

## Tenebrionidae from Chejudo Island, Korea (Insecta, Coleoptera)

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## Tenebrionidae from Chejudo Island, Korea (Insecta, Coleoptera)<sup>1),2)</sup>

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### Abstract

Four new species, *Caedius shoitii*, *Scaphidema kayokoae*, *Platydema koreanum* and *Laena chejuana* from Chejudo Island are described and 16 species are newly recorded from the island.

### Tribe PEDININI

#### 1. *Pedinus (Blindus) strigosus* Faldermann

(Fig. 1A)

*Pedinus strigosus* Faldermann, 1835, Mem. Acad. St. Petersb. sav. etr., 2: 410 (China).

**Spec. exam.:** 1 ex., Shiitakegoya(800m), Mt. Hallasan, Chejudo Is., Korea, 14. vii. 1968, T. Shirozu leg.; 1 ex., Kaewol Bridge, Chejudo, Korea, 17. v. 1990, M. T. ChÛjô leg.; 1 ex., Chungmun Beach, Chejudo, Korea, 18. v. 1990, S. Nomura leg.; 4 **exs.**(at light), Cheju Junior College Campus, Chejudo, Korea, 19. v. 1990, S. Nomura leg.; 15 **exs.**(at light), Cheju Junior College Campus, Chejudo, Korea, 20. v. 1990, M. T. ChÛjô leg.

Gen. **distr.:** Korea (incl. Chejudo Is.); Siberia; Mongolia; N. China & Japan (Tsushima Is.).

#### 2. *Mesomorphus villiger* (Blanchard)\*

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1) Results from the Korea-Japan Co-operative Science Program on "The Evolution and Biogeography of the Insects in the East Asia". **No. 4.**

2) Contribution from the Hikosan Biological Laboratory, Faculty of Agriculture, Kyushu University, **Hikosan** (Ser. 4, No. 6).

\* Asterisk shows the species which has hitherto been unrecorded from the island.

## (Fig. 1B)

*Opatrum villiger* Blanchard, 1853, Voy. Pole Sud **Zool.**, 4: 154-155, Pl. 10, Fig. 15 (New Holland).

= *asperulus* Fairmaire, 1898, Ann. **Soc. Ent. Belg.**, 38: 20 (Samoa).

= *dermestoides* Reitter, 1904, Verh. naturf. Ver. **Brünn**, 42: 74 (China & Hongkong).

= *dispersus* Champion, 1894, Trans. Ent. **Soc. London**, (2): 361 (N.W. Australia).

= *musterinus* Fairmaire, 1882, Notes **Leyden Mus.**, 4: 221 (tropical Africa).

= *puberulus* Fairmaire, 1867, Bull. Lii. Norm., (2)1: 187 (nota)(Madagascar).

**Spec. exam.:** 1 ex.(at light), Kinneikutsu, Chejudo Is., Korea, 24. vii. 1968, T. Doi, S. Hidaka, M. Nakahara, S. Hayakawa, Y. Nishida & S. Omatsu leg.

**Gen. distr.:** Korea (incl. Chejudo Is.); Siberia; China; Formosa; Nepal; S. E. Asia; Micronesia; Samoa; Irian Jaya; Africa; Madagascar; Australia & Japan proper.

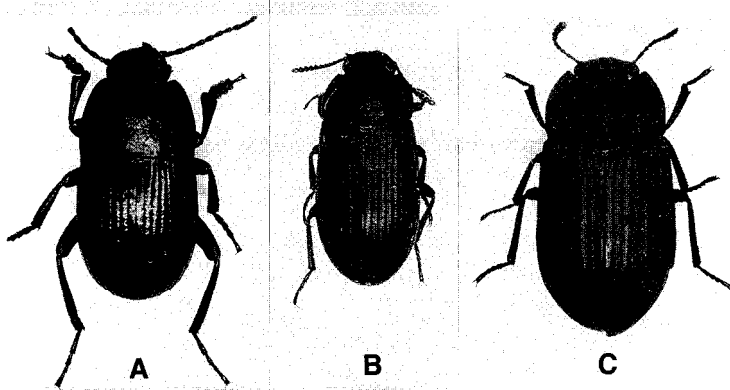
## Tribe OPATRINI

3. *Gonocephalum coenosum* Kaszab

## (Fig. 1C)

*Gonocephalum coenosum* Kaszab, 1952, Ent. Arb. Mus. G. Frey, Mtinchen, 3(2): 454, 643-646 & 682,

Abb. 413-415 [Korea(incl. Chejudo Is.); China(incl. Namoa Is. & Chusan Is.) & Japan (Honshu, Kyushu & Tsushima Is.)].



**Fig. 1.** A: *Pedinus (Blindus) strigosus* Faldermann. B: *Mesomorpha villiger* (Blanchard). C: *Gonocephalum coenosum* Kaszab.

**Spec. exam.:** 1 ex., Cheju City, 22. vii. 1968, Y. Nishida leg.; 1 ex., Cheju City, 22. vii. 1968, T. Shirôzu leg.; 1 ex., Cheju City, 23. vii. 1968, S. Hidaka leg.; 2 exs., Sogippo, 26. vii. 1968, Y. Nishida leg.; 1 ex., Songsan, Chejudo, Korea, 19. v. 1990, M. T. Chŭjô leg.; 1 ex., Songsan, Chejudo, Korea, 19. v. 1990, S. Nomura leg.; 1 ex., Ora-dong, Cheju City, Korea, 27. ix. 1990, M. T. Chŭjô leg.

**Gen. distr.:** Korea (incl. Chejudo Is.); China (incl. Namoa Is. & Chusan Is.); Formosa & Japan (Honshu, Shikoku, Kyushu, Tsushima Is. & Ryukyus).

4. *Gonocephalum coriaceum* Motschulsky\*

(Fig. 2A)

*Gonocephalum coriaceum* Motschulsky, 1857, Etud. Ent., 6: 34 [Japan (Hyogo)].

**Spec. exam.:** 7 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 18. v. 1990, M. T. Chûjô leg.; 1 ex., **Chungmun**, Cheju City, Chejudo, Korea, 18. v. 1990, S. Nomura leg.; 2 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 21. v. 1990, M. T. Chûjô leg.; 3 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 23. vii. 1990, M. T. Chûjô leg.; 1 ex., **Ora-dong**, Cheju City, Chejudo, Korea, 24. vii. 1990, S. Nomura leg.; 17 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 28. vii. 1990, M. T. Chûjô leg.; 13 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.

**Gen. distr.:** Korea (incl. Chejudo Is.); China (N.E. China to Fukien) & Japan proper.

5. *Gonocephalum koreanum* Kaszab\*

(Fig. 2B)

*Gonocephalum koreanum* Kaszab, 1952, Ent. Arb. Mus. G. Frey, Miinchen, 3(2):452, 549-550 & 676 [Korea (Chemulpo)].

**Spec. exam.:** 1 ex., **Ora-dong**, Cheju City, Chejudo, Korea, 18. v. 1990, M. T. Chûjô leg.; 2 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 23. vii. 1990, M. T. Chûjô leg.; 2 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.

**Gen. distr.:** Korea (incl. Chejudo Is.).

6. *Gonocephalum pubens* (Marseul)

(Fig. 2C)

*Opatrum pubens* Marseul, 1876, Ann. Soc. Ent. France, (5)6: 97-98 (Japon, Hiogo).

**Spec. exam.:** 35 exs., **Chungmun Seashore**, Chejudo, Korea, 18. v. 1990, S. Nomura leg.; 26 exs., **Chungmun**, Chejudo, Korea, 18. v. 1990, K. Morimoto leg.; 2 exs., **Songsan**, Chejudo, Korea, 19. v. 1990, K.

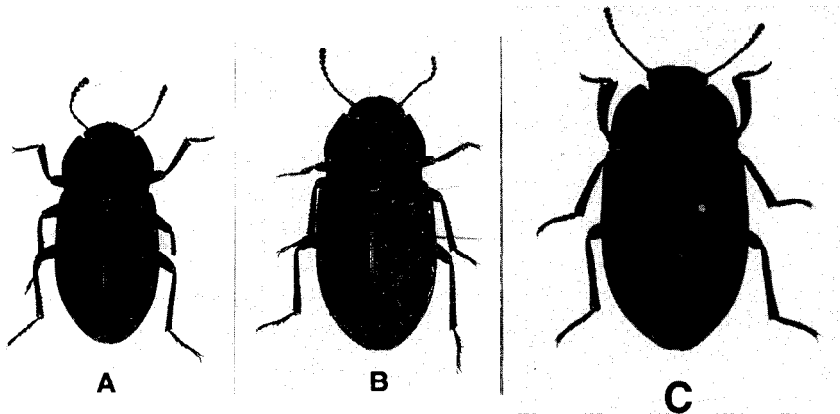


Fig. 2. A: *Gonocephalum coriaceum* Motschulsky. B: *G. koreanum* Kaszab. C: *G. pubens* (Marseul).

Morimoto leg.; 17 exs., Iho Beach, Chejudo, Korea, 26. vii. 1990, M. T. Chŭjō leg.

Gen. **distr.**: Korea (**incl.** Chejudo Is.): China; Formosa; India & Japan (Honshu, Shikoku, Kyushu & Awashima Is.).

Note: H. Okamoto recorded *Opatrum pubens* Marseul var. *obtusicolle* Kolbe from this island for the first time and introduced the English translation of H. J. Kolbe's original description [1924, Bull. Agr. Exper. Stat. Gov. Gen. Chosen, 1(2): 183]. The authors considers that these slight differences should be included in the individual variation. This specimen accords well with the characters of this species enumerated in the key and figures in Z. Kaszab's monograph, and also with the same in the **first** author's key [1963, Kontyū, 31(2): 151-153].

### 7. *Caedius shoitii* M. T. Chŭjō sp. nov.

(Fig. 3)

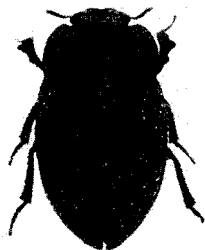
Oval, strongly convex, dark brown, 2nd to terminal segments of antennae and all tarsal segments amber brown.

Head gently convex; clypeus rugous, front margin roundly and deeply sinuate, clypeal suture shallowly depressed; frons roughly granulate, shortly and feebly expanded above eyes; gena strongly and roundly expanded outwards, vertically penetrated at frontal  $\frac{1}{3}$  of eyes; eyes obliquo-triangular in dorsal view, rounded in ventral view. Antennae short, somewhat stout, basal segment very thick, 2nd segment a little narrower than basal one, basal part of 3rd segment narrowest and then gradually thickened towards penultimate segment, ultimate segment oblong oval and a little narrower than penultimate segment; relative length of each segment (base to apex) 5 : 3 : 4 : 2 : 2 : 2 : 2 : 3 : 3 : 3. Ultimate segment of maxillary **palpus** securi-formed.

Pronotum somewhat transverse, gently convex, shagreened, densely granulate, densely covered with scale like hairs; front margin wholly and roundly sinuate, very narrowly marginate and weakly reflexed, front corners rounded; sides roundly expanded, narrowly marginate and weakly reflexed; hind corners angulate, hind margin somewhat triangularly producing posteriorly, middle part gently rounded, with single file of scale like hairs vertically. Prosternum strongly shagreened, densely covered with scale like hairs, prosternal process very densely covered with scale like hairs, convex between front coxal cavities, gradually widened towards posterior end of front coxal cavities, and then triangularly narrowed towards apex. **Scutellum** flat, semicircular, invisible in dorsal view.

Elytra strongly convex, very shallowly striate, interstices very weakly convex, shagreened, with three tiles of scale like hairs, outer files of scale like hairs much shorter than middle ones; base slightly wider than that of pronotum, sides gently roundly widened towards  $\frac{1}{4}$  from base, and then gradually narrowed towards apex, sides with single tile of long scale like hairs, not marginate. Epipleura reaching elytral apex, covered with comparatively long scale like hairs. Mesosternum strongly depressed and shagreened, strongly raised up along middle coxal cavities. Metasternum strongly convex, widely and shallowly depressed along median line, densely granulate, evenly and sparsely covered with relatively thick scale like hairs. Abdominal sternites convex, densely granulate, with sparse scale like hairs as well as on **metasternum**.

Femora thick, depressed, evenly and sparsely covered with scale like hairs. Front tibiae strongly depressed, strongly widened **apically**, underneath with sparse protuberance; hind tibiae gradually widened towards apex, weakly bent outwards, truncate at apex. All **tarsi** simple, comparatively slender.

F% 3. *Caedius sboitii* sp. nov.

**Length:** 3.9-4.5 mm. Width 2.2-2.5 mm.

**Holotype:** male (preserved in the collection of Prof. C. E. Lee, Kyungpook Nat. Univ.), Chungmun Seashore, Chejudo, Korea, 18. v. 1990, S. Nomura leg. **Paratypes:** 1 male, Iho Beach, Chejudo Prov., Korea, 23. vii. 1981, Y. J. Kwon leg.; female, Iho Beach, Chejudo Prov., Korea, 23. vii. 1981, Y. J. Kwon leg.; female, Iho Beach, Cheju City, Chejudo, Korea, 26. vii. 1990, S. Miyamoto leg.

**Distribution:** Korea (Chejudo Is.).

This new species is closely related with *Caedius maderi* Kaszab from **Kyushu**, but is separated from the latter by the following characters: generally much **smaller**, antennae much slenderer, **scale** like hairs on the whole surface thicker, and whole surface much smoother.

#### 8. *Idisia* *ornata* Pascoe\*

(Fig. 4A)

*Idisia ornata* Pascoe, 1866, Jour. Ent., 2: 452, t. 18, f. 8 (Japan).

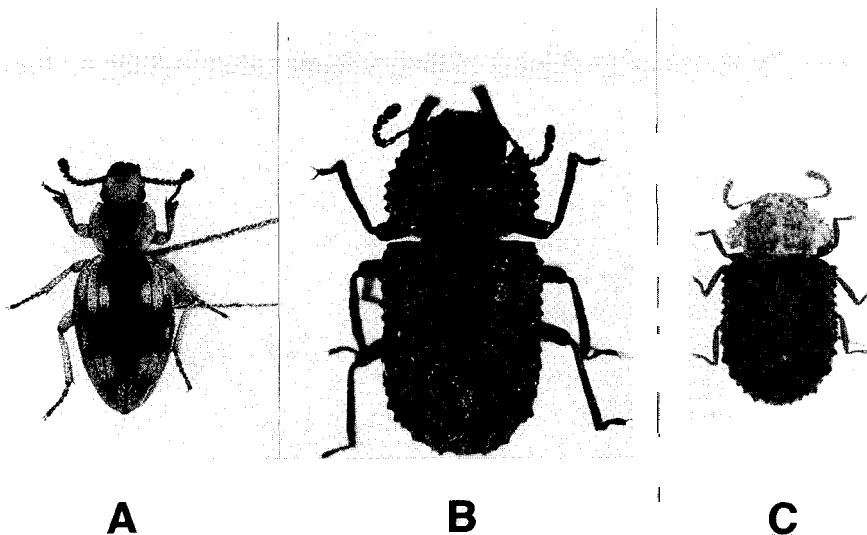
**Spec. exam.:** 5 exs., Iho Beach, Chejudo, Korea, 26. vii. 1990, C. E. Lee leg.; 13 exs., Iho Beach, Chejudo, Korea, 26. vii. 1990, S. Miyamoto leg.

**Gen. distr.:** Korea (incl. Chejudo Is.); N.E. China & Japan proper.

#### Tribe **BOLITOPHAGINI**

#### 9. *Boletoxenus bellicosus* (Lewis)\*

(Fig. 4B)



**Fig. 4.** A: *Idisia ornata* Pascoe. B: *Boletoxenus bellicosus* (Lewis). C: *Byrsax spinniceps* Lewis.

*Atasthalus bellicosus* Lewis, 1894, *Ann. Mag. Nat. Hist.*, [6], 13(77): 386, Pl. 13, fig. 4 (Japan).

**Spec. exam.:** 4 exs., Yongshil, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, M. T. Chūjō leg.; 1 ex., Yongshil, Mt. Hallasan, Chejudo, Korea, 27. vii. 1990, M. T. Chūjō leg.

Gen. distr.: Korea (Chejudo Is.) & Japan proper.

#### 10. *Byrsax spinniceps* Lewis\*

(Fig. 4C)

*Byrsax spinniceps* Lewis, 1894, *Ann. Mag. Nat. Hist.*, [6], 13(77): 388-389 [Japan (Yuyama & Nikko)].

**Spec. exam.:** 1 ex., Yongshil, Mt. Hallasan, Chejudo, Korea, 27. vii. 1990, M. T. Chūjō leg.

Gen. **distr.:** Korea (Chejudo Is.) & Japan (Hokkaido, Honshu, Kyushu & Tsushima Is.).

### Tribe DIAPERINI

#### 11. *Scaphidema kayokoae* M. T. Chūjō sp. nov.

(Fig. 5A-E)

Oval, mat umber, maxillae, 1st to 3rd segments of antennae, **pronotal** margin and legs bright umber, elytral fasciae stained yellow.

Head roundly convex, sparsely and roughly punctate; gena rather strongly convex; clypeus roughly carved, with front margin semicircular. Eyes relatively small, rounded, finely faceted. Antennae reaching middle **coxal** cavities, 1st segment thick, 4th to apical segments loosely clavate, 4th to penultimate segments nearly equal to each other in shape and size, **ultimate** segment oblong oval, relative length of each segment (bae to apex) 5.0 : 3.0 : 5.0 : 4.5 : 4.5 : 4.5 : 4.5 : 4.5 : 4.5 : 7.0. **Maxillary palpus** with ultimate segment nearly **cylindrical**, obliquely truncate at apex. **Gula** roughly carved, with two **gular** sutures gradually separating from each other towards base.

Pronotum gently and roundly convex, sparsely, irregularly and strongly punctate, transverse (5.0 : 4.5), widest at base, gently narrowed forwards; front margin shallowly sinuate, wholly and narrowly **marginate**, front corners rounded, sides nearly straight, narrowly marginate and roundly reflex, hind corners

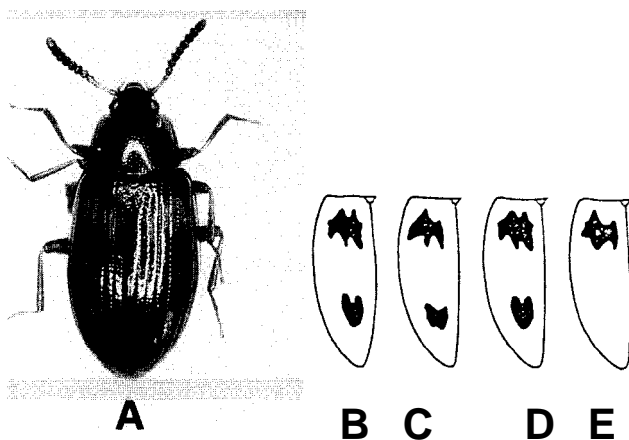


Fig 5. A: *Scaphidema kayokoae* sp. nov. B-E: Individual variation of elytral markings.

rounded, hind margin roundly projected at middle  $1/2$ , wholly and very finely marginate. Prosternum sparsely and very strongly punctate; prosternal process tongue-shaped, very **finely** ridged at sides, widely and deeply grooved at median part. **Scutellum** tongue-shaped, with surface very smooth.

Elytra relatively strongly convex, a little wider than base of pronotum at base, widest at middle part; strongly punctate-striate, 1st and 2nd of them reaching elytral apex, from 3rd to 8th of them reduced near apex, interstices gently convex, very feebly roughened, with elytral fasciae ranged from 2nd to 6th **punctate-striae** near base; sides narrowly marginate and reflex from shoulders to subapical parts, very finely marginate at apical  $1/10$ . Mesosternum with sparse and pubescent punctures, with very wide V-shaped receptor of prosternal process. Metasternum roundly convex, with sparse and pubescent punctures; **metepisternum** very densely punctate.

Every femur gently depressed, with very shallow femoral groove at apical  $2/3$ . Every tibia slender, slightly thickened **apically**. Ultimate segment of front **tarsi** slightly shorter than the rest put together.

**Length:** 3.70-4.70 mm. Width: 1.65-2.20 mm.

**Holotype:** male (preserved in the collection of Prof. C. E. Lee, Kyungpook Nat. Univ.), Yongshil, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. **Chûjô** leg **Paratypes:** 13 males & 9 females, Songp'anak, Mt. Hallasan, Chejudo, Korea, 28. ix. 1990, M. T. **Chûjô** leg.

**Distribution:** Korea (Chejudo Is).

This new species is closely related with *Scaphidema discale* Lewis from Japan (Honshu), but is separated **from** the latter by the following characters: antennae much slenderer and relative length of each segment different (6.0:3.0:6.0:5.0:5.0:5.0:5.0:5.0:5.0:9.0) in *discale*, punctures on head and pronotum much larger, elytral base wider than pronotal one; elytral punctate-striae much deeper, side margins of elytra less expanded.

## 12. *Platydemus korcanum* M. T. Chûjô sp. nov.

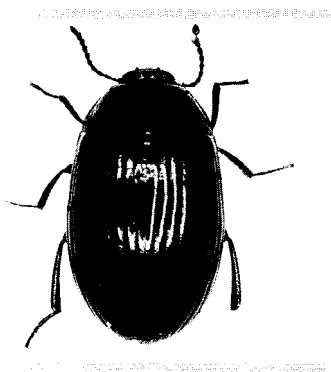
(Fig. 6)

Black to dark brown, shining, oval, strongly convex. Head finely and densely punctate, with inner ocular areas tuberculate in both sexes, sometimes horn-shaped and pointed at their apices; clypeus nearly semicircular, very feebly angulate at middle part, clypeal suture extremely fine and weakly depressed; frons concaved longitudinally; occiput roundly convex. Eyes large, oblique, strongly expanded outwards. Antennae slender, not reaching base of pronotum, relative length of each segment (base to apex) 4:2:4:3:3:3:3:3:3:4. Apical segments of maxillary **palpus** securiformed.

Pronotum **finely** and densely punctate, nearly trapezoidal (ca. 2:1), with **subbasal** part obliquely and weakly depressed at outer  $1/3$ , roundly convex; anterior margin roundly **sinuate**, very narrowly marginate, anterior corners rounded, side margins feebly warped outwards, narrowly marginate; posterior corners rounded, posterior margin roundly produced posteriorly at median  $1/3$ , not marginate. Prosternum densely and rugosely punctate; prosternal process oblong oval, posterior end obtusely angulate, median part narrowly and shallowly grooved. **Scutellum** smooth, nearly triangular, basal margin shallowly and roundly **sinuate**, sides roundly warped outwards, with apex sharply pointed.

Elytra strongly convex, punctate-striate, striae punctures very fine, interstices relatively strongly convex, sparsely and **finely** aciculate; sides sholly and very narrowly marginate. Mesosternum deeply depressed in V-shape. Metasternum roundly convex, sparsely and finely punctate, sparsely pubescent. From





**Fig. 6.** *Platydema koreanum* sp. nov.

1st to 3rd visible abdominal sternites densely and rugosely punctate, penultimate and terminal segments sparsely and finely punctate. All tibiae and tarsus relatively slender, densely pubescent.

**Length:** 5.5-7.0 mm. 3.1-4.2 mm.

**Holotype:** male (preserved in Ent. Lab., Kyushu Univ.), Kwang Nung, Pocheon Gun, Korea, 8. ix. 1984, K. Morimoto leg. Paratypes: 5 males & 14 females, same collecting data as holotype; 1 male & 1 female, Yongshil, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. Chŭjŏ leg.

**Distribution:** Korea (incl. Chejudo Is.).

This new species is closely related with *Platydema nigroaeneum* Motschulsky from Japan, but is easily distinguished from the latter by the following characters: two horns on inner ocular area much shorter and thicker, punctures on whole surface larger and a little denser, and interstices of elytral punctate-striae more strongly convex.

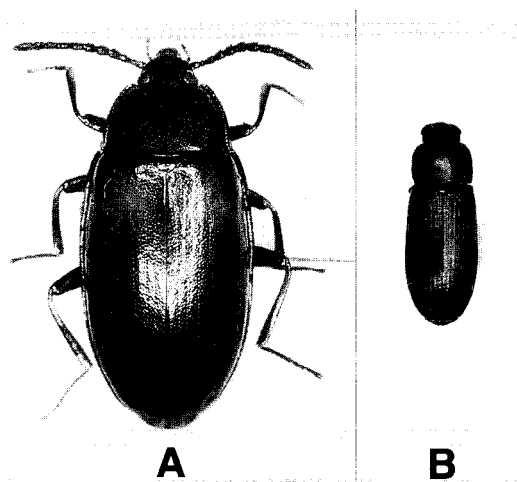
### 13. *Basanus tsushimensis* M. T. Chŭjŏ\*

(Fig. 7A)

*Basanus tsushimensis* M. T. Chŭjŏ, 1963, *Niponius*, 2(4):17-19, 2 figs. (Tsushima Is. & Korea).

**Spec. exam.:** 81 exs., Yongshil, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. Chŭjŏ leg.; 30 exs., Yongshil, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, M. T. Chŭjŏ leg.; 4 exs., Songp'anak, Mt. Hallasan, Chejudo, Korea, 28. ix. 1990, M. T. Chŭjŏ leg.

**Gen. distr.:** Korea (incl. Chejudo Is.) & Japan (Tsushima Is.).



**Fig. 7.** A: *Basanus tsushimensis* M. T. Chŭjŏ B: *Triborium (T.) castaneum* (Herbst).

## Tribe ULOMINI

14. *Tribolium (Tribolium) castaneum* (Herbst)\*

(Fig. 7B)

*Colydium castaneum* Herbst, 1797, *Natursyst. Ins. Jafer*, 7: 282, Pl. 112, Fig. 13 (Europe).**Spec. exam.:** 1 ex., Shiitakegoya(800m), Mt. Hallasan, Chejudo, Korea, 14. vii. 1968, T. Shirôzu et Y. Nishida leg.**Gen. distr.:** Cosmopolitan.15. *Uloma latimanus* Kolbe\**Uloma latimanus* Kolbe, 1886, *Arch. f. Naturg.*, 52(1):202-203, Pl. 11, Fig. 34 (Korea).**Spec. exam.:** 2 exs.(at light), Shiitakegoya(800m), Mt. Hallasan, Chejudo, Korea, 14-15. vii. 1968, T. Shirôzu et Y. Nishida leg.**Gen. distr.:** Korea (incl. Chejudo Is.) & Japan (Honshu & Tsushima Is.).

## Tribe TENEBRIONINI

16. *Promethis valgipes valgipes* (Marseul)\*

(Fig. 8A)

*Nyctobates valgipes* Marseul, 1876, *Ann. Soc. Ent. France*, [5]6: 117-118 (Kiu-Siu et Nippon).= *Nyctobates villosipes* Marseul, 1876: Kaszab, 1988, *Acta Zool. Hungaricae*, 34(2-3): 85 (as **syn. nov.**).= *Nyctobates davidis* Fairmaire, 1878: Kaszab, 1984 (design. as **lectotype**).*Setenis valgipes* Lewis, 1894, *Ann. Mag. Nat. Hist.*, [6], 13(77): 473.*Promethis valgipes* Kaszab, 1988, *Acta Zool. Hungaricae*, 34(2-3): 85 (as comb. **nov.**).**Spec. exam.:** 2 exs., Ora-dong, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.; 10 exs.(at light), Ora-dong, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.**Gen. distr.:** Korea (incl. Chejudo Is.); China & Japan (Honshu, **Shikoku**, Kyushu & Tsushima Is.).17. *Tenebrio obscurus* Fabricius\*

(Fig. 8B)

*Tenebrio obscurus* Fabricius, 1792, *Ent. Syst.*, 1: 111 (Germany).**Spec. exam.:** 1 ex., Kannonji(600m), Mt. Hallasan, Chejudo Is., Korea, 11. vii. 1968, T. Shirôzu et Y. Nishida leg.**Gen. distr.:** Cosmopolitan.18. *Cryphaeus duellicus* (Lewis)'

(Fig. 8C)

*Anthracias duellicus* Lewis, 1894, *Ann. Mag. Nat. Hist.*, [6], 13(78): 470, Pl. 13, Fig. 8 (Japan).**Spec. exam.:** 2 exs., Mt. Hallasan, Chejudo Is., Korea, 18. xii. 1979, Y. J. Kwon leg.; 4 exs., Ora-dong, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.; 2 exs., Kuwangnum Temple, Mt. Hallasan, Chejudo, Korea, 29. ix. 1990, M. T. Chûjô leg.

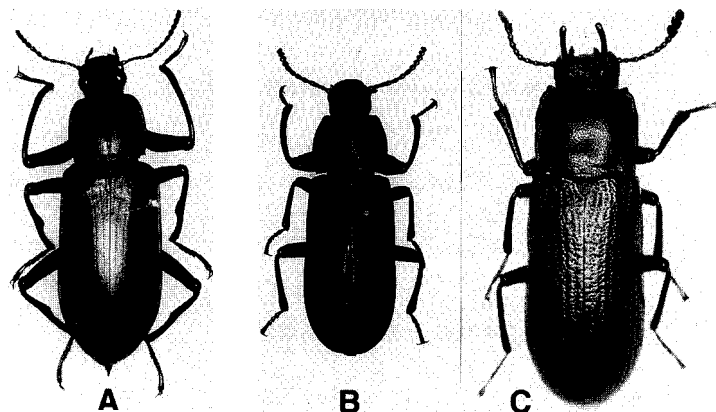


Fig. 8. A: *Promethis valgipes valgipes* (Marseul). B: *Tenebrio obscurus* Fabricius. C: *Cryphaeus duellicus* (Lewis).

**Gen. distr.:** Korea (Chejudo Is.) & Japan proper.

#### Tribe HETEROTARSINI

##### 19. *Anaedus mroczkowskii* Kaszab\*

(Fig. 9A)

*Anaedus mroczkowskii* Kaszab, 1968, Ann. Zool., Warszawa, 26(2):10-11 (N. Korea).

**Spec. exam.:** 1 ex., Yongshil, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, S. Nomura leg.; 1 ex., Mt. Hallasan, Chejudo, Korea, 25. vii. 1990, M. T. ChÛjô leg.; 14 exs., Kaewol Bridge, Chejudo, Korea, 26. vii. 1990, S. Nomura leg.; 17 exs., Orimok, Mt. Hallasan, Chejudo, Korea, 27. vii. 1990, S. Nomura leg.; 3 exs., Kuwangnum Temple, Mt. Hallasan, Chejudo, Korea, 29. ix. 1990, S. Nomura leg.

**Gen. distr.:** N. Korea & Korea (Chejudo Is.).

##### 20. *Luprops orientalis* (Motschulsky)

(Fig. 9B)

*Anaedus orientalis* Motschulsky, 1868, Bull. Soc. Imp. Nat. Moscou, 41(3):195 (Mongolia).

*Luprops orientalis* Kaszab, 1983, Acta Zool. Acad. Sci. Hungaricae, 29(1-3):137 (as comb. nov.).

= *Luprops sinensis* Marseul, 1876: Kaszab, loc. cit. (as **syn. nov.**).

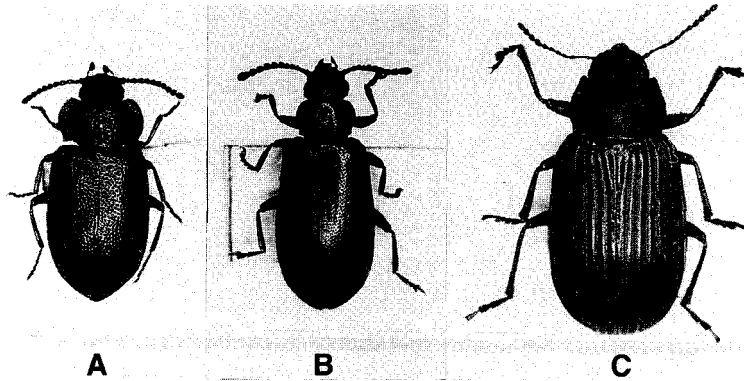
**Spec. exam.:** 1 ex., Ora-dong, Cheju City, Chejudo, Korea, 23. vii. 1990, M. T. ChÛjô leg.; 5 exs., Ora-dong, Cheju City, Chejudo, Korea, 28. vii. 1990, K. Morimoto leg.

**Gen. distr.:** Korea (incl. Chejudo Is.); Formosa; China: Mongolia; Indonesia; Buhtan; Nepal & Japan proper.

##### 21. *Heterotarsus carinula* Marseul\*

(Fig. 9C)

*Heterotarsus carinula* Marseul, 1876, Arm. Soc. Ent. France, [5]6:127(Kiu-Siu et Nippon).



**Fig. 9.** A: *Anaedus mroczkowskii* Kaszab. B: *Luprops orientalis* (Motschulsky). C: *Heterotarsus carinula* (Marseul).

= *subcostatus* Reitter, 1889, *Horae Soc. Ent. Rossicae*, 23: 701 (China).

**Spec. exam.:** 1 ex., **Shitakegoya**(800m), Mt. **Hallasan**, Chejudo, Korea, 15. vii. 1968, T. **Shirôzu** et Y. Nishida leg.; 6 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 18. v. 1990, M. T. **Chûjô** leg.; 14 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 18. v. 1990, K. Morimoto leg.; 1 ex., Chungmun Seashore, Sogippo City, Chejudo, Korea, 18. v. 1990, M. T. **Chûjô** leg.; 1 ex., **Songsan**, Chejudo, Korea, 19. v. 1990, K. Morimoto leg.; 1 ex., **Ora-dong**, Cheju City, Chejudo, Korea, 21. v. 1990, K. Morimoto leg.; 3 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 21. v. 1990, M. T. **Chûjô** leg.; 5 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 23. vii. 1990, M. T. **Chûjô** leg.; 1 ex. (light trap), Kaewol Bridge, Chejudo, Korea, 23. vii. 1990, M. T. **Chûjô** leg.; 2 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 28. vii. 1990, M. T. **Chûjô** leg.; 6 exs., **Ora-dong**, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. **Chûjô** leg.

**Gen. distr.:** Korea (incl. Chejudo Is.); China; Formosa & Japan proper.

#### Tribe ADELINI

#### 22. *Lacna chejuana* M. T. **Chûjô** sp. nov.

(Fig. 10A)

Brown to dark brown, lustrous, gourd-shaped, strongly constricted in middle part, wholly covered with yellow long hairs.

Head gently convex; clypeus trapezoidally produced in middle, very strongly punctate at both sides; clypeal suture strongly depressed, gena obliquely and roundly expanded, **frons** strongly and sparsely **punctate**; occiput strongly and very densely punctate, **Labrum** nearly quadrate, frontal corners rounded, strongly and sparsely punctate. Each mandible strongly and hook-shapedly produced forwards. Ultimate segment of maxillary **palpus** nearly triangular. Antennae moniliformed, stout, rather long, 1st segment very thickened, from 6th to apical segments gradually thickened, ultimate segment ovate, extremely thickened, relative length of each segment (from base to apex) 6.0 : 2.0 : 3.0 : 3.0 : 3.0 : 3.0 : 3.5 : 4.0 : 4.0 : 8.0.

Pronotum roundly convex, evenly, sparsely and strongly punctate; front margin nearly straight, not

marginate, frontal corners slightly angulate; sides roundly expanded, but gently tapered posteriorly and very narrowly marginate; hind corners obsolete, hind margin posteriorly rounded, not marginate. **Prosternum** strongly convex, sparsely and very strongly punctate; prosternal process very strongly narrowed at anterior half, dilated and rounded at posterior half, posterior end depressed. Scutellum densely and very strongly punctate, most part covered by basal part of pronotum.

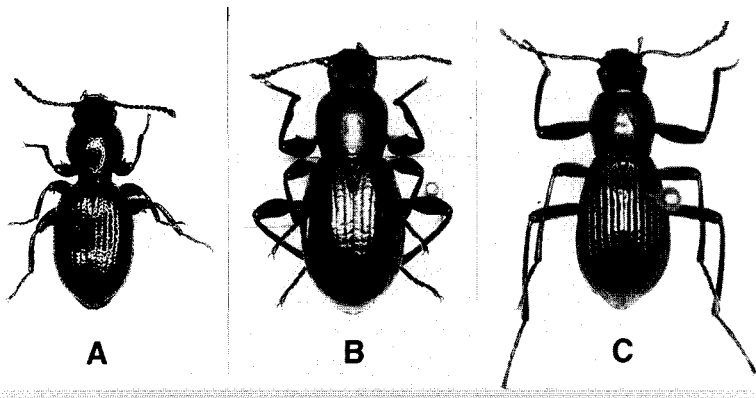
Elytra very strongly convex, very strongly striate-punctate, interstices weakly convex, with very sparse striate-punctures; basal part very strongly constricted, gradually dilated posteriorly, widest at middle part, and then tapered towards apex, apex obtusely angulate; side margins invisible from above, not marginate. Mesosternum without mesosternal groove, rather densely punctate at median part. **Metasternum** strongly punctate along mesocoxal cavities. Visible abdominal sternites sparsely punctate, 1st sternite relatively widened between metacoxal cavities, very strongly and roughly punctate along posterior margin; 4th sternite roundly and transversely convex. Every femora with shallow femoral groove, also with very large spine at 5/7 from base, frontal one on upper edge of femoral groove, middle and hind ones on lower edge of femoral groove. Every tibia relatively stout, weakly warped inwards, gently dilated towards apex. All tarsi simple.

**Length:** 3.8-5.6 mm. Width: 1.4-2.1 mm.

**Holotype:** male (preserved in the collection of Prof. C. E. Lee, Kyungpook Nat. Univ.), **Yongshil**, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, S. Nomura leg. **Paratypes:** 1 female, same collecting data as holotype; 1 male, Orimok, Mt. **Hallasan**, Chejudo, Korea, 20. v. 1990, S. Nomura leg.; female, Mt. **Hallasan**, Chejudo, Korea, 25. vii. 1990, K. Yahiro leg.

**Distribution:** Korea (Chejudo Is.).

This new species is related with *Laena rotundicollis* Marseul from Japan, but is distinguished from the latter by the following characters: punctures on whole surface much larger and sparser, inter ocular area much wider (ca. 6.4 times of the transversal diameter of the eye), and ultimate segments of antennae a little smaller.



**Fig. 10.** A: *Laena chejuana* sp. nov. B: *Misolampidius chejudoensis* M. T. Chujo et Imasaka. C: *Stenophanes mesostena* Solsky.

## Tribe MISOLAMPINI

23. *Misolampidius chejudoensis* IK. T. Chûjô et Imasaka

(Fig. 10B)

*Misolampidius chejudoensis* M. T. Chûjô et Imasaka, 1982, *Esakia*, (19):124-127, Figs. 2a-f (Chejudo Island).

**Spec. exam.:** Holotype specimen, 26 paratopotype specimens and 3 paratype specimens; 1 ex., Ori-mok, Mt. Hallasan, Chejudo, Korea, 18. v. 1990, M. T. Chûjô leg.; 3 exs., Yongshil, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. Chûjô leg.; 1 ex., Orimok, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. Chûjô leg.; 4 exs., Yongshil, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, M. T. Chûjô leg.; 1 ex.(at light), Kaewol Bridge, Chejudo, Korea, 26. vii. 1990, M. T. Chûjô leg.; 2 exs.(banana trap), Kaewol Bridge, Chejudo, Korea, 27. vii. 1990, S. Nomura leg.; 1 ex.(cup trap), Kaewol Bridge, Chejudo, Korea, 27. vii. 1990, S. Nomura leg.; 3 exs., Songp'anak, Mt. Hallasan, Chejudo, Korea, 28. ix. 1990, M. T. Chûjô leg.

**Gen. distr.:** Korea (Chejudo Is.).

24. *Stenophanes mesostena* (Solsky)

(Fig. 10C)

*Hedyphanes mesostena* Solsky 1875, *Horae Soc. Ent.*, 7: 376-377 (E. Siberia).

**Spec. exam.:** 4 exs., Shiitakegoya(800m), Mt. Hallasan, Chejudo Is., Korea, 14. vii. 1968, T. Shirôzu leg.; 2 exs., Shiitakegoya(800m), Mt. Hallasan, Chejudo, Korea, 15. vii. 1968, T. Shirôzu et Y. Nishida leg.

**Gen. distr.:** Korea (incl. Chejudo Is.); E. Siberia; E.N. China & Japan (Tsushima Is.).

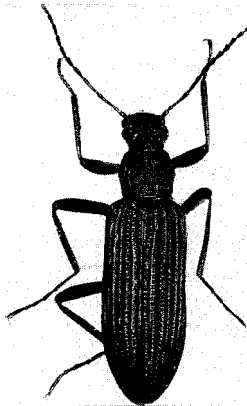
## Tribe STRONGYLINI

25. *Strongylium cultellatum* Mäklin\*

(Fig. 11)

*Strongylium cultellatum* Mäklin, 1866, *Monogr. Strongylium*: 345 (453)(Hongkong).

**Spec. exam.:** 1 ex.(at light), Kinneikutsu, 24. vii. 1968, T. Doi, S. Hidaka, M. Nakahara, S. Hayakawa,



**Fig. 11. A:** *Strongylium cultellatum* Mäklin.

Y. Nishida & S. Omatsu leg.

**Gen. distr.:** Korea (incl. Chejudo Is.); Hongkong & Japan (Honshu, Tsushima Is. & Ryukyus).

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		Distribution of Chejudoen Tenebrionidae															
localities	species	Chejudo Island	Mainland of Korea		Japan							Siberia	Mongolia	China	Formosa	Others	
			Hokkaido	Honshu	Shikoku	Kyushu	Tsushima Is.	Yakushima I.	Sadogashima I.	Ryukyus	Others						
	<i>Pedinus (B.) strigosus</i>	X					X						X				
	<i>Mesomorpha villiger</i>	X	X	X	X	X	X	X	X				X		X	X	X
	<i>Gonocephalum coenosum</i>	X	X		X	X	X	X				X	X		X		
	<i>G. coriaceum</i>	X	X	X	X	X	X	X	X			X	X		X		
	<i>G. koreanum</i>	X	X														
	<i>G. pubens</i>	X	X		X	X	X						X		X	X	X
	<i>Caedius shoichii</i>	X															
	<i>Idisia ornata</i>	X	X	X	X	X	X				X				X		
	<i>Boletoxenus bellicosus</i>	X		X	X	X	X	X	X			X					
	<i>Byrsax spinniceps</i>	X		X	X		X	X									
	<i>Scaphidema kayokoae</i>	X															
	<i>Platydema koreanum</i>	X															
	<i>Basanus tsushimensis</i>	X	X					X									
	<i>Tribolium (T.) castaneum</i>	X			X	X	X	X				X	X				X
	<i>Uloma latimanus</i>	X	X		X			X									
	<i>Promethis valgipes valgipes</i>	X	X		X	X	X	X							X		
	<i>Tenebrio obscurus</i>	X		X	X		X				X	X					X
	<i>Cryphaeus duellius</i>	X		X	X	X	X				X					X	
	<i>Anaedes mroczkowskii</i>	X	X														
	<i>Luprops orientalis</i>	X	X	X	X	X	X	X	X			X	X	X	X	X	X
	<i>Heterotarsus carinula</i>	X	X		X	X	X	X						X	X		
	<i>Laena chejuana</i>	X															
	<i>Misolampidius chejudoensis</i>	X															
	<i>Stenophanes mesostena</i>	X	X					X				X		X			
	<i>Strongylium cultellatum</i>	X			X			X				X					X