

TENEBRIONIDAE OF THE NANSEI ISLANDS I (COLEOPTERA)

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TENEBRIONIDAE OF THE NANSEI ISLANDS I*
(COLEOPTERA)

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Synopsis: Nine species of the Tenebrionidae are newly recorded from Tanegashima I., 7 from Kuroshima I., 14 from Yakushima I. and 1 from Kuchinoshima I. Two new taxa are *Gonocephalum acoriaceum* from Tanegashima I., Yakushima I. and Ishigakijima I., and *Misolampidius iriei* from Yakushima I. Male genitalia of *Misolampidius yakushimanus* Nakane are illustrated.

TANEGASHIMA I.

Opatrini

1. *Gonocephalum acoriaceum* sp. nov.

Dirty black, oblong oval, moderately convexed, wholly covered with short, brown scale-like hairs. Head strongly, coarsely punctured; apical portion of clypeus roundly deflexed downwards; frontal suture shallow but visible; preocular area shortly expanded, angle comparatively sharp; eye nearly rounded; interocular area 2.8 times as wide as eye; vertex strongly, densely granulated. Antennae moderate; 1st clavated, a little longer than 3rd, 2nd 1/3 of 1st, 4th a little longer than 5th, 5th and 6th subequal in length, similar in shape, 7th to 10th subequal in length to each other, also similar in shape, 11th rounded, a little longer than 10th, 7th to 11th forming a loose club.

* Contribution from the Hikosan Biological Laboratory, Faculty of Agriculture Kyushu University, Hikosan (Ser. 2, No. 49).

Pronotum transverse, about twice as broad as long, coarsely granulated, moderately convexed, side narrowly depressed: front margin widely, deeply sinuated, narrowly emarginated except for middle part; front corner projected forwards, apex obtuse; lateral margin moderately expanded, very narrow keel along submarginal area disappeared in middle part. Scutellum semicircular, very feebly convexed, slightly undulated.

Elytra moderately convexed, with punctate-striae, interstices convexed, granulated, base a little wider than pronotal one, widest at about $2/3$ from base, shoulder slightly oblique, side narrowly emarginated.

Mentum elongated pentagonal, strongly carved. Gular coarsely granulated. Prosternum shagreened, prosternal process irregularly, roughly carved. Propleura sparsely granulated, lateral marginal area with vertical sutures. Mesosternum strongly carved, apex of intercoxal space strongly depressed. Metasternum sparsely punctured, strongly carved between middle coxae. Metepisternum strongly shagreened. Abdomen sparsely, strongly punctured, in male middle parts of 1st and 2nd visible abdominal sternites weakly depressed, apical sternite emarginated.

All femora shagreened but becoming smooth towards base. Front tibia dilated towards apex, with dense bristles in apical half, in male with a thick, obtuse ventral projection in middle part, basal half slender; middle tibia wholly covered with short bristles, with several small projections along inner margin; hind tibia wholly covered with short spines as in middle tibia, slightly bent outwards. First to 4th segments of front tarsus nearly same in length, also similar in shape, 5th a little shorter than 1st to 4th put together; hind tarsus with 1st segment nearly as long as 2nd and 3rd put together, 4th a little longer than 1st.

Length: 7.2-8.0 mm. Width : 3.4-3.8 mm.

Type materials: Holotype ♂ (Type No. 2044, Kyushu Univ.), Mt. Banna, Ishigaki I., the Ryukyus, at light, 24. v. 1975, H. Makihara leg. Paratypes: ♂, Kurio, Is. Yaku-shima, 3. vii. 1959, M. et T. Okadome leg. ; 2 ♂♂, Kukibachi, Tanegashima I., 17. x. 1961, K. Baba leg. ; 2 ♀♀, Kukibachi, Tanegashima I., 17. x. 1961, K. Baba leg.; ♂, Ishigaki I., the Ryukyus, 3. iv. 1969, R. Takubo leg. ; ♂, Ishigaki City, the Ryukyus, at light, 28. v. 1975, H. Makihara leg.

Type depository: Holotype is preserved in the Entomological Labora-

tory, Faculty of Agriculture, Kyushu University.

Distribution: Tanegashima I., Yakushima I. and Ishigaki I.

This species is closely related to *G. coriaceum* Motschulsky, 1857, but distinguishable from it through the following characters:

G. coriaceum Motschulsky

Preocular area weakly, roundly expanded, proportion of antennal segments 2nd to 4th = 5 : 9 : 7; in male two small protibial projections present at 3/5 from base on underside, basal half of inner margin not excavated; male genitalia weakly twisted, apical part very feebly bent downwards.

G. acoriaceum sp. nov.

Preocular area strongly, sharply expanded, proportion of antennal segments 2nd to 4th = 4 : 10 : 7; in male a thick protibial projection present in middle part on underside, basal half of inner margin weakly excavated; male genitalia strongly twisted, apical part strongly bent downwards.

Phaleriini

- † 2. ***Micropedinus pallidipennis*** Lewis, 1894
1 ex., Honmura, 18. x. 1961, K. Baba leg.
- † 3. ***Phaleria (Epiphaleria) atriceps*** (Lewis, 1894)
36 exs., Nôkan, 19. x. 1961, K. Baba leg.

Bolitophagini

- † 4. ***Dicraeosis carinatus carinatus*** Gebien, 1913
7 exs., Makinomine, 29. vii. 1974, H. Hakiyama leg.

Diaperiini

- † 5. ***Ceropria induta induta*** (Wiedemann, 1819)
1 ex., Makinomine, 29. vii. 1974, H. Makihara leg.

Ulomini

- † 6. ***Eutochia lateralis*** Boheman, 1858
1 ex., Honmura, 18. x. 1961, K. Baba leg.

Cnodalonini

- † 7. ***Tetraphyllus lunuliger*** Marseul, 1876
1 ex., Makinomine, 29. vii. 1974, H. Makihara leg.

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

- † 8. **Pseudonautes purpurivittatus** (Marseul, 1876)
1 ex., Makinomine, 29. vii. 1974, H. Makihara leg.

Strongyliini

- † 9. **Strongylium apterum apterum** Nomura et Yamazaki, 1960
1 ex., Makinomine, 29. vii. 1974, H. Makihara leg.
10. **S. japonum tanegashimae** Nomura, 1963
1 ex., Ann&town, 19. vi. 1960, Y. Yamawaki leg.
- †11. **S. yakushmanum** Nakane, 1963
1 ex., Noma, 14. vi, 1964, Y. Yamawaki leg.

KUROSHIMA I.

Opatrini

- † 1. **Gonocephalum coriaceum** Motschulsky, 1857
2 exs., Oogora, 23-25. vii. 1975, H. Makihara leg.

Diaperiini

- † 2. **Diaperis sanguinipennis sinensis** Gebien, 1925
46 exs., Oogora, 23-25. vii. 1975, H. Makihara leg.

Tenebrionini

- † 3. **Menephilus arciscelis** Marseul, 1876
1 ex., 10. viii. 1967, N. Senda leg. ; 7 exs., Oogora, 23-25. vii.
1975, H. Makihara leg.

Cnodalonini

- † 4. **Obriomaia palpalis palpaloides** Nakane, 1963
5 exs., Oogora, 23-25. vii. 1975, H. Makihara leg.
- † 5. **Phaedis (Phaedis) helopioides** (Pascoe, 1866)
1 ex., Oogora, 23-25. vii. 1975, H. Makihara leg.

Strongyliini

- † 6. **Strongylium japonum yakushimae** Nomura, 1963
8 exs., Oogora, 23-25. vii. 1975, H. Makihara leg.
- † 7. **S. apterum apterum** Nomura et Yamazaki, 1960
13 exs., Oogora, 23-25. vii. 1975, H. Makihara leg.

YAKUSHIMA I.

Opatrini

- † 1. **Gonocephalum acoriaceum** M. T. Chûjô
1 ex., data mentioned above.

Diaperini

- † 2. **Diaperis sanguinipennis sinensis** Gebien, 1925
1 ex., 20. viii. 1954, M. Okadome leg.
- † 3. **Platydemia subf ascia subf ascia** (Walker, 1858)
2 exs., along Kusugawa (300m), 3. x. 1968, M. T. Chûjô leg.
- † 4. **Ceropria induta induta** (Wiedemann, 1819)
24 exs., along Kusugawa (300 m), 3. x. 1968, M. T. Chûjô leg. ;
8 exs., Aikodake (150-300 m), 4. x. 1968, M. T. Chûjô leg.; 1 ex.,
along Fundonosawa (150-400 m), 6. x. 1968, M. T. Chûjô leg. ;
2 exs., Anbo, 6-8. vi. 1969, H. Makihara leg. ; 4 exs., Kurio, 27.
vii. 1975, H. Makihara leg.
- † 5. **Basanus amamianus** M. T. Chûjô, 1966
3 exs., along Fundonosawa (150-400 m), 6. x. 1968, M. T. Chûjô
leg.

Ulomini

6. **Cneocnemis laminipes** Gebien, 1913
No example,
- ‡ 7. **Uloma bonzica bonzica** Gebien, 1913
2 exs., Aikodake (150-300 m), 4. x. 1968, M. T. Chûjô leg. ; 11
exs., along Fundonosawa (150-400 m), 6. x. 1968, M. T. Chûjô
leg. ; 1 ex., Mt. Miyanoura, 4-5. vi. 1969, H. Makihara leg.
8. **Eutochia lateralis** Boheman, 1859
No example.

Tenebrionini

9. **Setenis striatipennis** Lewis, 1894
2 exs., Mt. Miyanouradake, 19. vii. 1974, H. Irie leg. ; 1 ex.,
Miyanoura, 21. vii. 1974, T. Mikage leg.
- †10. **Menephilus arciscelis** Marseul, 1876
1 ex., along Fundonosawa (150-400 m), 6. x. 1968, M. T. Chûjô
leg.
- †11. **Toxicum tricornutum** Waterhouse, 1874
1 ex., along Suzukawa (100-400 m), 7. x. 1968, M. T. Chûjô leg. ;

1 ex., Ookawa-rindo, 28-31. vii. 1975, H. Makihara leg.

12. **T. funginum** Lewis, 1894

7 exs., along Fundonosawa (150-400 m), 6. x. 1968, M. T. Chûjô leg.

Cnodalonini

†13. **Tetraphyllus lunuliger** (Marseul, 1876)

1 ex., Kurio, 10-18. vi. 1959, M. et T. Okadome leg.; 9 exs., Aikodake (150-300 m), 4. x. 1968, M. T. Chûjô leg.; 7 exs., along Fundonosawa (150-400 m), 6. x. 1968, M. T. Chûjô leg.; 2 exs., Anbo, 30. v. - 1. vi. 1969, H. Makihara leg.; 4 exs., Kurio, 27. vii. 1975, H. Makihara leg.

†14. **Obriomaia palpalis palpaloides** Nakane, 1963

1 ex., Anbo, 6-8. vi. 1969, H. Makihara leg.; 1 ex., Ookawa-rindo, 28-31. 1975, H. Makihara leg.

f-15. **Pseudonautes purpurivittatus** (Marseul, 1876)

17 exs., Anbo, 6-8. vi. 1969, H. Makihara leg.; 4 exs., Ookawa-rindo, 28-31. vii. 1975, H. Makihara leg.

Adeliini

16. **Laena rotundicollis** Marseul, 1876

No example.

Misolampini

17. **Misolampidius yakushmanus** Nakane, 1968

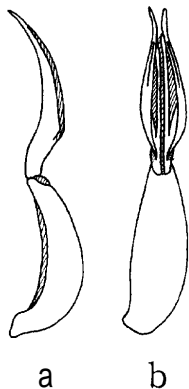


Fig. 1. Male genitalia of *Misolampidius yakushmanus* Nakane (4.30 mm in length, a : lateral view, b: dorsal view),

1 ex., Mt. Takatsukayama, 13. vi. 1974, H. Irie leg.: 2 exs., Mt. Miyanouradake, 13. vi. 1974, H. Irie leg. ; 2 exs., Mt. Takatsukayama, 16. vi. 1974, H. Irie leg.

18. *Misolampidius iriei* sp. nov.

Shiny dark brown, gourd-shaped, strongly convexed. Head roughly, sparsely punctured; clypeal suture visible, clypeus depressed, apical margin of clypeus roundly bent downwards ; preocular area moderately rounded ; eye nearly rounded, strongly expanded, longitudinal inner groove of eye very shallow, interocular area well convexed.

Pronotum sparsely, weakly punctured, punctures much smaller and sparser than punctures on head; front corner gently rounded; side moderately rounded at frontal $6/7$, narrowed at basal $1/7$, subbasal line visible. Scutellum small, nearly triangle, very weakly convexed. Elytra well convexed, widest at middle part, with visible punctate-striae, weakly convexed interstices very sparsely aciculated, lateral margin visibly emarginated.

Antennae not reaching to elytra; 2nd antennal segment about one-half as long as 1st, 3rd 1.3 times of 4th, 4th a little longer than 5th, 5th to 8th nearly equal in length to each other, 8th a little thicker than 7th, 9th a little shorter than 8th, 9th nearly equal to 10th in length and shape, 11th obcordate, nearly equal to 3rd in length, 8th to 11th forming a very loose club. Mentum with reflexed margin, longitudinally elevated, gular nearly smooth, gena very strongly punctured.

Prosternum very feebly rugosed, prosternal process strongly convexed and gently widened between front coxal cavities, apical half strongly, irregularly rugosed, strongly elevated along middle coxal cavities, apex nearly transverse. Metasternum very sparsely, minutely punctured, with many transverse rugae between hind coxal cavities. First to 4th visible abdominal sternites comparatively sparsely punctured, in apical segment punctures diminished but becoming denser towards apex.

Front femur very sparsely, minutely punctured, thickly clavated, with very wide profemoral tooth at $2/3$ from base; middle femur thickest at $3/4$ from base, sparsely punctured, punctures becoming denser towards base; hind femur thickest at $1/5$ from base. Front tibia with comparatively dense punctures, $3/5$ to $4/5$ from base weakly flattened, apical $1/5$ a little thickened and weakly bent inwards ; front half of hind femur very feebly flattened, slightly warped

outwards in middle part. First to 4th tarsal segments nearly equal to each other in length, 5th about 3 times of penultimate one; 1st hind tarsal segment twice as long as 2nd, 2nd a little longer than 3rd, 4th slightly longer than 1st.

Length: 9.5-12.2 mm. Width : 3.8-4.6 mm.

Type materials: Holotype ♂ (Type No. 2045, Kyushu Univ.), Mt. Takatsukayama, 16. vi. 1974, H. Irie leg.; Paratopotypes ♀♂, 13. vi. 1974, H. Irie leg.; ♂, same data as holotype ; ♀, Mt. Miyanouradake, 12. vi. 1974, H. Irie leg. ; ♀, Mt. Miyanouradake, 15. vi. 1974, H. Irie leg.

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

Distribution : Yakushima Island.

This species is closely allied to *M. clavicrus* Marseul, 1876, but they are distinguishable through the following characters :

M. clavicrus Marseul

Moderate sized in this genus, punctures on upper surface strong and dense, eye not expanded, longitudinal inner groove of eye deep, profemoral tooth strongly projected, front tibia not flattened, apical zone of gular to gena strongly rugosed, median lobe of male genitalia strongly raised.

M. iriei sp. nov.

Small sized in this genus, punctures on upper surface weak and sparse, eye expanded, longitudinal inner groove of eye very shallow, profemoral tooth weakly projected, apical half of front tibia weakly flattened, gular nearly smooth, gena roughly punctured, median lobe of male genitalia weakly raised.

†19. *Paramisolampidius tokarensis* (Nakane, 1968)

4 exs., along Fundonosawa (150-400 m), 6. x. 1968, M. T. Chûjô leg.

Helopini

†20. *Tarpela brunnea brunnea* Marseul, 1876

1 ex., Miyanoura, 10. iv. 1967 H. Shima leg. ; 3 exs., Anbo, 6-8. vi. 1969, H. Makihara leg.

Amarygmini

21. *Plesiophthalmus nigrocyaneus yakushmanus* Yamazaki, 1964

3 exs., Onoaida, 6. vi. 1969, H. Makihara leg. ; 2 exs., Ookawa-

rindo, 28-31. 1975, H. Makihara leg.

Strongyliini

22. *Strongylium apterum apterum* Nomura et Yamazaki, 1960
1 ex., Kurio, 27. vii. 1975, H. Makihara leg. ; 1 ex., Ookawa-rindo, 28-31. vii. 1975, H. Makihara leg.; 1 ex., Ookawa-rindo (at light), 28-31. vii. 1975, H. Makihara leg.
23. *S. japanum japanum* Marseul, 1876
1 ex., Ambo-Kosugidani, 16. vii. 1950, T. Shirôzu leg. ; 1 ex., Anbo, 30. v. - 1. vi. 1969, K. Kushigemachi leg.; 7 exs., Ookawa-rindo (at light), 28-31. vii. 1975, H. Makihara leg. ; 3 exs., Ookawa-rindo, 1-2. viii. 1975, H. Makihara leg.
24. *S. yakushmanum* Nakane, 1963
3 exs., Ambo-Kosugidani, 16. vii. 1950, T. Shirôzu leg. ; 17 exs., Ookawa-rindo, 28-31. vii. 1975, H. Makihara leg. ; 5 exs., Ookawa-rindo (at light), 28-31. vii. 1975, H. Makihara leg.

KUCHINOSHIMA I.

Cnodalonini

- † 1. *Obriomaia palpalis palpaloides* Nakane, 1963
2 exs., 26. vi. - 3. vii. 1969, H. Makihara leg.

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Explanation of Plate 1.

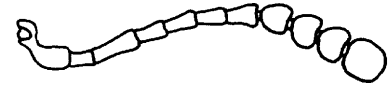
- A : Head and pronotum of *Gonocephalum coriaceum* Motschulsky.
a : Head and pronotum of *G. acoriaceum* sp. nov.
- B: Antennae of *Gonocephalum coriaceum* Motschulsky (2.25 mm in length).
b: Antennae of *G. acoriaceum* sp. nov. (2.35 mm in length).
- C: Oblique ventral view of front tibia of *Gonocephalum coriaceum* Motschulsky (Specially front tibia1 projections are given.) (1.45 mm in length).
c: Oblique ventral view of front tibia of *G. acoriaceum* sp. nov. (1.60 mm in length).
- D: Dorsal view of male genitalia of *Gonocephalum coriaceum* Motschulsky (1.65 mm in length).
d: Dorsal view of male genitalia of *G. acoriaceum* sp. nov. (1.70 mm in length).
- E: Lateral view of male genitalia of *Gonocephalum coriaceum* Motschulsky .
e: Lateral view of male genitalia of *G. acoriaceum* sp. nov.



A



B



b



a



c



c



D



E



d



e

Chûjô—Tenebrionidae from the Nansei Islands.

Explanation of Plate 2.

A : *Misolampidius iriei* sp. nov.

a : *M. clavicus* Marseul.

B : Ventral view of femur of ***Misolampidius iriei*** sp. nov. (**2.90** mm in length).

b : Ventral view of femur of ***M. clavicus*** Marseul (3.10 mm in length).

C : Dorsal view of male genitalia of ***Misolampidius iriei*** sp. nov. (in length).

c : Dorsal view of male genitalia of ***M. clavicus*** Marseul (3.30 mm in length) .

D : Lateral view of male genitalia of ***Misolampidius iriei*** sp. nov.

d : Lateral view of male genitalia of ***M. clavicus*** Marseul.



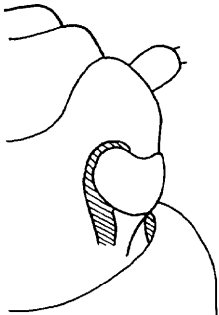
A



B



b



a



C



D



c



d

Chûjô—Tenebrionidae from the Nansei Islands.