

THE FAMILY CURCULIONIDAE OF JAPAN. II. VITICIINAE, SUBFAM. NOV.

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**THE FAMILY CURCULIONIDAE OF JAPAN. II.
VITICIINAE, SUBFAM. NOV.***

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Abstract

The new subfamily Viticiinae are proposed for receiving the genera *Viticis* Lea and *Tivicis* Morimoto, new genus. The former has been placed in the tribe Ottistirini of the subfamily Rachyderinae, and the latter contains two new species, *maculatus* and *aeratus*, from the Ryukyus, Japan.

The tribe Ottistirini were established by Heller (1925) in the subfamily Rachyderinae on eight genera, and key to genera of the tribe, twelve in all, from the world was given by Emden (1944). By courtesy of Dr. R. T. Thompson, I had examined seven genera of the tribe in the collection of the British Museum (Natural History) together with a new genus from Japan, and found that *Viticis* and the new genus are markedly different from the others in such important characters for the taxonomy of Curculionidae as the structures of mandibles, prementum, postmentum, and legs, though they are similar to each other in first sight and *Viticis* has been classified in the Ottistirini by Lea (1930), Emden (1936, 44), and Zimmerman (1939, 40, 42, 43, 63).

On this occasion of describing a new genus from Japan, I wish to propose a new subfamily Viticiinae based on two genera in this paper.

I acknowledge my indebtedness to Dr. R. T. Thompson of the British Museum (Natural History) for his kind help, and to many friends for their kindness in giving me the materials. My thanks are also due to Prof. Y. Hirashima of Kyushu University for his kind guidance in the course of the present study.

***Viticiinae* subfam. nov.**

Type-genus : *Viticis* Lea.

Here also belongs *Tivicis* gen. nov.

* Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Series No. 131).

Rostrum slightly broader than long, epistome not delimited posteriorly by a sulcus, scrobes passing oblique downwards and almost touching apico-ventral margin of eyes. Postmentum pedunculate, prementum not completely covering buccal cavity, but well exposed the parts of maxillae. Labial palpi three-segmented. Apical exterior surface of mandibles without an appendage or scar.

Prothorax without ocular lobes ; anterior margin of prosternum straight ; fore coxae separated. Scutellum visible. Elytra with prominent humeri, ten striate, basal margin not laminate.

Legs with fore pair a little longer than posteriors; femora dentate ; tibiae curved, uncinata, not mucronate; tarsi with third segment wider than second, weakly notched at apex. First ventrite behind coxa as long as second, the latter as long as third and fourth combined.

Male aedeagus with penis curved, struts short and broad, inner sac much shorter than penis. Tegmen Y-shaped, parameres absent.

Judging from such characters as the flat and uncinata tibiae, short rostrum with thinner and sharp mandibles, and longer fore legs, it has a relation with some xylophagous subfamilies. The present new subfamily is, however, clearly separable from them by the following key:

- 1 (8) Postmentum not pedunculate ; prementum completely covering buccal cavity ; tibiae not uncinata **Curculionidae adelognathi**
- 2 (3) Mandibles without a scar or lasting appendage **Sitoninae, Pachyrhynchinae**
- 3 (2) Mandibles with a scar or lasting appendage
- 4 (7) Scrobes of rostrum curving downwards in front of eyes, lateral in position; prothorax without ocular lobes **Brachyderinae**
- 5 (6) Epistome delimited posteriorly by a sulcus; fore and middle tibiae mucronate ; corbel of hind tibiae open; claws connate at base or only one claw **Ottistirini**
- 6 (5) Epistome not separated posteriorly by a sulcus other tribes of **Brachyderinae**
- 7 (4) Scrobes of rostrum straight, dorsal in position **Ottirhynchinae, etc.**
- 8 (1) Postmentum pedunculate ; prementum not completely covering buccal cavity, leaving maxillae entirely or largely exposed; mandibles without a scar or lasting appendage **Curculionidae phaneroognathi**
- 9(18) Tibiae uncinata
- 10(17) Fore coxae separated
- 11(16) Prosternum not canaliculate
- 12(15) Tarsal groove of fore tibiae normal as in the posteriors, inner setose fringe oblique
- 13(14) Rostrum a little wider than long; pronotum without ocular lobes; pygidium covered ; posterior margin of 2-4 ventrites straight; mesepimera not ascended; eyes not approximate on forehead **Viticiinae**
- 14(13) Rostrum much longer than wide **Pissodinae, Acicnemidinae, etc.**
- 15(12) Tarsal groove of fore tibiae entirely open posteriorly, inner setose fringe on the lower edge **Cossoninae**
- 16(17) Prosternum canaliculate **Cryptorhynchinae, etc.**
- 17(10) Fore coxae contiguous **Hylobiinae, Mecysolobiinae, Cleoninae, etc.**
- 18 (9) Tibiae simple or mucronate at apex many subfamilies

Tivicis gen. nov.

Type-species : *Tivicis maculatus* sp. nov.

Forehead between eyes a little narrower than the base of rostrum, flat; eyes lateral, well separated from prothorax, weakly convex. Rostrum with dorsal outline weakly depressed at base, expanded from base to apex on sides; epistome not delimited posteriorly by a sulcus; scrobes deep, passing downwards. Antennae with scape reaching the posterior margin of eye; funicle six-segmented, first globular, second longer, club compact. Prementum without seta. Mandibles each with two short setae.

Prothorax without ocular lobes, widest in the middle. Scutellum bare. Elytra much wider at humeri than the base of pronotum, strongly punctate-striate, tenth stria entire. Pygidium covered. Metepisterna narrow, reaching posteriorly to first ventrite. First ventrite behind coxa as long as second, the latter as long as third and fourth combined. Femora dentate. Tibiae curved, fore tibiae a little longer than the posteriors, apex of tibiae with two inner and two outer setose fringes. Tarsi with third segment wider than second, weakly notched apically, claw segment small. Claws almost connate to form a single claw, but shortly furcate at apex. Ovipositor vestigial, stylus

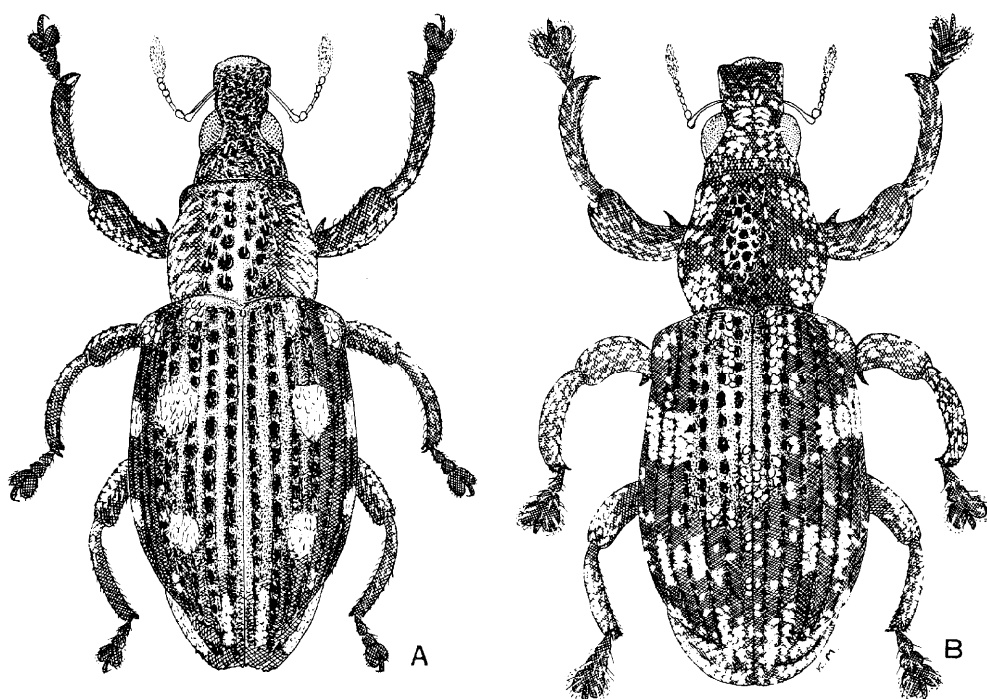


Fig. 1. A: *Tivicis maculatus* sp. nov. B: *Tivicis aeratus* sp. nov.

absent, coxite hardly sclerotized, small.

The present new genus is easily separable from *Viticis* by the tarsi, which are normal cryptopentamerous, while in *Viticis* tarsi are three-segmented and claw segment is wanting.

***Tivicis maculatus* sp. nov.**

Derm black, scape of antennae reddish brown, funicle dark reddish brown, apical margin of rostrum dark reddish brown; scales greyish with greenish lustre in many specimens, and often with coppery shimmer in some places.

Head opaque, densely punctate, with sparse setiform scales; forehead between eyes flat, without median fovea, $4/5$ times as wide as the base of rostrum, scales wide; eyes oblong-oval, twice as long as the shortest diameter. Rostrum straightly expanded anteriorly on sides, 1.2 times as wide at apex as the base, rugose and opaque on basal half, then finely punctate to the apex, with several scales at the base. Antennae with scape as long as funicle, first segment of funicle globular, slightly longer than wide, second 1.5 times as long as wide, third and fourth subequal in shape, fourth to sixth successively slightly broader; club as long as first to fifth funicular segments combined.

Pronotum slightly wider than long (10 : 8-9), truncate at apex, bisinuate at base, widest just before the middle, the sides very weakly rounded or almost straightly and slightly narrowing posteriorly; coarsely with setiferous strong punctures, scales forming longitudinal lateral stripes.

Scutellum small, a little longer than wide, bare, impunctate.

Elytra $2/3$ times as broad as long, three times as long as pronotum, almost straightly and slightly expanded on sides from humeri to apical third, then broadly rounded posteriorly; basal margin convex anteriorly on either side of scutellum; striae with coarse punctures and wider than intervals basally, but becoming a little smaller and narrower and as wide as intervals distally, setae borne by punctures very minute and almost invisible; intervals convex, bare, impunctate, tenth interval costate along apical margin and continued to first. Scales forming following patches: two at the base of third and sixth intervals, two before and two behind the middle on third to fifth and seventh to eighth striae, one on second interval near apex, and one in the apico-lateral margin of elytra on tenth interval.

Legs with femora and tibiae rather densely clothed with elongate scales; femora each with sharp tooth, apex of which slightly bend distad, this tooth larger and placed at basal fourth in fore femora, a little shorter and placed at basal third in middle femora, small and median in hind femora, fore and middle femora each with two tubercle-like teeth at about the middle, which arranged dorso-ventrally at flat anterior margin; fore tibiae longest, evenly

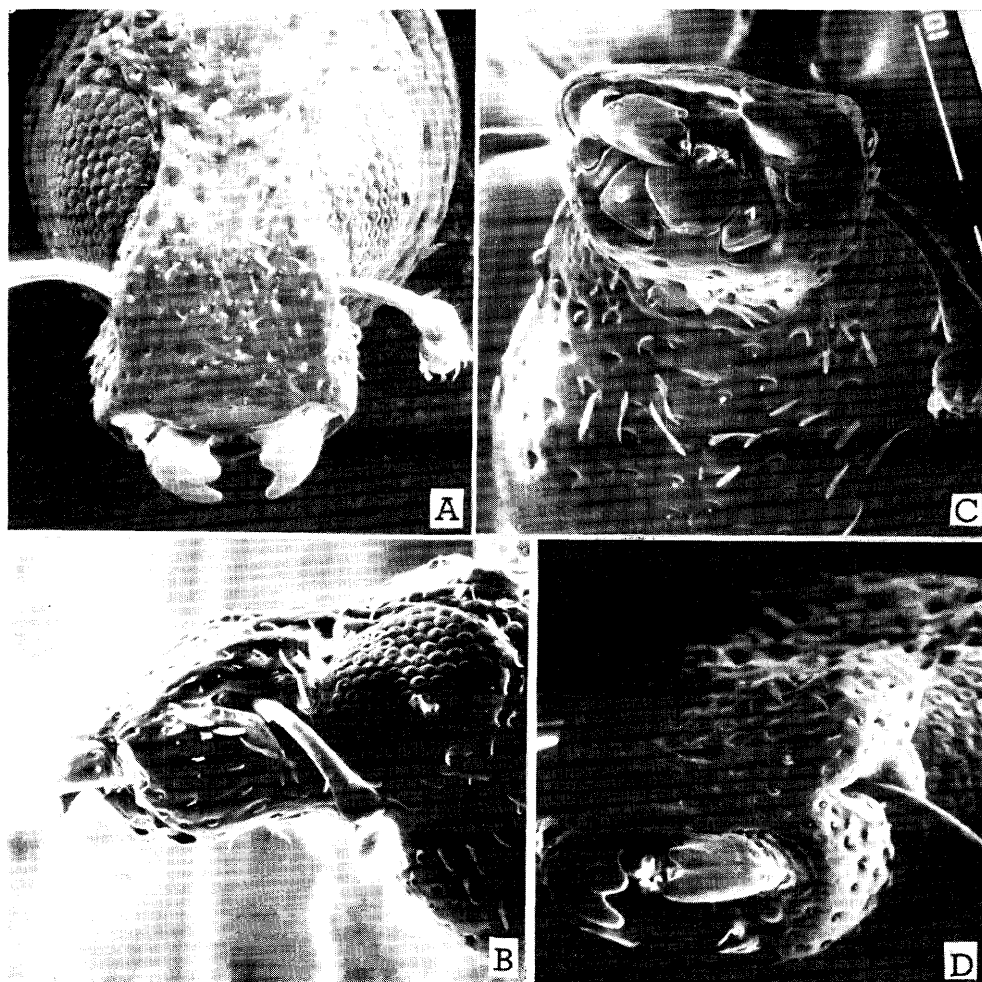


Fig. 2. *Tivcis maculatus* sp. nov. A: Rostrum, dot-so-anterior. B: Rostrum, lateral. C: Mouth parts, ventral. D: Mandible.

curved; hind tibiae shortest, curved at basal fifth, then almost straight distally, tibiae uncinata; tarsi with second segment transverse, widest at apex, third segment wider than second, weakly notched at apex.

Sternum with scattered scales at sides only, otherwise bare; metasternum almost impunctate except along coxal cavities and sides; metepisterna with a row of punctures.

Venter with first and second ventrites with scattered small setigerous punctures, which being a little larger and denser along basal margin, third and fourth ventrites impunctate, fifth ventrite sparsely punctulate.

Male: First ventrite flat or very slightly depressed at middle, fifth ventrite truncate at apex.

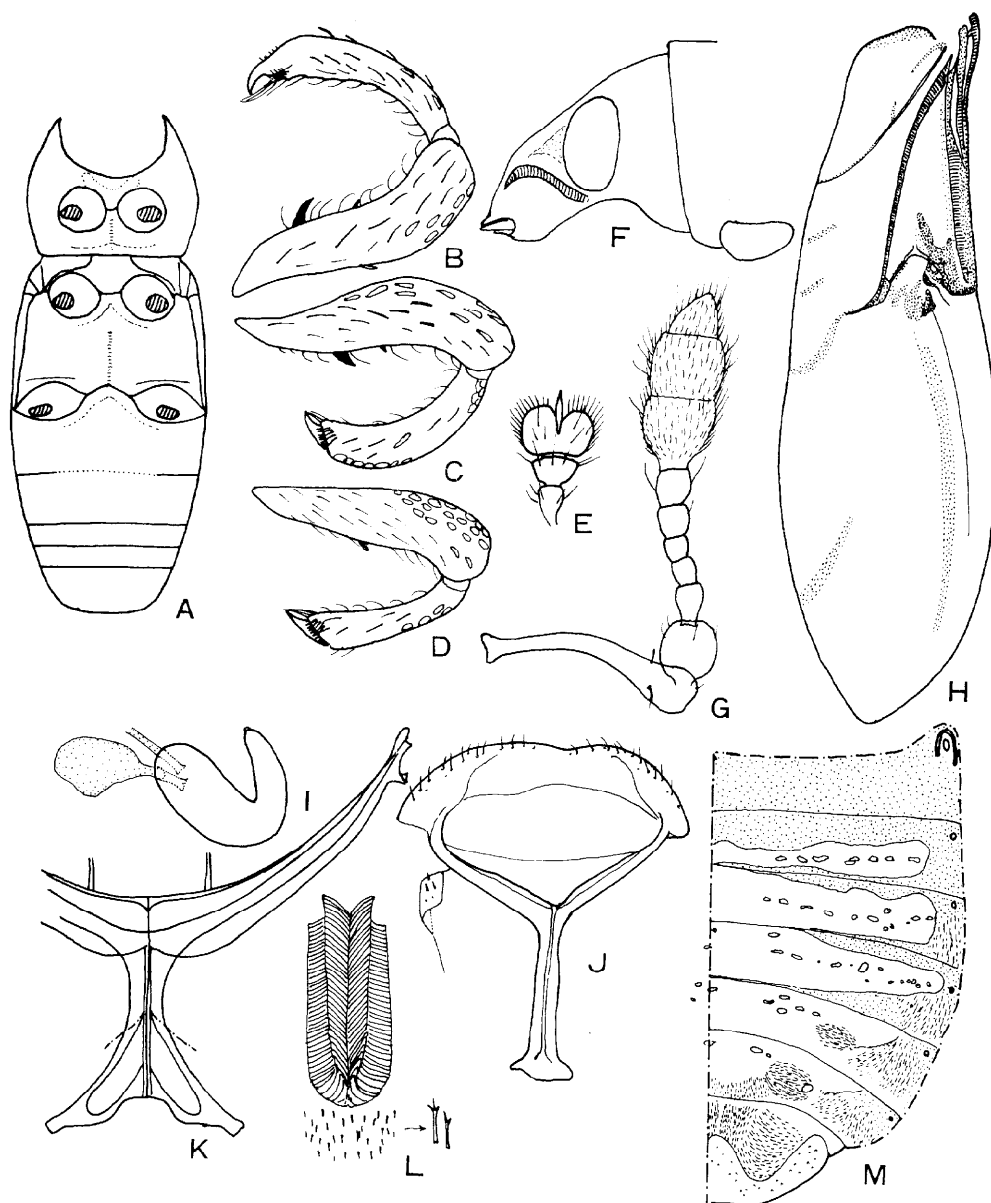


Fig. 3. *Tivicis maculatus* sp. nov. A: Ventral side, male. B: Fore leg. C: Middle leg. D: Hind leg. E: Fore tarsus. F: Head, lateral. G: Antenna. H: Hind wing. I: Spermatheca. J: Eighth sternite and right coxite. K: Metendosternite. L: Part of proventriculus. M: Tergal region of female abdomen.

Female: First ventrite slightly convex, fifth ventrite broadly rounded at apex.

Length : 2.2-2.4 mm(excl. rostrum).

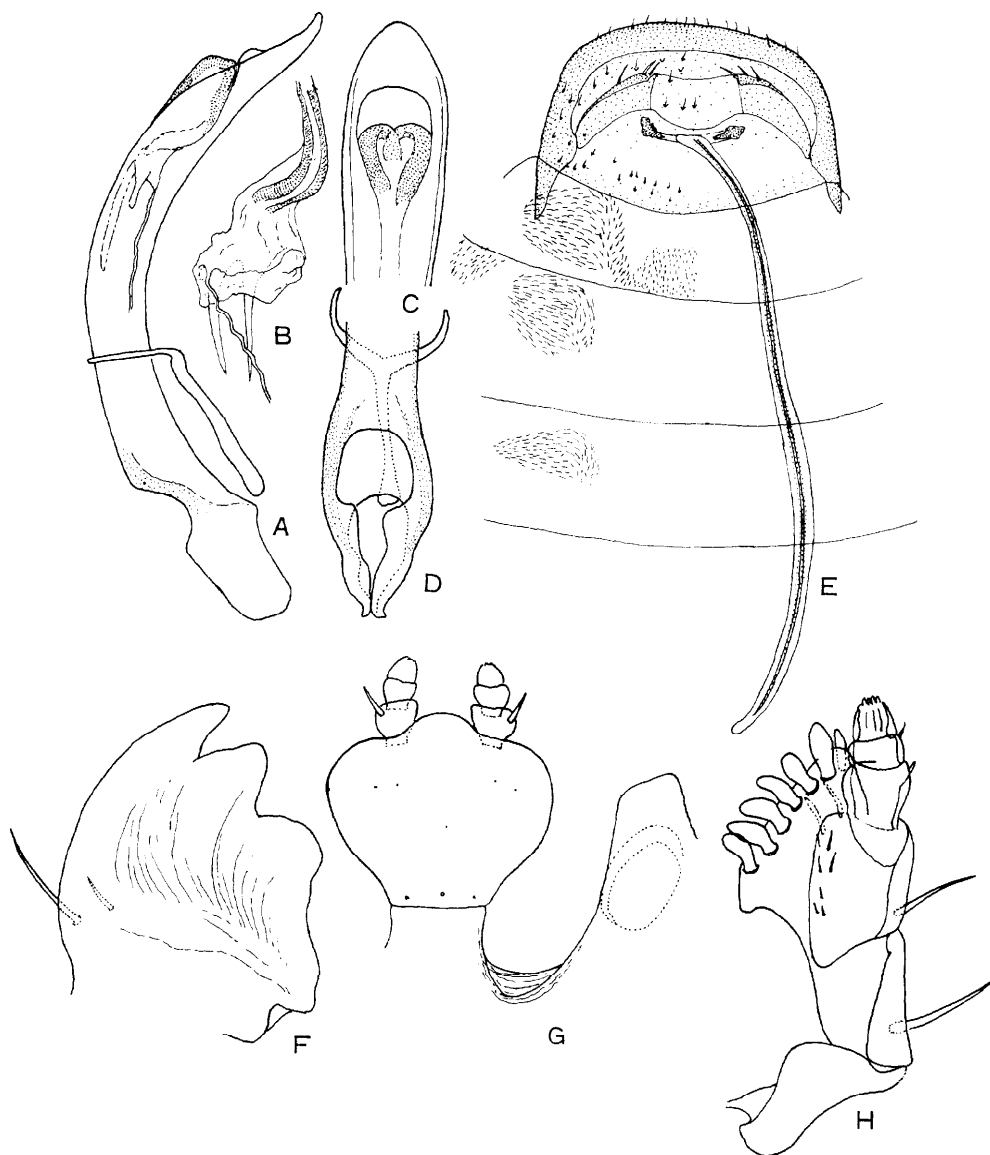


Fig. 4. *Tivicis maculatus* sp. nov. A : Penis. B: Inner sac. C: Apex of penis. D: Basal part of penis. E: Genital segments, male. F: Mandible, ventral. G: Labium. H: Maxilla.

HOLOTYPE male (Type No. 2419, Kyushu Univ.), Mt. Omotodake, Ishigaki, 18. iv. 1975, H. Irie leg.

PARATYPES : Shirahama, Iriomote, three males and one female, 7-8. iii. 1964, S. Kimoto and Y. Miyatake leg. ; one female, 4. x. 1963, K. Morimoto leg. Nakaragawa, Iriomote, two males, 12. iii. 1964, S. Kimoto leg. Ushiku-mori, Iriomote, one male and one female, 9-11. iii. 1964, 1'. Shirôzu and S. Kimoto

leg. Inaba, Iriomote, two males, 19. iii. 1964, S. Kimoto and Y. Miyatake leg. Ohara, Iriomote, one female, 18. viii. 1962, M. T. Chûjô leg. Otomi, Iriomote, one female, 12. viii. 1962, M. T. Chûjô leg. Sonai, Iriomote, one female, 28. vi. 1965, K. Hatta leg. Mt. Omotodake, Ishigaki, two females, 16. iii. 1964, T. Shirôzu and Y. Miyatake leg. Bannadake, Ishigaki, one female, 28. viii. 1961, M. Okabe leg. Kaarayama, Ishigaki, two males, 14 and 18. iii. 1964, Y. Miyatake leg. Takeda, Ishigaki, one female, 14. iii. 1977, Y. Hori leg.

DISTRIBUTION: Japan (Ishigaki and Iriomote Isls.).

***Tivicis aeratus* sp. nov.**

Very close to *maculatus*, but separable from it by the following points:

Scales greyish with coppery shimmer, a little denser on the base of rostrum and forehead, and forming following patches on pronotum and elytra: lateral stripes on pronotum, which often indistinct at median part, elongate patch at the base of second interval, small patches at the bases of third and sixth intervals, oblique broad band on fifth to seventh intervals at basal third, ill-defined transverse band formed of scattered scales at apical third on elytra, median area of first interval and apical margin of elytra with denser scales.

Pronotum with round sides, the base almost as wide as apex. Elytra $3/5$ times as wide as long, striae as wide as intervals. Fore and middle femora each with a sharp tooth, hind femora edentate, tubercle-like teeth absent on all femora.

Length : 2.3-2.4 mm (excl. rostrum).

HOLOTYPE female (Type No. 2420, Kyushu Univ.), Ushikumori, Iriomote, 11. iii. 1964, S. Kimoto leg.

PARATYPES: Shirahama, Iriomote, one male and one female, 8. iii. 1964, Y. Miyatake leg.

DISTRIBUTION : Japan (Iriomote Is.).

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