs from *T. magna* Kuwayama in being conspicuously smaller in dimensions (nearly 0.8 times), in having a rather short antenna (1.3 times as long as width of head in *horii* and 2.2 times in *magna*), in the shape of male forcps and in having a dorsal valve of female genitalia which is more attenuate apically and distinctly upturned at apex.

Differs from *T. esaki* Miyatake and *T. kasugaensis* Miyatake in having a longer M₃+₄ (nearly 2/3 times as long as M₁+₂, 1/2 times in *esaki* and *kasugaensis*) and more elongate (nearly 2 times) cubital cell in forewing, more elongate forcps in male genitalia and a dorsal valve remarkably upturned at apex in female genitalia.

**Literature Cited**