

## TENEBRIONIDAE OF THE NANSEI ISLANDS III (COLEOPTERA)”

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<https://doi.org/10.5109/2374>

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出版情報 : ESAKIA. 11, pp.63-80, 1978-03-31. Entomological Laboratory, Faculty of Agriculture,  
Kyushu University

バージョン :

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# TENEBRIONIDAE OF THE NANSEI ISLANDS III (COLEOPTERA)\*

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## Abstract

Fourty-one species of the Tenebrionidae are recognized from Okinawa-Honto Island, 22 of which are new to the fauna of the island. Six new **taxa** are *Setenis subbiangulata* sp. nov., *Setenis okinawanus* sp. nov., *Toxicum subtricornutum* sp. nov., *Plesiophthalmus brevipennis aurichalceus* subsp. nov., *Plesiophthalmus piceus* sp. nov. and *Eucrossoscelis michioi* sp. nov. from this island.

## OKINAWA-HONTO I.

### PEDININI

#### 1. Mesomorphus villiger (Blanchard, 1853)

*Spec. exam.* : 1 ex., Shuri, Okinawa, 9. iv. 1958, H. Nakachi leg.

### OPATRINI

#### 2. Gonocephalum okinawanum M. T. Chûjô, 1962

*Spec. exam.* : 8 exs., (Holotype, Allotype & 6 Paratypes), Hentona, Is. Okinawa, Loo-Choo, 28. iv. 1958, Coll. K. Iha; 1 ex., Hyakuna, Is. Okinawa, 1. iv. 1969, M. Chûjô leg.

### BOLITOPHAGINI

#### 3. Dicraeosis carinatus carinatus Gebien, 1913

*Spec. exam.* : 1 ex., Nago, Is. Okinawa, Loo-Choo, 28. iv. 1958, Coll. K. Iha; 2 exs., Toyama, Is. Okinawa, Loo-Choo, 31. v. 1958, Coll. K. Iha; 2 exs., Yurudji, Is. Okinawa, Loo-Choo, 27. vi. 1958, Coll. K. Iha; 1 ex., Izumi, Okinawa, 21. x. 1963, Y. Hirashima leg. ; 8 exs., Yona, Okinawa, Ryukyu Is., 9-13. Aug. 1969, H. Makihara leg.; 14 exs., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 1 ex., Hyakuna, Okinawa, Nansei Is., Japan, 18. vi. 1970, H. Makihara leg. ; 1 ex., Yona,

\* Contribution from the Hikosan Biological Laboratory, Faculty of Agriculture, Kyushu University, Hikosan (Ser. 2, No. 36).

Okinawa, Ryukyu, 15-17. vii. 1970, H. Makihara leg. ; 1 ex., Mt. Gogayama, Okinawa-Honto, 3. ix. 1970, K. Iha leg.; 1 ex., Kudeken, Okinawa I., Ryukyus, 22. v. 1974, H. Makihara leg. ; 4 exs., Yona, Okinawa, Nansei Is., Japan, 4. vi. 1974, Coll. H. Irie ; 1 ex., Mt. Nago-dake, Okinawa, Nansei Is., Japan, 5. vi. 1974, Coll. H. Irie ; 1 ex., Shoshi, Okinawa, Nansei Is., Japan, 5. vi. 1974, Coll. H. Irie ; 2 exs.(at light), Yona, Okinawa, Nansei Is., Japan, 5. vi. 1976, H. Makihara leg.; 3 exs., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg. ; 3 exs., Kudeken, Okinawa, Nansei Is., Japan, 2. vii. 1976, H. Makihara leg.

#### DIAPERINI

##### † 4. *Diaperis sanguinipennis sinensis* Gebien, 1913

*Spec. exam.* : 1 ex., Oura, Okinawa, 22. x. 1963, Y. Hirashima leg. ; 2 exs., Kudeken, Okinawa, Nansei Is., Japan, 22. iv. 1975, Coll. H. Irie.

##### 5. *Platydemia subfascia subfascia* (Walker, 1858)

*Spec. exam.* : 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1973, Coll. H. Irie; 2 exs., Oku, Okinawa, Nansei Is., Japan, 15. iv. 1974, Coll. H. Irie ; 3 exs., Kudeken, Okinawa, Nansei Is., Japan, 22. iv. 1975, Coll. H. Irie; 5 exs., Naha-Oku-Yona, Okinawa I., Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.

##### † 6. *P. sauteri omoto* Nakane, 1973

*Spec. exam.* : 1 ex., Mt. Nago-dake, Okinawa, Nansei Is., Japan, 5. vi. 1974, Coll. H. Irie; 1 ex., Naha-Oku-Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg. ; 1 ex.(at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.

##### † 7. *P. marseuli marseuli* Lewis, 1894

*Spec. exam.* : 18 exs., Shuri, Okinawa, Nansei Is., Japan, 21. iv. 1973, Coll. H. Irie ; 2 exs., Oku, Okinawa, Nansei Is., Japan, Coll. H. Irie; 1 ex., Naha-Oku-Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg; 2 exs.(at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 4 exs., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.

##### † 8. *Basanus amamianus* M. T. Chûjô, 1966

*Spec. exam.* : 2 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1973, Coll. H. Irie.

##### 9. *Ceropria induta induta* (Wiedemann, 1819)

*Spec. exam.* : **9 exs.**, Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 2 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie ; 1 ex., Kudeken, Okinawa, Nansei Is., Japan, 22. iv. 1975, Coll. H. Irie ; 1 ex., Ie-Rindo, Okinawa I., Nansei Is., Japan, 31. iii. 1976, T. Tsutsumi leg. ; 11 exs.(at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 4 exs., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.; 4 exs.(at light), Yona, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.

† The dagger shows that the species has hitherto been unrecorded from the island.

**IO. Addia latior** Nakane, 1963

*Spec. exam.* : 2 exs., Yona 100 m., Okinawa Is., 27. xi. 1963, G. A. Samuelson leg.; 1 ex., Izumi-Gogayama, Okinawa Is., 22. iii. 1964, C. M. Yoshimoto leg.

## LEIOCHRINI

**11. Derispia japonica** Kaszab, 1961

*Spec. exam.* : 2 exs., Agunison, Is. Okinawa, Loo-Choo, 26. vi. 1960, Coll. K. Iha; 15 exs., Hyakuna, Okinawa, Nansei Is., Japan, 18. vi. 1970, H. Makihara leg.; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 29. vi. 1972, Coll. H. Irie; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 28. iii. 1973, Coll. H. Irie; 1 ex., Shuri, Okinawa, Nansei Is., Japan, 20. iv. 1973, Coll. H. Irie; **1 ex.**, Oku, Okinawa, Nansei Is., Japan, 15. iv. 1974, Coll. H. Irie; 1 ex., Yona, Okinawa, Nansei Is., Japan, 4. vi. 1974, Coll. H. Irie; 4 exs., Mt. Nago-dake, Okinawa, Nansei Is., Japan, 5. vi. 1974, Coll. H. Irie; 3 exs., Shoshi, Okinawa, Nansei Is., Japan, 5. vi. 1974, Coll. H. Irie; 3 exs., Yonamine, Okinawa, Nansei Is., Japan, 19. iv. 1975, Coll. H. Irie; 5 exs., Kudeken, Okinawa, Nansei Is., Japan, 22. iv. 1975, Coll. H. Irie.

**12. D. klapperichi** Kaszab, 1942

*Spec. exam.* : 1 ex., Nakijin, Okinawa Is., 12. iv. 1964, T. Takara leg.

## ULOMINI

**13. Uloma excisa excisa** Gebien, 1913

*Spec. exam.* : 1 ex., Sedake, Is. Okinawa, Loo-Choo, 29. vi. 1960, Coll. K. Iha; 14 exs., Yona, Okinawa, Ryukyu Is., 9-13. viii. 1969, H. Makihara leg.; 2 exs., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 6 exs., Yona, Is. Okinawa, 4. ix. 1970, Coll. M. Chûjô; 2 exs., Kunigami, Okinawa, Nansei Is., Japan, 18. iv. 1974, Coll. H. Irie; 1 ex., Hentona, Okinawa, Nansei Is., Japan, 7. iv. 1975, Coll. H. Irie; 2 exs., Oku, Okinawa I., Nansei Is., Japan, 13. ii. 1976, T. Tsutsumi leg.; 1 ex., Ie-Rindo, Okinawa I., Nansei Is., Japan, 31. iii. 1976, T. Tsutsumi leg.; 6 exs. (at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 1 ex., Yona, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.; 26 exs., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.; 4 exs., Oku, Okinawa, Nansei Is., Japan, 3. vii. 1976, T. Tsutsumi leg.

**14. U. ichoi** Nakane, 1956

*Spec. exam.* : 1 ex., Yona, Okinawa, Ryukyu Is., 9-13. viii. 1969, H. Makihara leg.; 1 ex., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 1 ex., Yona, Okinawa I., Ryukyus, 2. ix. 1972, H. Makihara leg.

† **15. Alphitobius diaperinus** (Panzer, 1797)

*Spec. exam.* : 1 ex., Shuri, Okinawa, Nansei Is., Japan, 11. vi. 1970, H. Makihara leg.; 1 ex., Kunigami, Okinawa, Nansei Is., Japan, 18. iv. 1974, Coll. H. Irie.

† **16. A. laevigatus** (Fabricius, 1781)

*Spec. exam.* : **1 ex.**, Shuri, Okinawa, Nansei Is., Japan, 11. vi. 1970, H. Makihara

leg. ; **1 ex.**, Yona, Okinawa I., Ryukyus, 2. ix. 1972, H. Makihara leg. ; 1 ex., Yona, Okinawa I., 25-27. v. 1974, M. Sato leg.

† 17. *Hypophloeus* (*Paraphloeus*) *amamiensis* Kaszab, 1964

*Spec. exam.* : 1 ex., Yona, Okinawa Ryukyu Is., 9-13. iii. 1969, H. Makihara leg.; 1 ex., Shuri, Okinawa, Nansei Is., Japan, 20. iv. 1973, Coll. H. Irie ; 2 exs., Oku, Okinawa, Nansei Is., Japan, 15. iv. 1974, Coll. H. Irie.

† 18. *H. (P.) gentilis* (Lewis, 1894)

*Spec. exam.* : **2 exs.**, Oku, Okinawa, Nansei Is., Japan, 15. iv. 1974, Coll. H. Irie.

19. *Setenis okinawanus* sp. nov.

Elongate, gently swelling to hind part, shining black. Head coarsely punctate, clypeal suture visible, clypeus gently bent downwards, front margin of clypeus very feebly and widely sinuate, interocular area longitudinally and very shallowly grooved at submarginal part of eye. Eyes transverse, gently prominent outwards. Labrum moderately aciculate, semicircular, frontal 1/4 roundly bent downwards, apical margin very feebly sinuate.

Antennae scarcely reaching basal margin of pronotum; 1st segment thick, 2nd the shortest, each segment of 1st to 5th gently thickened towards apex, 6th strongly, apically thickened and feebly flattened, 7th more strongly, apically thickened, 8th

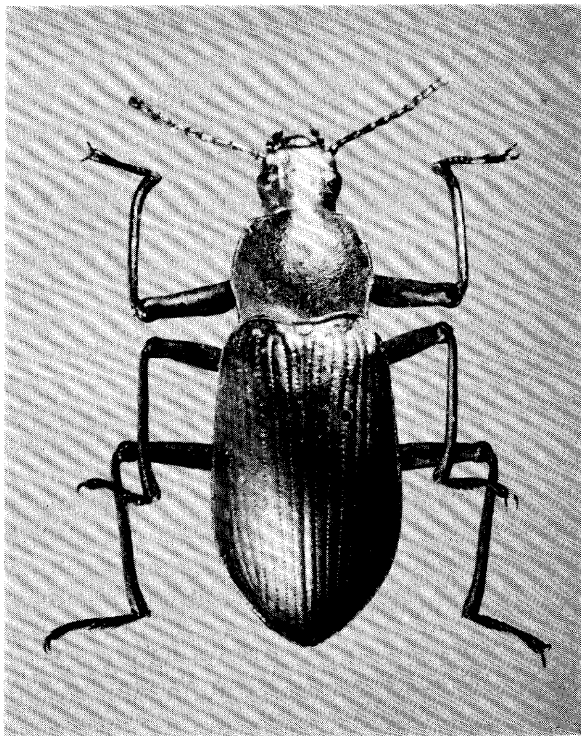


Fig. 1. *Setenis okinawanus* sp. nov.

to penultimate one strongly flattened and subequal to each other in shape, terminal one elongate ; relative length of each segment (base to apex)=9.0 : 4.0 : 9.0 : 8.5 : 7.0 : 7.0 : 7.0 : 6.0 : 6.0 : 6.0 : 7.5.

Pronotum coarsely punctate, gently convex, nearly transverse to rather longitudinal, narrowly and shallowly marginate except for middle part of front margin; basal margin bisinuate, basal corner makes an angle of ca. 80 degrees, apex sharp, side margin widest at about 1/3 from base, space between basal corner and the widest part shallowly sinuate and that widest part and front corner gently and roundly expanded, front corner round, front margin very shallowly sinuate. Elytra widest at 2/3 from base, shoulder to apex narrowly marginate, shoulder oblique, with shallow punctate-striae, interstices weakly convex, finely and sparsely punctate. Gula very roughly carved, longitudinally depressed, gular suture obscure. Prosternum densely wrinkled, prosternal process very sparsely and shallowly punctate. Meso- and metasternum sparsely punctate. Metasternum very sparsely pubescent, apical 2/3 of median line weakly depressed, outside of median line densely carved. Middle part of 1st and 2nd visible abdominal sternites very weakly depressed in male, 1st to 3rd longitudinally wrinkled, sparsely punctate, penultimate and terminal ones very finely, sparsely aciculate.

Several sexual difference can be seen on mentum and tibiae as follows:

♂

Mentum with a double filed dense hairs. Front tibia strongly crumpled inwards and outwards at apical 1/3, middle tibia visibly bent inwards, apical 2/7 strongly thickened towards apex, hind tibia very weakly biangulate.

♀

Mentum with very sparse and irregular hairs. Front tibia slightly bent inwards at apical 1/5, middle tibia faintly bent inwards, apical 1/3 gently thickened towards apex, hind tibia nearly straight.

Every femur without special character. Front tarsi comparatively short, 1st to penultimate segments densely pubescent on underside, terminal one with a double filed pubescence on underside, a little longer than preceding 4 put together. First hind tarsal segment a little longer than 2nd and penultimate one put together, 2nd nearly equal to penultimate one, terminal one twice as long as 1st. All tarsi pubescent on underside.

Length : 19.5-25.0 mm. Width : 7.8-9.7 mm.

Distribution : Okinawa-Honto Island.

Type material : Holotype ♂ (Type No. 2088, Kyushu Univ.)(at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg. Paratopotypes; ♀, 9-13. viii. 1969, H. Makihara leg.; ♀, 12-17. vi. 1970, H. Makihara leg. ; 2♂♂ & 2♀♀, same data as holotype; ♂ (at light), 30. vi. 1976, H. Makihara leg. Paratypes : 5♂♂ & 5♀♀, Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1973, Coll. H. Irie; 3♀♀, Mt. Yonaha, Okinawa, Nansei Is., Japan, 16. iv. 1974, Coll. H. Irie; ♀, Mt. Yonaha, Okinawa, Nansei Is., Japan, 2. vi. 1974, Coll. H. Irie ; 2♂♂, Kunigamison, Okinawa I., Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie ; 9♂♂ & 2♀♀, Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.; ♂ & 2♀♀, Oku, Okinawa I., Nansei Is., Japan, 3. vii. 1976, T. Tsutsumi leg.

**Type depository :** Holotype is preserved in the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

This species is closely related to *S. oshimanus* Miwa, 1935 from Amami-Oshima Island, but is clearly distinguished from the latter by the following characters:

***S. oshimanus* Miwa**

Generally larger in size. Pronotum very coarsely punctate. Elytral punctate-striae deep; interstices with coarse punctures and fine wrinkles, strongly convex. Male genitalia gently warped downwards. First hind tarsal segment a little shorter than 1/2 of terminal one. Apical part of prosternal process depressed,

***S. okinuwanus* sp. nov.**

Generally smaller in size. Pronotum coarsely punctate. Elytral punctate-striae shallow; interstices with sparse punctures, weakly convex. Male genitalia strongly warped downwards. First hind tarsal segment nearly 1/2 as long as terminal one in length. Apical part of prosternal process not depressed.

**20. *Setenis subbiangulata* sp. nov.**

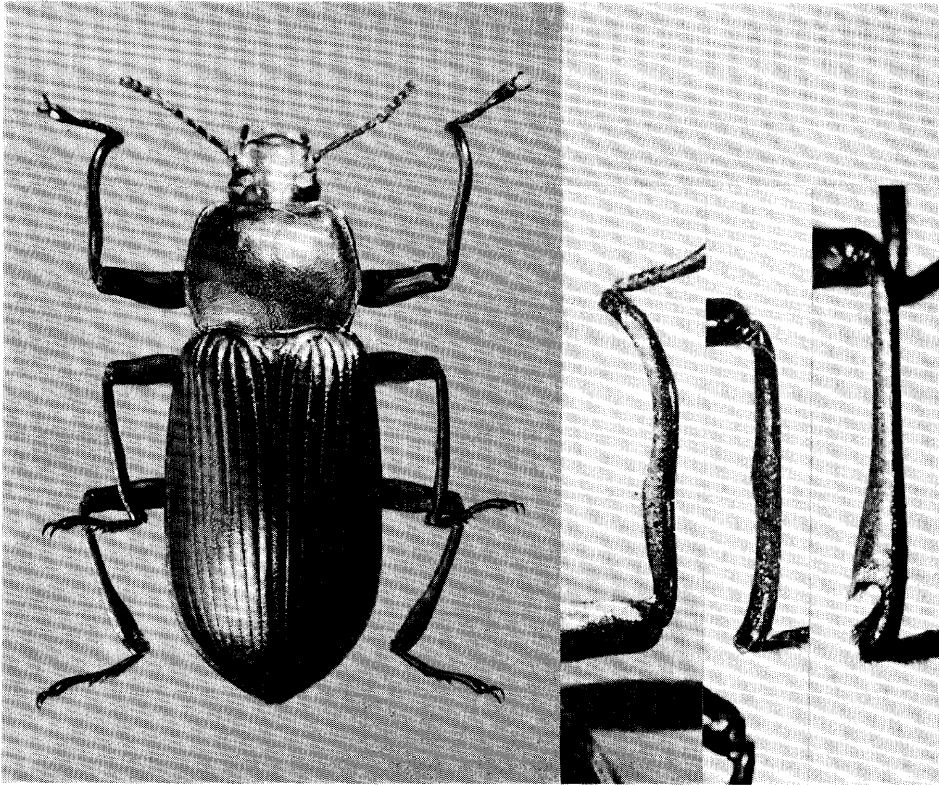
Elongate, moderately convex, shining black. Head coarsely and shallowly punctate, interocular area feebly convex, weakly depressed along clypeal suture, preocular area weakly and roundly expanded. Eyes transverse, moderately prominent outwards. Labrum coarsely aciculate, front margin narrowly warped downwards. Antennae not reaching basal margin of pronotum, 7th to terminal segments make a loose club, relative length of each segment (base to apex) = 7.0 : 3.0 : 8.0 : 7.0 : 6.5 : 6.5 : 6.0 : 5.0 : 5.0 : 4.0 : 6.0.

Pronotum transverse, width nearly 1 1/3 times as wide as long, strongly convex, coarsely and shallowly punctate, narrowly but entirely marginate, basal margin very shallowly sinuate, basal corner makes an angle of ca. 75 degrees and slightly bent downwards, side margin very weakly and roundly expanded, front corner widely rounded, front margin widely sinuate.

Elytra narrowly but entirely marginate, shoulder shallowly foveolate to receive produced basal corner of pronotum, punctate-striae not so deep, punctures on striae very obscure in male but rather visible in female, interstices moderately convex, very shallowly and irregularly wrinkled like tanned leather. Mentum strongly convex in middle part, tempora to gula roughly punctate, gular suture invisible. Prosternum irregularly wrinkled, episternum very feebly wrinkled, mesepimera and metepisterna very shallowly punctate. First to 3rd visible abdominal sternites longitudinally and densely wrinkled, further feebly punctate in middle area, 4th coarsely punctate, terminal one punctate as in 4th and subapically grooved at apical half.

Front femora thickest at middle, middle femora with brown and dense pubescence inside. Tibiae very specialized in male; front tibiae biangulate, viz. basal half expanded interiorly and then strongly crumpled inwards and downwards at apical 1/3, slightly compressed at basal 3/4, apex densely pubescent; middle tibiae very slightly compressed, inside gradually expanded from base to middle and then very slightly gouged to apex, apex densely pubescent; hind tibiae clavate, apical half very thick, subapical part of inside strongly and obliquely scooped out resulting in a thick spine on basal edge of cavity, apex and inside of spine densely pubescent. Female front tibiae very slightly thickened towards apex, weakly warped inwards

at apical 1/3, with very short pubescence at inside of apical 1/3, specially dense at apex; middle and hind tibiae without special character.



Figs. 2-5. *Setenis subbiangulata* sp. nov. 2 : Dorsal view. 3: Upper surface of front tibia. 4: Upper surface of middle tibia. 5: Upper surface of hind tibia.

Front tarsi comparatively thick, 1st to penultimate segment subequal to each other in length ; terminal one much longer than preceding 4 put together; middle tarsi similar to front one; hind tarsi the longest, 1st segment. 3 times as long as 2nd, penultimate segment subequal to 2nd, -terminal segment nearly equal to 1st and 2nd put together; all terminal segments with a double filed pubescence on underside, strongly thickened towards apex, roundly warped downwards, the others with dense pubescence on underside.

Length : 18.5 -24.0 mm. Width : 6.6-9.2 mm.

Distribution : Okinawa-Honto Island.

Type material : Holotype ♂ (Type No. 2089, Kyushu Univ.), Kunigamison, Okinawa I., Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie. Paratopotypes: ♂ & ♀, same data as holotype. Paratypes: ♀, Mt. Yonaha-dake, Okinawa, Nansei Is., Japan, 25. v. 1972, Coll. H. Irie ; ♀, Mt. Yonaha, Okinawa, Nansei Is., Japan, 28. iii. 1973, Coll. H. Irie ; 2♂ & ♀, Mt. Yonaha, Okinawa, Nansei Is., Japan, 16. iv. 1974, Coll. H. Irie ; ♂, Ie-Rindo, Okinawa I., Nansei Is., Japan, 31. iii. 1976, T. Tsutsumi leg.



Type depository : Holotype is preserved in the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

This species is very close to *S. biangulata* Gebien [1918, Entomol. Mitteilungen 7(10/12): 217-218, Fig. 3] from S. China, but will be distinguished from the latter by the following characters:

***S. biangulata* Gebien**

Strial punctures on elytra comparatively visible, middle tibiae straight, hind tibiae nearly straight and without special character.

***S. subbiangulata* sp. nov.**

Strial punctures on elytra very obscure, middle tibiae gently expanded inwards in middle; hind tibiae clavate, subapical part of inside strongly scooped out.

**21. *Menephilus arciscelis* Marseul, 1876**

*Spec. exam.*: 2 exs., Sedake, Is. Okinawa, Loo-Choo, 29. vi. 1960, Coll. K. Iha; 1 ex., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg., 2 exs., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie; 1 ex., Mt. Nago-dake, Okinawa, Nansei Is., Japan, 5. vi. 1974, Coll. H. Irie; 6 exs., Kunigamison, Okinawa I., Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie; 2 exs., Kudeken, Okinawa, Nansei Is., Japan, 22. iv. 1975, Coll. H. Irie; 2 exs., Shuri, Okinawa I., Nansei Is., Japan, 9. ix. 1975, T. Tsutsumi leg.; 4 exs. (at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 15 exs., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.; 26 exs., Oku, Okinawa, Nansei Is., Japan, 3. vii. 1976, T. Tsutsumi leg.; 1 ex., Yona, Okinawa I., Nansei Is., Japan, 4. vii. 1976, T. Tsutsumi leg.

**† 22. *Catapiestus subrufescens* Pic, 1911**

*Spec. exam.*: 2 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 26. iii. 1973, Coll. H. Irie; 2 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1973, Coll. H. Irie; 2 exs., Yonaha, Okinawa, Nansei Is., Japan, 17. iv. 1974, Coll. H. Irie; 1 ex., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie; 18 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie; 33 exs., Mt. Yonaha-dake, Okinawa I., Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 2. iv. 1975, Coll. H. Irie; 3 exs., Aha, Okinawa, Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie; 2 exs., Hiji, Okinawa, Nansei Is., Japan, 6. iv. 1975, Coll. H. Irie; 1 ex., Yona, Okinawa, Nansei Is., Japan, 3. v. 1975, T. Tsutsumi leg.; 16 exs., Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 39 exs., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.; 4 exs., Yona, Okinawa I., Nansei Is., Japan, 4. vii. 1976, Tsutsumi leg.

**23. *Toxicum subtricornutum* sp. nov.**

♂: Head very sparsely punctate, vertex acutely semicircularly scooped and opened towards apex through interocular area, with upright, thick and long horn on inner ocular edge, horn with brushy hairs on front side of apical half, but upright horn on middle of front margin slender and short, preocular area nearly equal to eye in width and slightly angular near frontal end, front margin of clypeus obtusely prominent forwards and slightly reflexed, clypeal suture invisible.

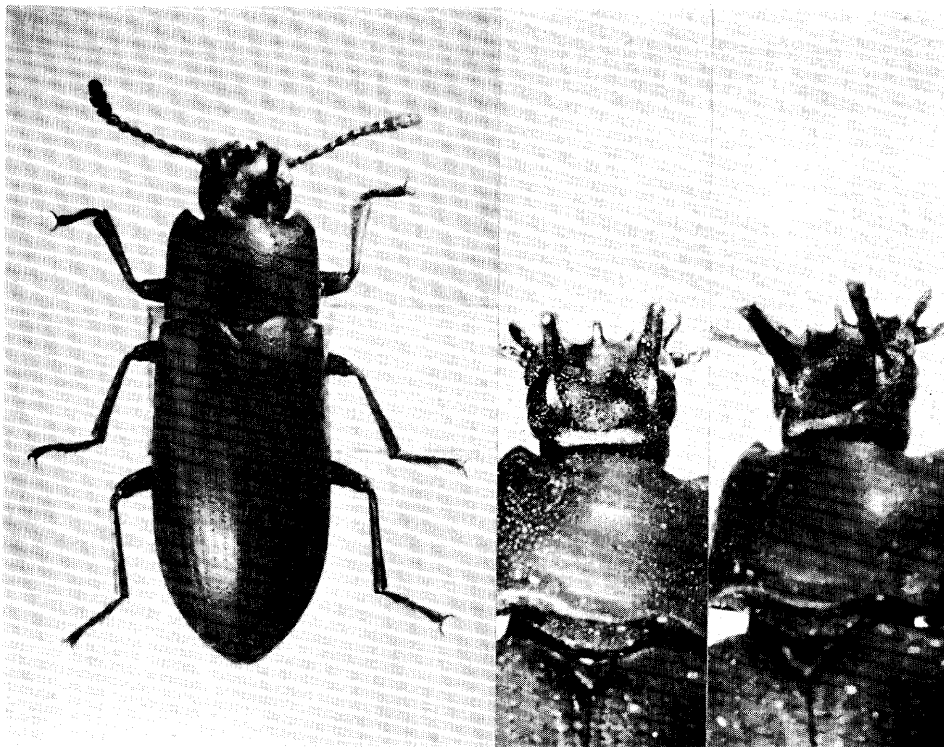
♀: Head densely punctate, specially coarse and dense at interocular area,

clypeus finely and densely aciculate, inner ocular edge obtusely rising, vertex and interocular area weakly depressed, clypeus slightly convex, front margin strongly, roundly bent downwards.

Elongate, nearly parallel-sided, pitchy black. Antennae nearly reaching basal corner of pronotum, 1st segment thick, 4th to 6th similar to each other in shape, 7th a little thicker than 6th, 8th to terminal one flattened and clavate ; 1st long, 2nd  $\frac{2}{5}$  as long as 1st, 3rd subequal to 1st, 4th  $\frac{2}{3}$  as long as 3rd, 4th to terminal one subequal to each other.

Pronotum strongly and sparsely punctate, gently convex ; hind margin bisinuated, sinuated part very feebly marginate, hind corner obtuse, side margin very weakly expanded, very narrowly but visibly marginate, front corner very obtuse, front margin widely and deeply sinuate, nearly  $\frac{3}{4}$  as wide as hind one, oblique part of both sides very narrowly marginate. Elytra comparatively and strongly convex, with sparse striate-punctures, interstices not convex; basal margin not marginate, very shallowly scooped to receive pronotal hind corner near shoulder, shoulder obtusely angulate, side very narrowly but entirely marginate.

Mentum strongly dilated forwards, front margin transverse, front corner obtuse and reflex, with a dotted pubescence, surface very coarsely carved. Gula sparsely, strongly punctate. Prosternum sparsely and strongly punctate, prosternal process



**Figs. 6-8.** *Tetricum subtricornutum* sp. nov. **6:** Dorsal view. **7 & 8:** Close-up of head.

weakly depressed at apex, punctures on propleura coarser and stronger than those on prosternum, mesepisternum punctate as in propleura, metasternum deeply grooved subbasally, metepisternum sparsely punctate. Visible abdominal sternites evenly, sparsely punctate, without sexual difference.

Front femora the thickest, in male obtusely project forwards at 2/5 from base. Front tibiae gradually flattened and strongly dilated towards apex, very weakly bent downwards, apex somewhat oblique, finely and densely punctate, densely pubescent, pubescence gradually denser and lengthened towards inner corner of apex; middle tibiae moderately thickened towards apex, slightly bent outwards; hind tibiae very weakly thickened towards apex, faintly bent outwards. Front tarsi sparsely pubescent, terminal segment strongly thickened towards apex, subequal to preceding 4 put together in length, terminal one a little shorter than 1st and 2nd put together.

Length : 14.0-15.0 mm. Width: 4.8-5.1 mm.

**Distribution** : Okinawa-Honto Island.

**Type material** : Holotype ♂ (Type No. 2090, Kyushu Univ.), Kunigamison, Okinawa I., Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie. Paratypes: ♂, Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1973, Coll. H. Irie; ♀, Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie; ♀, Yona, Okinawa, Nansei Is., Japan, 2. vi. 1974, Coll. H. Irie; ♂ & ♀, Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makiyara leg.

**Type depository** : Holotype is preserved in the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

This species is related to *T. tricornutum* Waterhouse, 1874 from Japan, but may clearly be separated from the latter through the following characters:

*T. tricornutum* Waterhouse

Horn on front clypeal margin reversed triangular, both corner of apex bent backwards; horn on inner ocular edge nearly upright. Head densely punctate, preocular area to clypeus angulate. Pronotum strongly punctate, front margin shallowly sinuate, side margin more or less sinuate, hind corner rather sharp. Elytral striate-punctures deep, interstices convex.

*T. subtricornutum* sp. nov.

Horn on front clypeal margin very short and spinescent projection; horn on inner ocular edge weakly inclines backwards. Head sparsely punctate, preocular area to clypeus biangulate. Pronotum shallowly punctate, front margin deeply sinuate, side margin evenly expanded, hind corner obtuse. Elytral striate-punctures shallow, interstices not convex.

†24. *Cryphaeus satoi* Kaszab, 1964

*Spec. exam.* : **2 exs.**, Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makiyara leg.; 1 ex., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie; 1 ex., Aha, Okinawa, Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie.

CNODALONINI

†25. *Tetraphyllus amamiensis* Kaszab, 1964

*Spec. exam.* : **5 exs.**, Yona, Okinawa, Ryukyu Is., 9-13. viii. 1969, H. Makiyara

leg ; 12 exs., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg. ; 1 ex., Yona, Okinawa I., Ryukyu, 2. ix. 1972, H. Makihara leg.; 7 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1973, Coll. H. Irie ; 1 ex., Taminato, Okinawa, Nansei Is., Japan, 27. iv. 1973, Coll. H. Irie ; 1 ex., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie; 3 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie; 2 exs., Yona, Okinawa, Nansei Is., Japan, 4. vi. 1974, Coll. H. Irie ; 2 exs., Aha, Okinawa, Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie; 5 exs.(at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 1 ex., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg. ; 1 ex., Oku, Okinawa I., Nansei Is., Japan, 3. vii. 1976, T. Tsutsumi leg.

26. **T. lunuliger laevis** M. T. Chûjô, 1977

*Spec. exam.* : 9 exs., see " Esakia (10):11 "; 1 ex., Shuri, Okinawa I., Nansei Is., Japan, 6. iv. 1975, T. Tsutsumi leg. ; 1 ex.(at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 5 exs., Oku, Okinawa I., Nansei Is., Japan, 3. vii. 1976, T. Tsutsumi leg.

†27. **Hemicera alternata nodokai** Nakane, 1963

= *H. multicolor* : M. T. Chûjô, 1966, J. Fac. Agr., Kyushu Univ., 14 (1): 23.

*Spec. exam.* : 1 ex., Izumi, Okinawa I., 21. x. 1963, S. Uéno leg. ; 22 exs., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 1 ex., Yona, Is. Okinawa, 4. ix. 1970, Coll. M. Chûjô; 2 exs., Yona, Okinawa I., Ryukyu, 2. ix. 1972, H. Makihara leg.; 1 ex., Yona, Okinawa I., 25-27. v. 1974, M. Sato leg.; 2 exs., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie ; 2 exs., Kudeken, Okinawa, Nansei Is., Japan, 22. iv. 1975, Coll. H. Irie; 1 ex., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg. ; 1 ex., Sueyoshi, Okinawa I., Nansei Is., Japan, 1. vii. 1976, H. Makihara leg.; 6 exs., Kudeken, Okinawa, Nansei Is., Japan, 2. vii. 1976, H. Makihara leg. ; 1 ex., Oku, Okinawa I., Nansei Is., Japan, 3. vii. 1976, T. Tsutsumi leg.; 1 ex., Yona, Okinawa I., Nansei Is., Japan, 4. vii. 1976, T. Tsutsumi leg.

†28. **H. fukiensis** Kaszab, 1951

*Spec. exam.* : 12 exs., Yona, Okinawa, Ryukyu Is., 9-13. viii. 1969, H. Makihara leg.; 23 exs., Yona, Ryukyu, 12-17. vi. 1970, H. Makihara leg. ; 1 ex., Yona, Okinawa, Ryukyu, 15-17. vii. 1970, H. Makihara leg. ; 2 exs., Yona, Is. Okinawa, 5. ix. 1970, Coll. M. Chûjô; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1973, Coll. H. Irie; 1 ex., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie ; 2 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie; 2 exs., Yona, Okinawa, Nansei Is., Japan, 2. iv. 1975, Coll. H. Irie ; 1 ex., Oku, Okinawa I., Nansei Is., Japan, 13. ii. 1976, T. Tsutsumi leg.; 3 exs., Ie-Rindo, Okinawa I., Nansei Is., Japan, 31. iii. 1976, T. Tsutsumi leg.; 1 ex., Naha-Oku-Yona, Okinawa I., Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 3 exs.(at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg. ; 2 exs., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.

29. **Phaedis (Phaedis) helopioides okinawanus** Nakane, 1968

*Spec. exam.* : 2 exs., Nago, Okinawa, Ryukyu Is., 7. v. 1969, H. Makihara leg.;

1 ex., Yona, Okinawa, Ryukyu, **15-17**. vii. 1970, H. Makihara leg.; 6 exs., Taminato, Okinawa, Nansei Is., Japan, 27. iv. 1973, Coll. H. Irie ; 2 exs., Kudeken, Okinawa, Nansei Is., Japan, 27. iv. 1973, Coll. H. Irie; 3 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 17. iv. 1974, Coll. H. Irie ; 3 exs., Kudeken, Okinawa I., Ryukyus, 22. v. 1974, H. Makihara leg. ; 1 ex., Mt. Yanaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie; 10 exs., Kudeken, Okinawa I., Ryukyus, 30. vi. 1974, H. Makihara leg. ; 1 ex., Yona, Okinawa, Nansei Is., Japan, 2. iv. 1975, Coll. H. Irie ; 1 ex., Shuri, Okinawa I., Nansei Is., Japan, 9. ix. 1975, T. Tsutsumi leg.; 1 ex., Ie-Rindo, Okinawa I., Nansei Is., Japan, 31. iii. 1976, T. Tsutsumi leg.; 1 ex., Naha-Oku-Yona, Okinawa I., Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 1 ex., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.; 5 exs., Kudeken, Okinawa, Nansei Is., Japan, 2. vii. 1976, H. Makihara leg. ; 2 exs., Oku, Okinawa I., Nansei Is., Japan, 3. vii. 1976, T. Tsutsumi leg.

†30. *Metaclisa nagaii* Nakane, 1968

*Spec. exam.* : 1 ex., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 1. vi. 1974, Coll. H. Irie ; 1 ex., Aha, Okinawa, Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie; 2 exs., Hiji, Okinawa, Nansei Is., Japan, 6. iv. 1975, Coll. H. Irie.

31. *Obriomaia palpalis palpaloides* Nakane, 1963

*Spec. exam.* : 1 ex., Shuri, Okinawa, Ryukyu Is., 5-9. v. 1969, H. Makihara leg. ; 1 ex., Yona, Okinawa, Ryukyu Is., 9-13. viii. 1969, H. Makihara leg.; 1 ex., Shuri, Okinawa, Ryukyu Is., 15. viii. 1969, H. Makihara leg.; 6 exs., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg. ; 1 ex., Kudeken, Okinawa I., Ryukyus, 22. v. 1974, H. Makihara leg.; 1 ex., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie ; 7 exs., Mt. Nago-dake, Okinawa, Nansei Is., Japan, 5. vi. 1974, Coll. H. Irie ; 1 ex., Shuri, Okinawa I., Nansei Is., Japan, 9. ix. 1975, T. Tsutsumi leg.; 1 ex., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg. ; 1 ex., Yona, Okinawa I., Nansei Is., Japan, 4. vii. 1976, T. Tsutsumi leg.

f-32. *O. rufiventris* Kaszab, 1964

*Spec. exam.* : 1 ex., Nago, Okinawa, Ryukyu Is., 7. v. 1969, H. Makihara leg.; 10 exs., Yona, Ryukyu Is., 9-13. viii. 1969, H. Makihara leg. ; 2 exs., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 1 ex., Taminato, Okinawa, Nansei Is., Japan, 27. iv. 1973, Coll. H. Irie ; 4 exs., Oku, Okinawa, Nansei Is., Japan, 15. iv. 1974, Coll. H. Irie; 1 ex., Yona, Okinawa, Nansei Is., Japan, 4. vi. 1974, Coll. H. Irie ; 1 ex., Ie-Rindo, Okinawa I., Nansei Is., Japan, 31. iii. 1976, T. Tsutsumi leg.; 1 ex., Naha-Oku-Yona, Okinawa I., Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.

33. *Pseudonautes purpurivittatus* (Marseul, 1876)

*Spec. exam.* : 1 ex., Nago, Is. Okinawa, Loo-Choo, 14. v. 1958, Coll. K. Iha ; 5 exs., Nago, Is. Okinawa, Loo-Choo, 27. v. 1958, Coll. K. Iha; 10 exs., Yurudji, Is. Okinawa, Loo-Choo, 26. vi. 1958, Coll. K. Iha; 1 ex., Yona, Okinawa, Ryukyu Is., 9-13. viii. 1969, H. Makihara leg. ; 21 exs., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg. ; 1 ex., Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie; 1 ex., Mt. Nago-dake, Nansei Is., Japan, 5. vi. 1974, Coll. H. Irie ; 2 exs., Naha-Oku-

Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg.; 1 ex.(at light), Yona, Okinawa, Nansei Is., Japan, 29. vi. 1976, H. Makihara leg. ; 1 ex., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.

## HELOPINI

†34. ***Tarpela amamiensis*** Kaszab, 1964

*Spec. exam.* : 2 exs., Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1963, Coll. H. Irie; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 17. iv. 1974, Coll. H. Irie ; 1 ex., Aha, Okinawa, Nansei Is., Japan, 4. iv. 1975, Coll. H. Irie ; 1 ex., Mt. Yonaha, Okinawa, Nansei Is., Japan, 6. iv. 1975, Coll. H. Irie; 1 ex., Ie-Rindo, Okinawa I., Nansei Is., Japan, 31. iii. 1976, T. Tsutsumi leg.

†35. ***T. brunnea konoi*** Nakane, 1963

*Spec. exam.* : 1 ex., Kudeken, Okinawa I., Ryukyus, 22. v. 1974, H. Makihara leg.

**36. *Plesiophthalmus brevipennis aurichalceus* subsp. nov.**

Oblong oval, black with brassy tinge; legs, 1st and 2nd antennal segments and every joint part of 3rd to terminal one brown. Head roughly punctate, basal half of interocular area shallowly depressed, clypeal suture visible and depressed, clypeus angularly expanded forwards, apical margin narrowly smooth and glittery, preocular area sparsely punctate. Antennae reaching 3rd visible abdominal segment, 1st segment thick, 3rd 8 times as long as 2nd, 4th 1/2 as long as 3rd, 4th 2/3 as long as 5th.

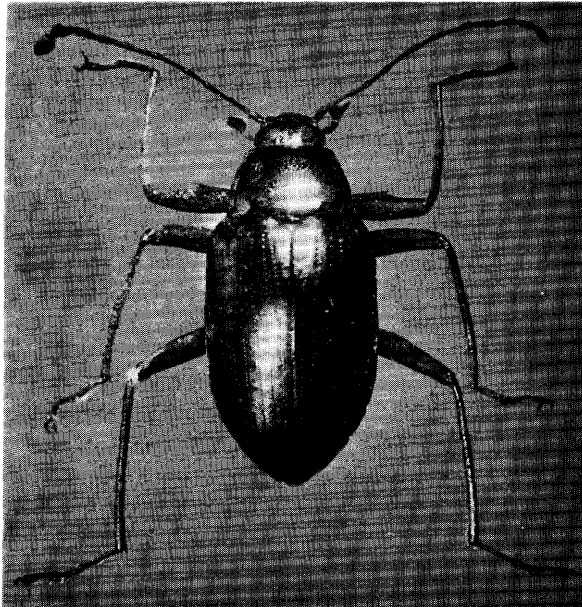


Fig. 9. *Plesiophthalmus brevipennis aurichalceus* subsp. nov.

Pronotum strongly convex, sparsely but strongly punctate; front margin shallowly sinuated, narrowly marginate; side narrowly marginate, roundly expanded, widest at 1/3 from base, front corner obtuse, slightly sinuate. Elytra strongly convex, with punctate-striae, stria not grooved, interstices very feebly convex, very sparsely **aciculate**, side margin very narrowly marginate.

Every femur fulvus, apical part darkened, inside of front femora with oblique femoral projection. Male front tibiae gently bent inwards and downwards, slightly thickened at apical 4/7; terminal abdominal sternite weakly sinuate at apex.

This species is very close to *P. brevipennis* Lewis, 1896 from Amami-Oshima I., but they are separated to each other through the following characters:

*P. b. brevipennis* Lewis

Black with navy bluish tinge, legs dark brown with bluish tinge. Antennae slender. Pronotum faintly and sparsely punctate. Elytra moderately striate-punctate. Second segment of maxillary palpus about twice as long as basal one. Mesepisternum strongly and densely punctate, metepisternum comparatively densely punctate.

*P. b. aurichalceus* subsp. nov.

Black with brassy tinge, legs brown but darkened towards apex. Antennae very slender. Pronotum sparsely but strongly punctate. Elytra strongly striate-punctate. Second segment of maxillary palpus 3 times as long as basal one. Mesepisternum coarsely punctate, metepisternum very sparsely punctate.

Length : 10.5–13.2 mm. Width : 5.1–6.2 mm.

**Distribution** : Okinawa-Honto Island.

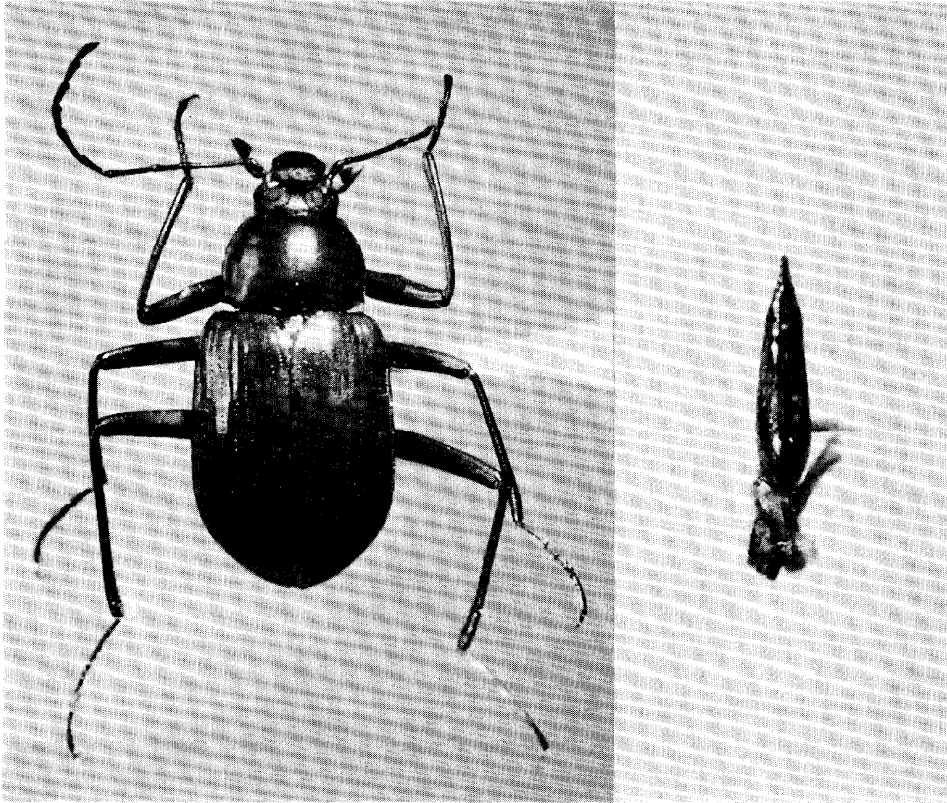
**Type material** : Holotype ♂ (Type No. 2091, Kyushu Univ.), Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg. Paratopotypes: 2 ♀♀, same data as holotype. Paratypes : ♀, Mt. Yonaha, Okinawa, Nansei Is., Japan, 22. iv. 1973, Coll. H. Irie ; ♂ & 2 ♀♀, Oku, Okinawa, Nansei Is., Japan, 31. v. 1974, Coll. H. Irie ; ♂ & ♀, Mt. Yonaha, Okinawa, Nansei Is., Japan, 2. vi. 1974, Coll. H. Irie.

**Type depository** : Holotype is preserved in the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

**37. *Plesiophthalmus piceus* sp. nov.**

Oblong oval, piceous with brassy tinge. Head densely punctate, pubescent, preocular area weakly and roundly expanded, strongly depressed along clypeal suture, clypeus weakly and roundly bent downwards at apical half, apical 1/3 amber coloured and without puncture, transverse at apex. Antennae very slender, reaching 3rd visible abdominal sternite; 1st segment thick, 2nd 1/3 as long as 3rd, 3rd longest and twice as long as 4th, 5th nearly twice as long as 1st, 6th a little shorter than 5th, 6th and 7th subequal to each other, 8th nearly 3/4 as long as 7th, 9th and penultimate one subequal to each other and a little shorter than 8th, terminal one subequal to 8th. Pronotum strongly convex, finely and sparsely punctate, widest at middle; hind margin very feebly marginate, hind corner obtuse, side margin roundly expanded, narrowly marginate, front corner a little obtuse, front margin 2/3 as wide as hind margin, not sinuate, narrowly marginate. Scutellum nearly equilateral triangular, very sparsely aciculate. Elytra strongly convex, widest at 2/3 from base, narrowly marginate, with punctate-striae, interstices very weakly convex and sparsely aciculate.

Mentum strongly convex, densely aciculate, gular suture visible, gena roughly punctate. Prosternal process strongly gouged in median part, propleura sparsely pubescent, mesonotum densely wrinkled and pubescent, mesepisternum densely punctate and pubescent, mesepimera sparsely punctate and pubescent, metanotum with dense and fine wrinkles, metepisternum very sparsely and finely punctate. Visible abdominal sternites sparsely and finely punctate, side longitudinally and finely wrinkled, male terminal segment deeply sinuate at apex.



**Figs. 10-11.** *Plesiophthalmus piceus* sp. nov. 10: Dorsal view. 11: Dorsal view of male genitalia.

Front femora with obtuse femoral projection at  $2/3$  from base. Front tibiae very weakly thickened towards apex, weakly warped inwards, basal  $1/3$  of inside very slightly scooped; middle tibiae very weakly warped inwards; hind femora nearly straight. First segment of front tarsi twice as long as 2nd, 3rd a little shorter than 2nd, penultimate one a little shorter than 3rd, terminal one a little longer than 1st and 2nd put together. Hind tarsi very slender, 1st the longest, a little longer than 2nd and terminal one put together.

Length : 13.0–14.0 mm. Width : 6.4–6.8 mm.

**Distribution** : Okinawa-Honto Island.



**Type material :** Holotype ♂ (Type No. 2092, Kyushu Univ.), Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg. Paratypes: ♂, Mt. Yonaha, Is. Okinawa, 23. v. 1967, Y. Yamawaki leg.; ♀, Mt. Yonahadake, Okinawa, Nansei Is., Japan, 25. v. 1972, Coll. H. Irie.

**Type depository :** Holotype is preserved in the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

This species is close to *P. makiharai* M. T. Chûjô, 1977 from Tokunoshima Island, but easily distinguished from the latter through the following characters:

*P. makiharai* M. T. Chûjô

Piceous with bluish tinge. Clypeus moderately extended forwards, narrowly smoothened along front margin. Side margin of scutellum very weakly, roundly expanded. Aciculae on elytra denser. Inside of apical 2/3 of front tibia comparatively, strongly expanded. Male genitalia much smaller, tegmen acutely narrowed towards apex.

*P. piceus* sp. nov.

Piceous with brassy tinge. Clypeus comparatively strongly extended forwards, widely smoothened along front margin. Side margin of scutellum roundly expanded. Aciculae on elytra sparser. Inside of apical 2/3 of front tibia slightly expanded. Male genitalia much larger, tegmen gradually narrowed towards apex.

38. *Plesiophthalmus spectabilis okinawanus* Nomura, 1964

**Spec. exam. :** 1 ex., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 1 ex., Oku, Okinawa, Nansei Is., Japan, 30. vi. 1976, H. Makihara leg.

†39. *Elixota iridicollis* Nakane, 1968

**Spec. exam. :** 1 ex., Yona, Okinawa, Ryukyu Is., 9-13. viii. 1969, H. Makihara leg.; 1 ex., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 3 exs., Izumi, Okinawa, Nansei Is., Japan, 1. vii. 1972, Coll. H. Irie ; 1 ex., Yona, Okinawa I., Nansei Is., Japan, 4. vii. 1976, T. Tsutsumi leg.

STRONGYLINI

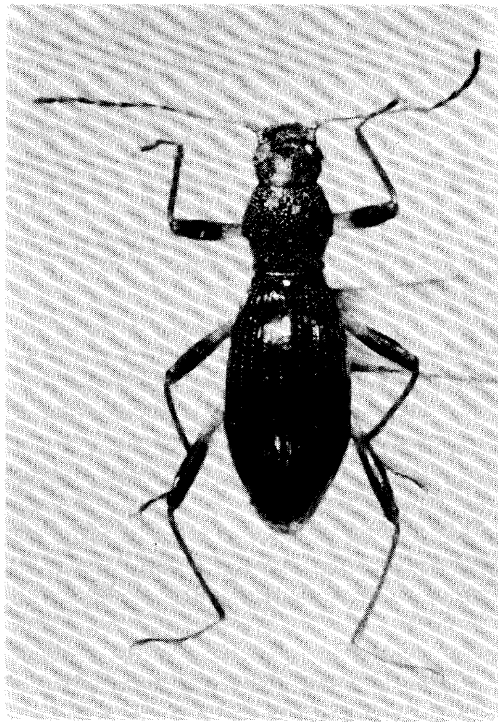
†40. *Strognylium cultellatum* Mäklin, 1866

**Spec. exam. :** 1 ex., Yona, Okinawa, Ryukyu Is., 9-13. viii. 1969, H. Makihara leg. ; 1 ex., Yona, Okinawa, Ryukyu, 12-17. vi. 1970, H. Makihara leg.; 1 ex.(at light), Mt. Yonaha, Okinawa, Nansei Is., Japan, 29. vi. 1972, Coll. H. Irie; 6 exs., Kudeken, Okinawa I., Ryukyus, 22. v. 1974, H. Makihara leg.; 1 ex., Yona, Okinawa, Nansei Is., Japan, 4. vi. 1974, Coll. H. Irie ; 2 exs., Oku, Okinawa I., Nansei Is., Japan, 3. vii. 1976, T. Tsutsumi leg.

41. *Eucrossoscelis michioi* sp. nov.

Gourd-shaped, piceous with golden tinge, basal half of every femur yellowish. Head sparsely, very coarsely punctate, vertex gently convex, interocular area with reversed semicircular groove, clypeal suture nearly semicircular, clypeus transverse, apical 1/3 gently bent downwards, front margin nearly straight. Antennae nearly reaching hind coxa, 1st segment thick, 2nd 3/5 as long as 1st, 3rd 4 times as long as 2nd, 4th 2/3 as long as 3rd, 5th subequal to 4th, 6th a little shorter than 5th, 6th to penultimate one subequal to each other, terminal one 3 times as long as 2nd.

Pronotum strongly convex, irregularly and very coarsely punctate, with 2 swellings on subbasal part, interval of swellings as wide as  $\frac{3}{5}$  of hind margin; hind margin strongly marginate; hind corner obtuse; side margin narrowed at  $\frac{1}{5}$  from base and then roundly expanded, with small swelling in middle part on side margin, widest at  $\frac{2}{3}$  from base; front margin roundly expanded, weakly marginate. Scutellum triangular, base wide. Elytra strongly convex, but subbasally depressed, strongly striate-punctate, interstices nearly smooth, 1st and 2nd interstices nearly flat, with longitudinal and short protuberance on 3rd, 7th keeled at basal  $\frac{1}{10}$ , 4th and followings gently convex; basal margin weakly marginate and reflexed, side margin gently and roundly expanded, very narrowly marginate.



**Fig. 12.** *Eucrossoscelis michioi* sp. nov.

Gular suture visible, depressed. Gena extremely, strongly punctate. Prosternum very strongly and sparsely punctate; punctures on mesosternum a little denser than that of prosternum; metasternum very sparsely and strongly punctate; punctures on metepisternum nearly in a file. Punctures on 1st visible abdominal sternites smaller than that of metasternum, and becoming smaller towards apex, terminal one weakly depressed at apex in male. Front femora thickest at  $\frac{3}{5}$  from base, middle and hind femora thickest at  $\frac{3}{4}$  from base. All tibiae nearly straight, gradually thickened towards apex, strongly punctate. Terminal segment of front tarsus longest, nearly twice as long as 1st; 1st hind tarsal segment nearly twice as long as 2nd and further subequal to terminal one, penultimate one about  $\frac{4}{5}$  as long as 2nd.

Length : 5.8-7.1 mm. Width : 2.2-2.5 mm.

**Distribution** : Okinawa-Honto Island.

**Type material** : Holotype ♂ (Type No. 2093, Kyushu Univ.), Mt. Yonaha, Okinawa, Nansei Is., Japan, 24. iv. 1973, Coll. H. Irie. Paratopotypes: 4 ♀♀, 17. iv. 1974, H. Irie leg.

**Type depository** : Holotype is preserved in the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

This species is very close to *E. broscosomoides* Nakane, 1963 from Amami-Oshima Island, but clearly be separated from the latter through the following characters :

*E. broscosomoides* Nakane

Piceous with copper tinge. Hind corner of pronotum very weakly bent outwards. Elytral striate-punctures larger, interstices comparatively, strongly convex, short ridge on 3rd interstices often indistinct. Terminal antennal segment a little longer than penultimate one.

*E. machioi* sp. nov.

Piceous with golden tinge. Hind corner of pronotum distinctly bent outwards. Elytral striate-punctures smaller, 1st and 2nd interstices nearly flat, short ridge on 3rd interstices strongly convex. Terminal antennal segment nearly 1.5 times as long as penultimate one.

### Acknowledgements

I wish to express my appreciation to Prof. Y. Hirashima, the head of Hikosan Biological Laboratory, for making this study possible and for his kind advice in the preparation of the manuscript. Also, I express my cordial thanks to Prof. Emeritus K. Yasumatsu and Prof. T. Shirôzu of Kyushu University for their continual kind guidance. Particular thanks are due to Prof. Emeritus M. Chûjô of Kagawa University for his various help to my study. My sincere thanks are also due to Mr. H. Makihara of Kyushu University and Mr. H. Irie of Fukuoka who kindly gave me so many valuable Ryukyuan tenebrionid specimens.