

## A New Record of *Tricycleopsis paradoxa* Villeneuve from Japan (Diptera: Calliphoridae)

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**Abstract:** *Tricycleopsis paradoxa* Villeneuve is newly recorded from the mainlands, Honshu, Shikoku and Kyushu, Japan. The female is redescribed in detail. The illustration of ovipositor is given for the first time. A key is provided to distinguish it from the Japanese endemic species, *T. tibialis* Kurahashi.

**Key words:** Calliphoridae, *Tricycleopsis*, New record, Japan, Fauna

### INTRODUCTION

*Tricycleopsis paradoxa* Villeneuve, 1927 is a tropical calliphorid fly, which has hitherto been known from Indonesia, Malaysia and Taiwan (Kurahashi, 1970; James, 1977). In Japan, only one species, *Tricycleopsis tibialis* Kurahashi, 1972 has been so far recorded from Honshu (Kurahashi, 1972). The authors examined specimens of the calliphorid flies in the Reference Center, Institute of Tropical Medicine, Nagasaki University (TMNU), Department of Medical Zoology, Tokyo Medical and Dental University (TMDU), Department of Medical Entomology, National Institute of Health (NIHJ), and found 11 *Tricycleopsis paradoxa* Villeneuve collected from Honshu, Shikoku, Kyushu and Hachijo Jima Isl. This is a new record of the species from Japan. The female is redescribed in detail and its ovipositor together with that of *T. tibialis* is illustrated.

### Key to the Japanese species of *Tricycleopsis* Villeneuve

- 1. Body and legs largely testaceous yellow ..... *T. paradoxa* Villeneuve
- Body and legs largely metallic except for tibiae brownish ..... *T. tibialis* Kurahashi

*Tricycleopsis paradoxa* Villeneuve

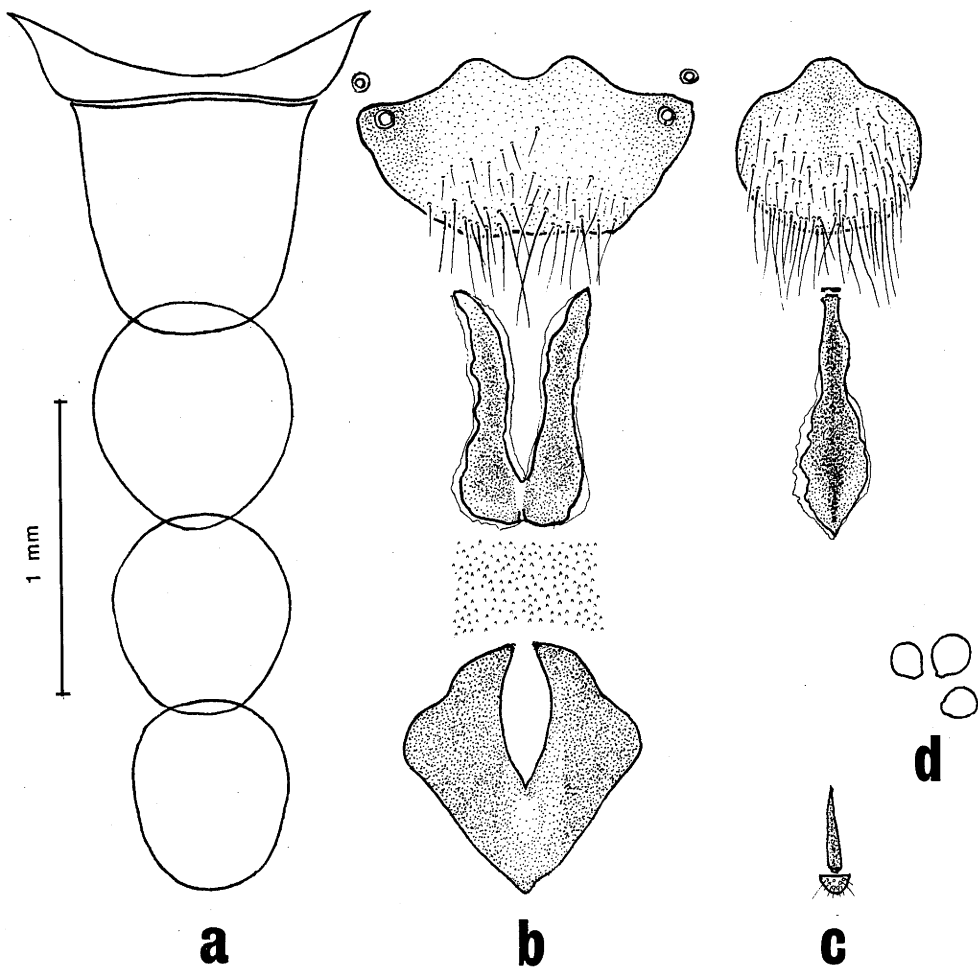
*Tricycleopsis paradoxa* Villeneuve, 1927, Rev. Zool. Afr., 15: 389.

♀.—*Head*: eyes bare, dichoptic, separated at vertex by a distance equal to 0.24–0.26 of head width; frontal stripe reddish brown, narrowed posteriorly, about 3 x the width of one of parafrontalia just in front of anterior ocellus; parafrontalia gray-dusted, slightly darkened toward vertex, with black and white setulae on anterior half, and several black setulae present near vertex, provided with 5 strong *ori* and 1 fine interstitial between 2nd and 3rd *ori*; *ors* 2+0; *oc* developed; *acoc* weakly developed; *ov* and *iv* well developed; *poc* divergent; *occ* 1; parafacialia yellowish brown, darkened below, yellowish-silver dusted, setulose above, white setulae intermixed with 1–2 black ones; face pale brown, slightly yellowish-gray dusted, without median carina; facialia brown, gray-dusted, with black setulae on lower 1/3 from vibrissae to antennal bases; medianae brown, slightly yellowish-gray dusted under certain incidence of light, largely bare except for 1–2 black setulae below; vibrissaria narrow, brown, slightly yellowish-gray dusted under certain incidence of light, with bristly hairs; vibrissae strongly developed; epistome pale brown, not distinctly projecting forward; genae fuscous except for upper margin yellowish, gray-dusted, with black hairs; postgenae concolorous with genae above, but yellowish brown below, with black hairs anteriorly and with yellow ones posteriorly; occiput concolorous with genae, gray-dusted, clothed with yellow hairs; 2nd antennal segment reddish brown, black setulose; 3rd antennal segment largely fuscous except for reddish brown base, slightly more than 2 X as long as 2nd; arista fuscous, long-plumose; palpi orange, slightly darkened apically.

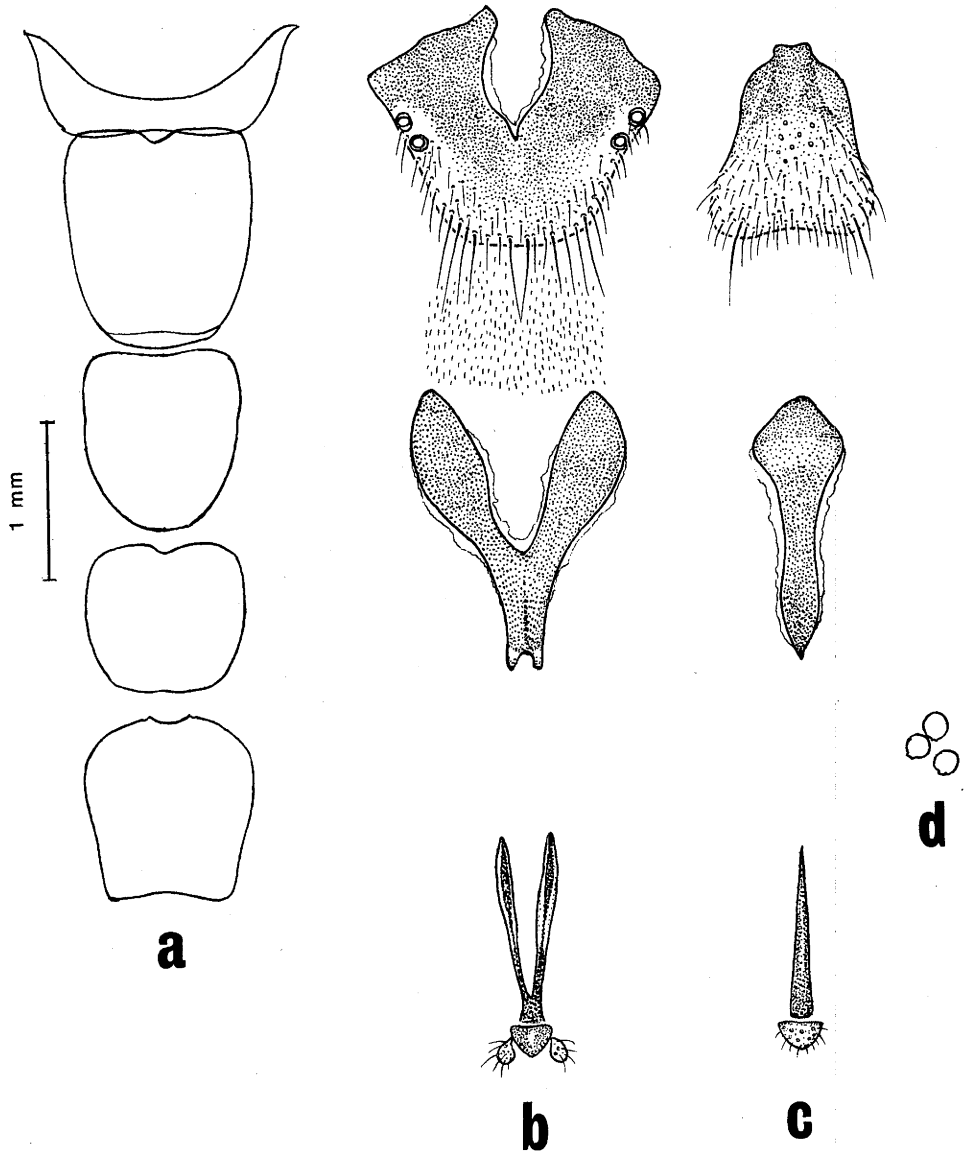
*Thorax*: testaceous, yellowish-gray dusted, dorsum with median black stripe widened and two-branched on posterior half of scutum; humeri, postalar calli and scutellum concolorous with scutum; prosternum testaceous yellow, yellowish-haired; propleura testaceous yellow, yellowish-haired; supraspiracular convexity fuscous, pubescent; a few hypopleural hairs present on upper part below anterior corner of metathoracic spiracle, yellow; mesopleura blackish-haired; sternopleura and pteropleura clothed with black and yellow hairs; meso- and metathoracic spiracles yellowish white; postalar declivity with tuft of yellowish hairs intermixed with a few black ones on central portion; tympanic tuft not developed, only a few yellow hairs present; suprasquamal ridge with anterior parasquamal tuft of a few yellow hairs. Chaetotaxy; *ac* 2+3, *dc* 2–3+3, *ia* 1+2, *h* 3, *ph* 2–3, *prs* 1, *sa* 3, *pa* 2–3, *st* 1+1, *sc* 3–4+1, *n* 2, *pp* 2, *pst* 1–2.

*Wings*: hyaline, yellowish brown tinge entirely; veins yellowish brown; epaulet brown; basicosta yellow; subcostal sclerite yellow, yellowish pubescent; node of 2nd and 3rd longitudinal veins with several black setulae above and below, one of them stronger than the others; 4th longitudinal vein bent with a right angle, but the corner rounded, section of the 4th vein from bend to wing edge inflexed; squamae yellowish brown, thoracic one lobulated, with black hairs on central portion of upper surface. Halteres yellow.

*Legs*: yellowish orange except for fuscous tarsi; coxae with yellow and black hairs; femora and tibia clothed with black hairs; fore tibia with incomplete row of five short *ad*



**Fig. 1.** *Tricycleopsis paradoxa* Villeneuve, ♀. a: Abdominal sternites 1-5, ventral view. b: Tergites 6-8+9, ovipositor, dorsal view. c: Sternites 6-9, Ovipositor, ventral view. d: Spermathecae.



**Fig. 2.** *Tricycleopsis tibialis* Kurahashi, ♀. a: Abdominal sternites 1–5, ventral view. b: Tergites 6–9, ovipositor, dorsal view. c: Sternites 6–9, ovipositor, ventral view. d: Spermathecae.

and 1 *p*; mid tibia with 1 *ad*, 2 *pd* and 1 *v*; hind tibia with 2 *av*, 2 *ad* and 2 *pd*, incomplete rows of short *ad* and *pd* more or less developed.

**Abdomen:** short oval, entirely testaceous yellow, yellowish-gray dusted irregularly, largely black-haired, the hairs on sternite 1 and anterior margin of sternite 2 yellow: tergites 1+2 entirely testaceous yellow; median black triangular spot present on tergite 3; tergite 3 marginal banded only on lateral sides, with a pair of strong erect median and several lateral marginal bristles; tergite 4 with median black stripe and complete marginal band, with row of erect marginal bristles, 3–4 strong bristles present on lateral sides of the tergite; tergite 5 with trace of median stripe, with row of erect marginal bristles and 8 strong discals, two strong bristles present on lateroventral side of tergite 5; sternites 1 and 2 yellowish, yellowish-haired on entire sternite 1 and anterior margin of sternite 2; other sternites testaceous yellow, clothed with black hairs and bristly ones. Ovipositor moderate in length, as shown in Fig. 1.

♂.—well redescribed by Senior-White *et al.* (1940). Hypopygium was illustrated by Kurahashi (1970).

Length: 7.5 mm.

**Specimens examined.** HACHIJO JIMA: 2 ♂, Tokyo, Mt. Mihara, 700 m, 18. XI. 1, 980 m, 27. X. 1981, H. Kurahashi (NIHJ). HONSHU: 1 ♂ 1 ♀, Kanagawa Pref., Kawasaki City, Asou, 28. XI. 1980, 15. XII. 1989, N. Agui (NIHJ). SHIKOKU: 1 ♂, Ehime Pref., Seto-cho, 25. VII. 1960, R. Kano (TMDU). KYUSHU: 2 ♂ 4 ♀, Nagasaki Pref., Nagasaki City, 25. VI. 1990, 18–19. VI. 1991, 19. VIII. 1991, 2–3. K. 1991, 5. K. 1991, 23. K. 1991, O. Suenaga (TMNU).

**Bionomics.** Nothing is known.

**Distribution.** Indonesia (Sumatra), Malaysia (Malaya, Borneo), Taiwan and Japan (Honshu, Shikoku, Kyushu and Hachijo Jima Isl.)

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