TRIBE CLYTINI OF OKINAWA PREFECTURE
(COLEOPTERA : CERAMBYCIDAE)*

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Abstract
Seventeen species of longicorn beetles belonging to the tribe Clytini of Okinawa Prefecture are discussed. Two new species, Xylotrechus albolatifasciatus and Perissus tsutsumii are described. Clytus tinsunshi Ohbayashi et Ohbayashi, 1965 is treated as a synonym of Xylotrechus chujoi ishigakianus (Ohbayashi, 1964), which is a new combination. Perissus ishigakianus Ohbayashi, 1964 is treated as a subspecies of Xylotrechus chujoi Hayashi, 1960.

In the present paper, the results of my recent studies on the tribe Clytini of Okinawa Prefecture are presented. Seventeen species are discussed. Two new species, Xylotrechus albolatifasciatus and Perissus tsutsumii are described. Perissus ishigakianus Ohbayashi, which was described from Ishigaki Island is considered to be a subspecies of Xylotrechus chujoi Hayashi described from Okinawa Island. Clytus tinsunshi Ohbayashi et Ohbayashi from Ishigaki Island is synonymized with a new combination, Xylotrechus chujoi ishigakianus (Ohbayashi). Comments are also made on the geographic variation of some species.

I wish to express my sincere gratitude to Professor Y. Hirashima and Associate Professor K. Morimoto of Kyushu University for their continuous kind guidance. My thanks are due to Professor S. Azuma of University of the Ryukyus, Mr. N. Ohbayashi of Kanagawa Experiment Station and Messrs. T. Tsutsumi, K. Nichō, H. Fujita, M. Fukamachi and T. Yano for the donation or the loan of the valuable specimens as well as the type specimens for my present study. I am also grateful to Mr. K. Yogi of Ishigaki City for his kind help to my collecting trips to Ishigaki Island.

TRIBE CLYTINI
Mulsant, 1839, Hist. nat. col. France, Longicornes, p. 70, (Clytaires)

* Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Ser. 3, No. 71).
KEY TO GENERA OF CYTINII OF OKINAWA PREFECTURE

1. Antennae widely separated basally ...................................................... 2
   Antennae rather close basally .......................................................... 4
2. Front of head without carinae .................................................................. 3
   Front of head with a V-shaped or branching carinae; lateral sides of frons
   carinate; antennae short ....................................................................... Xylotrechus
3. First hind tarsal segment less than 2.5 times as long as $2 + 3$; antennae short,
   robust .................................................................................................. Clytus
   First hind tarsal segment more than 2.5 times as long as $2 + 3$; antennae rather
   long, filiform ....................................................................................... Perissus
4. Antennae without spines at apices of segments ...................................... 5
   Antennae with spines at apices of segments 3-4 .................................. Demonax
3. Antennal segment 3 longer than 1; antennae not extremely close basally ..... Rhaphuma
   Antennal segment 3 not longer than 1; antennae extremely close basally ... Chlorophorus

Genus Xylotrechus Chevrolat

cerambyc., p. 424; Pascoe, 1869, Trans. Ent. Soc. London, ser. 3, 3: 606; Gahan, 1906,
34(2): 265; Mitono, 1941, Bull. School Agr. For. Taihoku Imp. Univ., 2: 79; Gressitt,

KEY TO THE OKINAWAN SPECIES OF Xylotrechus*

1. Front of head with distinct carinae; body large ...................................... 2
   Front of head with indistinct carinae; body small .................................. 7
2. Pronotum without a red band; abdominal sternites with white or yellow bands .... 3
   Pronotum with a red, an orange and a black bands; elytra with oblique orange
   and blackish brown bands on basal $2/3$, with orange and narrow blackish
   brown bands on apical $1/3$; abdominal sternites with orange bands; body length
   15-25 mm ...................................................................................... Xylotrechus chinensis (Chevrolat)
3. Front of head with a distinct V-shaped carina, pronotum without small whitish
   yellow spots; mid and hind femora and tarsi black or brown on basal halves ....... 4

* Some species closely related to the Okinawan species are also included.
Front of head with a pair of parallel, not clearly V-shaped carina; pronotum with ten whitish yellow spots; elytra with a narrow zig-zag white line on basal half, and an oblique narrow white one on apical half; mid and hind femora and tarsi red except apical 1/3; body length 9.0-16.5 mm.

**Xylotrechus grayii** (White)

- Pronotum angulate at side; front of head with 2 V-shaped and A-shaped median carinae, fused together
- Body length 8-16 mm

**Xylotrechus atronotatus angulithorax** Gressitt from Amami-Oshima I. and Tokunoshima I. (Figs. 11 and 15 A)

- Pronotum angulate at side on basal 2/5; body length 10-16 mm
- Pronotum with black markings at middle and sides; elytra with broad pale bands; body length 10.5-18.0 mm

**Xylotrechus atronotatus** atronotatus Pit from Taiwan (Figs. 11, 14 and 15 D)

- Pronotum with black markings on median and lateral portions, confused below and above; elytra with narrow pale bands; body length 8.5-18 mm

**Xylotrechus atronotatus** generosus Gressitt from Ishigaki I. and Iriomote I.

- Elytra with one or two oblique bands and apical markings not clear

**Xylotrechus atronotatus** generosus Gressitt from Ishigaki I. and Iriomote I.

- Elytra with two markings, X-shaped on basal 1/3 and T-shaped on apical 1/3, clear on female and not clear in male; body length 6.5-10.5 mm

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8. Abdominal sternites 3-4 with white pubescent bands 

Abdominal sternites 3-6 with white pubescence; elytra with two oblique bands; body length 7-8 mm. Xylotrechus laetus Matsushita from West Japan and Yakushima I.

9. Body with golden green pubescence; elytra rather short, relative measurement of width to length 2.35 in male; legs long, relative measurement of body to hind legs 1.13-1.15 in male; body length 6.8-8.2 mm. Xylotrechus chujoj Hayashi

Body with whitish yellow pubescence; elytra rather long, relative measurement of width to length 2.40-2.63 in male; legs short, relative measurement of body to hind legs 1.02-1.12 in male; body length 6.3-10.5 mm. Xylotrechus chujoj ishigakianus (Ohbayashi)

10. Elytra with an oblique band and two spots on base and basal 1/3; pronotum with white markings on base; body length 6.5-8.0 mm. Xylotrechus reductomaculatus Hayashi from Nakanoshima I. and Amami-Oshima I.

Elytra with two oblique bands, a narrow one and a wide one; pronotum with small white markings on base not clear; body length 5.6-8.0 mm. Xylotrechus albolatifasciatus sp. nov.

Xylotrechus albolatifasciatus sp. nov. (Figs. 1 A, 2, 3, 6, 7 and 10 A, B D, G)

Body black; antennae and legs brown; disc of elytral markings yellow.

Head closely punctured, with median long and lateral short carinae, covered with white or yellow pubescence, and with long oblique whitish yellow hairs on sides of frons and lateral and ventral sides; eyes large, relative length of inferior eye lobes to gena 1.4; antennae short, relative length to body 0.50-0.51 (male), 0.46-0.48 (female), relative length of each segment as 12.8:7.2:12.8:10.5:11.2:8.7:8.3:7.3:7.2:6.2:7.8 (male), 14.1:7.5:1.0:9.8:11.2:8.2:8.0:7.2:7.0:6.4:8.5 (female); long oblique white hairs on segment 1 and ventral sides of segments 2-5, short oblique ones on segments 6-11 sparsely, whitish yellow pubescence on segments 1-5 sparsely and on 6-11 densely.

Pronotum circular, closely punctured, with long oblique white hairs sparsely on lateral sides, with golden yellow and white pubescence densely on lateral sides and sparsely on another parts.

Scutellum semicircular, with white or golden green pubescence densely on apex.

Elytra parallel at basal 9/10, relative measurement of width to length 2.4-2.6 (male), 2.5-2.7 (female); apices nearly roundly truncate, with two white pubescent bands, a narrow one extending obliquely backward from suture behind scutellum to basal 1/3, and a wide one parallel to the narrow one near middle, apices with white patch of pubescence broad in male, narrow in female, and another parts with white or golden yellow pubescence.

Legs long; femora and tibiae with white suberect hairs sparsely; mid and hind femora with short oblique white hairs on ventral sides.
Ventral side with white pubescence on mesepisternum, metepimeron and apices of abdominal sternites 3-4 densely, another parts with pubescence not dense.

Male genitalia robust; median lobe with median struts rather long and slightly curved; tegumen with roof and without basal piece; lateral lobes wide and short, with three long setae on apices and short setae all over.

Length: 7.6-8.6 mm (male), 5.4-7.2 mm (female).

Distribution: Okinawa I.

Type material: Holotype ♂ (Type No. 2166, Kyushu Univ.), Oku, Ōki-

**Type Depository:** The holotype is preserved in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

**Diagnosis:** This new species is related to *X. laetus* Matsushita from West Japan and Yakushima I., but separable from it by the following points: Elytral white bands broad, elytral apices subrounded; and antenna1 segment 5 relatively short. The new species is also related to *X. reductomaculatus* Hayashi from Nakanoshima I., Amami-Ōshima I. and Tokunoshima I., but is separable from it as follows: Elytral white bands complete and broad; and parameres of male genitalia broad (Figs. 1 A, B, C and Z-10).


**Xylotrechus atronotatus angulithorax** Gressitt

(Figs. 1 G, 11 and 15 B)


**Xylotrechus (s. str.) generosus angulithorax**: Samuelson et Gressitt, 1965, Pac. Ins., 7(1): 75.


**DISTRIBUTION**: Okinawa I.

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Figs. 11-14. **Xylotrechus atronotatus** subsp. 11: angulithorax from Amami-Ōshima I. 12: angulithorax from Okinawa I. 13: generosus from Iriomote I. 14: atronotatus from Taiwan.

**Xylotrechus atronotatus generosus** Matsushita (Figs. 1 H, 13 and 15 C)

**Xylotrechus generosus** Matsushita, 1933, J. Fac. Agr. Hokkaido Imp. Univ., 34: 270, pl. 11, fig. 1.


**Xylotrechus basalis angulithorax**: Mitono, 1940, Cat. Col. Japonic., 8: 106.

**Xylotrechus atronotatus angulithorax**: Mitono, 1941, Bull. School Agr. For. Taihoku Imp. Univ., 2: 91, pl. 7: figs. 6, 7 (part).

**Xylotrechus (s. str.) atronotatus** generosus: Gressitt, 1951, Phil. J. Sci., 79(2): 213.


**Xylotrechus (s. str.) generosus generosus**: Samuelson et Gressitt, 1965, Pac. Ins., 7(1): 75.

Fig. 15. Pronotum of *Xylotrechus atronotatus* subspp. A: *angulithorax* from Amami-Ôshima I. B: *angulithorax* from Okinawa I. C: *generosus* from Iriomote I. D: *atronotatus* from Taiwan


Distribution: Ishigaki I., Iriomote I., Taketomi I., Kohama I. and Hateruma I.

Remarks: *X. atronotatus* shows a cline from Taiwan to Amami-Ôshima I. in regard to the angulation of the lateral sides of the pronotum which is intensified from south to north.

*Xylotrechus chinensis* (Chevrolat)

(Figs. 1 E and 24)


Xylotrechus chujoi chujoi Hayashi

(Fig. 23)


Male. Body black; antennae dark brown; front of head with a median long carina, oblongly at interspace of eyes, and short carinae on lateral sides not clear; eyes large, inferior eye lobes as long as gena; antennae rather

short, relative length to body 0.46-o. 51, relative length of each segment as
13.8 : 7.1 : 14.5 : 11.0 : 10.8 : 9.1 : 7.2 : 6.7 : 6.5 : 5.7 : 7.6, with depressed white
hairs and long oblique whitish yellow ones on under sides of segments 1-5
sparsely, and segments 6-11 with suberect hairs' sparsely.

Pronotum circular, as long as broad, closely punctured, with golden green
pubescence, disc with two small black spots.

Scutellum semicircular, with pubescence similar on pronotum.

Elytra parallel at basal 3/4, rather long, relative measurement of width
to length 2.35, apices truncate subroundly; disc with X-shaped golden green
pubescent band on basal 1/3 and T-shaped similar one on apical 1/3, not clear
and wide.

Legs long, relative length of body to hind legs 1.13-l. 15; femora, tibiae
and fore and mid tarsi with white depressed and oblique hairs sparsely, apices
of hind tibiae and tarsi with brown oblique hairs, apices of tarsi with two
spines on undersides.

Ventral side with depressed golden white pubescence.

Length : 6.8-8.2 mm.


Distribution: Okinawa I.

_Xylotrechus chujoi ishigakianus_ (Ohbayashi) n. comb.

(Figs. 16-22)


Head with whitish yellow pubescence; relative length of antenna to body
0.45-o. 50 (male), 0.43-o. 48 (female), relative length of each antennal segment
as 12.8 : 6.6 : 13.9 : 11.5 : 11.4 : 8.9 : 8.1 : 7.0 : 6.8 : 5.8 : 7.3 (male), 14.5 : 7.0 :
13. 3 : 11.8 : 11. 6 : 8. 7 : 7. 7 : 6. 7 : 6. 2 : 5.4 : 7.0 (female).

Elytra long, relative measurement of width to length 2.40-2.63 (male),
2.47-2.64 (female), with whitish yellow pubescent bands obscure in male and
narrow and clear in female.

Legs rather long, relative length of body to hind legs 1. 02-l. 12 (male),
1.05-l. 17 (female).

Ventral side with depressed whitish yellow pubescence.

Length : 6.3-10.5 mm. (male), 6.0-7.8 mm (female).

Specimens examined: Ishigaki 1♂, Takeda, 3. v. 1963, Y. Arita leg.

_(Perissus ishigakianus_ Ohbayashi, holotype; this specimen was described as
female); 1♀, Mt. Omoto, 16. vii. 1964, N. Ohbayashi leg. (Clytus tinsunshi Ohbayashi et Ohbayashi, holotype); 1♀, Botanical Garden, Banna, 20. vii. 1974, emerged from a decayed tree, H. Makihara leg.; 1♂, same data as above, 23. viii. 1974; 1♂, Mt. Omoto, 18. v. 1975, Y. Takahashi leg.; 1♀, same locality as above, 20. v. 1975, H. Makihara leg.; 1♂, same locality as above, 14. vi. 1975, S. Kimoto leg.; 1♂, same locality as above, 10. x. 1975, T. Takahashi leg.; 2♂♂, 1♀, same locality and collector as above, 17. iv. 1976.

**Distribution:** Ishigaki I.

**Diagnosis:** Xylotrechus chujoi Hayashi was once miscombined with Perissus and Clytus by Ohbayashi (1964) and Ohbayashi and Ohbayashi (1965), respectively. The holotype of Perissus ishigakianus Ohbayashi is a small specimen having the frontal carinae of the head weak and the first hind tarsal segments long, 2.45 times as long as 2+3. More curiously, the holotype, which is a male, was misregarded as a female. The holotype of Clytus tinsunshi Ohbayashi et Ohbayashi is also a small specimen having the frontal carinae of the head weak, but the first hind tarsal segments shorter, 2 times as long as 2+3. In Xylotrechus chujoi Hayashi, however, the frontal carinae of the head are clear in larger specimen, and the first hind tarsal segments are variable, 1.80-2.45 times as long as the second and third hind tarsal segments taken together. Moreover, the elytral makings of the male markedly differ from those of the female in this species.

X. chujoi ishigakianus differs from X. chujoi chujoi from Okinawa Island in having the body with whitish yellow pubescence, the elytra long and the legs short.

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**Figs. 24 & 25.** Xylotrechus spp. 24: chinensis. 25: grayii.
Xylotrechus grayii (White)
(Figs. 1 F and 25)

*Clytus grayii* White, 1855, Cat. Col. Brit. Mus., 8: 261, pl. 6, fig. 4.


Distribution: Hokkaido, Honshu, Shikoku, Kyushu, Sado I., Hachijo I., Niijima I., Tsushima I., Yakushima I., Amami-Ōshima I., Okinawa I., Ishigaki I., Iriomote I. and Hateruma I.; Taiwan, China and Mariana Is.

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Genus *Clytus* Laicharting

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Clytus fukienensis Gressitt

(Figs. 26-29)


**Specimens examined**: Okinawa I.: 2 exs., Yona, 25. ii. 1977, emerged from a decayed tree, T. Tsutsumi leg.

**Distribution**: Amami-Ôshima I. and Okinawa I.; China.

Genus Perissus Chevrolat


**Perissus tsutsunmii** sp. nov.

(Figs. 30, 34 and 38A, B, I, L)

**Male.** Body blackish brown; fore legs and antennal segments 10-11 reddish brown.

Head closely punctured, with oblique white pubescence and with long oblique white hairs on apex of frons and ventral side; eyes large, inferior eye lobes as long as gena; mouth parts with oblique golden yellow hairs; antennae rather short, relative length to body 0. 64-0. 70, relative length of each segment as 11, 1: 4. 8: 10. 6: 10. 7: 12. 2: 10. 9: 9. 7: 8. 4: 7. 4: 6. 5: 7. 8; segments 1-5 with oblique brown hairs, segments 6-11 with short suberect brown hairs sparsely, segments 5-8 and dorsal sides of segment 9 with white pubescence densely, ventral side of segment 9 and 10-11 with reddish brown pubescence densely.

Pronotum circular, closely punctured, with two black spots on submedian portions, median portion of pronotum and the two black spots with brown pubescence, another parts with white pubescence, with erect white hairs on lateral and ventral sides sparsely.

Scutellum semicircular; apices truncate subroundly, with two weak spines; disc with two white pubescent bands, a narrow one extending obliquely backward from suture behind scutellum to basal 1/3, and a wide one transverse
at apical 1/3, with white pubescence on humeri, with whitish yellow hairs on apices, another parts with blackish brown pubescence densely.

Legs very long, relative length of hind legs to body 1.4-1.5; femora and tibiae with suberect whitish yellow hairs; tarsi with short oblique brown hairs densely, first hind tarsal segment 2.8-3.0 times as long as 2+3.

Ventral side with white pubescence densely on mesepisternum, apical half of metepimeron, apical 1/3 of metasternum and apices of abdominal sternites 3 and 4, another parts with suberect whitish yellow hairs and brown pubescence.

Male genitalia rather slender; median lobe with long median struts; tegumen with long roof and without basal piece; lateral lobes slender, with three long setae on apices and short ones on interior.

Length: 7.8-10.5 mm.

**DISTRIBUTION**: Okinawa I.


**TYPE DEPOSITORY**: The holotype is preserved in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

**DIAGNOSIS**: This new species is related to *P. kiusuensis* Ohbayashi from West Japan including islets from Yakushima I. to Tokunoshima I. and *P. demonacoides* (Gressitt) from Taiwan, but separable from them by the following key.

**KEY TO THE OKINAWAN SPECIES OF Perissus***

1. Apices of abdominal sternites 3-4 with white pubescent bands ........................................ 2
   - Apices of abdominal sternites 3-5 with white pubescent bands; two elytral white bands narrow; hind tarsal segment 2 slender and long; body length 8-10 mm. ............. *Perissus demonacoides* (Gressitt) from Taiwan (Figs. 31, 35 and 38 J, M)

2. Pronotum with two black spots ................................................................. 3
   - Pronotum without two black spots ...................................................................... 4

3. Pronotum with white pubescent bands; elytral white pubescent bands narrow; legs reddish brown; hind tarsal segment 2 long; body length 8.5-11.5 mm........... *Perissus kiusuensis* Ohbayashi from Amami-Ōshima I. and Tokunoshima I. (Figs. 32, 36 and 38 C, H, K)
   - Pronotum with white pubescence; elytral white pubescent bands wide; legs blackish brown (except for fore legs); hind tarsal segment 2 short; body length 7.8-10.5 mm ........................................... *Perissus tsutsumii* sp. nov.

4. Elytral apices truncate subroundly ........................................................................ 5
   - Elytral apices truncate ....................................................................................... 6

5. Elytral humeri and apices with broad patch of pale pubescence; body length 8.5 mm .......... *Perissus kiusuensis hisamatsui* Ohbayashi from Hachijo I., Mikura I. and Miyake I. (Figs. 37 and 38G)

* Some species closely related to the Okinawan species are also included.
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Elytral humeri and apices with patch of whitish yellow pubescence not wide; body length 7-10 mm ....... *Perissus kiusiuensis* Ohbayashi from West Japan (Fig. 38 D)
Elytral humeri and apices with patch of pale pubescence rather wide; elytral apices with spines not developed; body length 9.5-11.0 mm ..............

*Perissus kiusiuensis* Ohbayashi from Yakushima I. (Figs. 33 and 38E)
Elytra with patch of pale pubescence wide; elytral apices with spines rather developed; body length 6-7 mm ........................................

*Perissus kiusiuensis* Ohbayashi* from Nakanoshima I. (Fig. 38 F)

* The pattern of geographic variation of *Perissus kiusiuensis* Ohbayashi from Kyushu to Nakanoshima I. is distinctive in being the pubescence on the elytra getting denser and the elytral spines more developed from north to south.

Figs. 30-37. *Perissus* spp. 30-33 & 37: Dorsal views, 34-36: ventral views. 30 & 34: tsutsumii nov. 31 & 35: *demonacoides* from Taiwan. 32 & 36: *kiusiuensis* from Amami-Ōshima I. 33: *kiusiuensis* from Yakushima I. 37: *kiusiuensis hisamatsui* from Mikura I.

Genus *Chlorophorus* Chevrolat


**KEY TO THE OKINAWAN SPECIES OF Chlorophorus**

1. Pronotum with markings; elytra with oval markings on base
   - Pronotum without markings; elytra without oval markings on base; body with dense pale green pubescence; body length 9-12 mm ........... *Chlorophorus muscosus* (Bates)

2. Pronotum with markings not separated
   - Pronotum with markings separated

3. Pronotum weakly constricted at base, with a transverse united marking; body with dense orange yellow or orange red and dark brown pubescence; elytral apices truncate subroundly; body length 12-18 mm
   - Pronotum strongly constricted at base, with a marking united at apex; head and pronotum with pale green pubescence; elytra with yellow and brown pubescence; elytral apices truncate obliquely; body length 9-15 mm
   - *Chlorophorus annularis* (Fabricius)

4. Elytral median marking united transversely, complete; body with dense orange yellow pubescence; elytral markings brown; body length 10-16 mm
   - *Chlorophorus aritai* (Ohbayashi)
Elytral median markings separated by suture; body with dirty yellow pubescence; elytral markings black; body length 9-15 mm.

\[ \text{Chlorophorus yayeyamensis (Kano)} \]

**Chlorophorus annularis** (Fabricius)

(Figs. 39 and 43A)

**Callidium annulare** Fabricius, 1787, Mant. Ins., 1: 156.

**Clytus annularis** Fabricius, 1801, Syst. Eleuth., 2: 352.

**Callidium bidens** Weber, 1801, Obs. Ent., p. 90.

**Calocyclus annularis** Gahan, 1906, Fauna Brit. India, Col., 1: 261.


**Distribution**: Honshu, Shikoku, Kyushu, Sado I., Awajishima I., Miyake I., Hachijo I., Tsushima I., Tanegashima I., Yakushima I., Amami-Oshima I., Tokunoshima I., Okinoerabu I., Okinawa I., Ishigaki I., Iriomote I. and Ogasawara Is.; Korea, Taiwan, China, Burma, Thailand, Malaya, Philippine, India.
Fig. 43. Pronotum of *Chlorophorus* spp. A: *annularis*. B: *aritai*. C: *muscous*. D: *yaye-yamensis*. E: *quinquefasciatus*.

Malaysia, Cambodia, Ceylon, New Guinea, Vietnam, Hainan I., Laos, Sunda Is.

**Chlorophorus aritai** (Ohbayashi)

(Figs. 40 and 43B)


**Distribution**: Okinawa I., Miyako I., Ishigaki I., Iriomote I. and Yonaguni I.
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Chlorophorus muscosus (Bates)
(Figs. 41 and 43 C)


Chlorophorus quinquefasciatus (Castelnau et Gory)
(Figs. 43 E and 44-48)

Clytus quinquefasciatus Castelnau et Gory, 1841. Hist. Nat. Icon. Ins. Col., p. 101, pl. 19, fig. 120.


Remarks: This species is divided into two types according to the markings, one is a wide type having the elytral oval markings, and another is a narrow type. The wide type distributes in Okinawa I. and Kumejima I., the narrow type from Yonaguni I. to Miyako I. and from Takarajima I. to
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Honshu. The intermediate type is found from Okinoerabu I. to Amami-Oshima I. (figs. 44-48).

Fig. 48. Geographic variation of the elytral markings in Chlorophorus quinquefasciatus. A: Population range diagrams showing for each locality the range (thin vertical), sd (thick vertical) and the mean (horizontal); ten materials for each locality. B: Diagrammatic representation of elytral markings. C: Map of the Ryukyus.

Chlorophorus yayeyamensis Kano
(Fig. 42)


Genus Rhaphuma Pascoe

**Fig. 52.** _Rhaphuma diminuta_ subsp. A-C: Elytral markings (A: _diminuta_ from Kyushu. B: _nitens_ from Amami-Ōshima I. C: _nitens_ from Okinawa I.). D & E: Pronotal markings (D: _diminuta_ from Kyushu. E: _nitens_ from Okinawa I.).

*Rhaphuma diminuta nitens_ Hayashi

(Figs. 50, 51 and 52 B, C, E)


_Chlorophorus diminutus nitens_: Kojima et Hayashi, 1969, Ins. Life Japan, 1: 85, pl. 26, fig. la.


**Distribution:** Amami-Ōshima I. and Okinawa I.

**Diagnosis:** The subspecies _nitens_ is separable from _diminuta_ in west Japan (Figs. 49 and 52 A, D) by the following points.* Pronotum with broad white band on base; elytral markings small; body, antennae and legs shinning black.

**Genus Demonax** Thomson


Fig. 56. Antennal segments 3 & 4 of *Demonax* spp. A: *transilis*. B: *semixeniscus*. C: *masatakai*. D: *ohbayashii*.


**KEY TO THE OKINAWAN SPECIES OF *Demonax***

1. Antennal segments 3-4 with long spines ................................................................. 2

   - Antennal segments 3-4 with short spines; body length 7-12 mm ..............................

   *Demonax transilis* Bates from Japan including Yakushima I. (Fig. 56 A)

2. Spine of antennal segment 3 shorter than that of 4; basal black marking on elytra extending to scutellum ................................................................. 3

   - Spine of antennal segment 3 longer than that of 4; basal black markings on elytra extending to humeri, not to scutellum; body length 6-7 mm ......................

       *Demonax ohbayashii* Samuelson et Gressitt

* Some species closely related to the Okinawan species are also included.
3. Spine of antennal segment 3 well developed; black markings on pronotum and elytra broad; body length 6-8 mm .................................................................

Demonax semixeniscus Hayashi from Amami-Ōshima I. (Figs. 53 and 56B)

- Spine of antennal segment 3 not so developed; black markings on pronotum and elytra narrow; body length 6-8 mm ................ Demonax masatakai Ohbayashi

Demonax masatakai Ohbayashi

(Figs. 54 and 56D)


Distribution: Ishigaki I. and Iriomote I.

Diagnosis: This species is related to D. transilis Bates and D. semixeniscus Ohbayashi, but separable from them by the key given above.

Demonax ohbayashii Samuelson et Gressitt

(Figs. 55 and 56D)


Distribution: Ishigaki I. and Iriomote I.