

Platynine Carabid Beetles of the Subgenus *Negreum* (Coleoptera, Carabidae)

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Abstract Platynine carabid beetles belonging to the subgenus *Negreum* are enumerated. This subgenus is characterized mainly by having at least three setae on the antennal segment II, and no pubescence on the sternites. Of the seven species hitherto known, two are new to science and are described under the names of *Colpodes amagisanus* and *C. asakoae*. A key to all the species is prepared.

Introduction

The subgenus *Negreum* was erected by HABU (1958, p. 46) for a medium-sized platynine carabid, *Agonum ehikoense* HABU (1954, p. 331) known from West Japan. Twenty years later, when a monograph of the Japanese platynine carabids was published by the same author, he placed five species in the subgenus, that is, *Agonum ehikoense*, *A. yasuii* (HABU, 1974, p. 26), *A. peliotes* (HABU, 1974, p. 23), *A. bentonis* (BATES, 1883, p. 258) and *A. mutator* (BATES, 1883, p. 259). This subgenus is rather easily recognizable mainly in having metallic lustre on the elytra, at least three setae on the second antennal segment and no pubescence on the sternites. Since its publication, nothing has been added to our knowledge.

The first species of this subgenus known to the science is *Agonum bentonis* BATES originally described from Nikko, Central Japan, more than one hundred years ago. Later in 1958, it was redescribed by HABU (1958, p. 50), though he did not make critical re-examination of its type series. Studying my collection of “*A. bentonis*” recently, I noticed that it contained three different forms and that they were very similar to one another in their facies. Accordingly, it was impossible to determine their true systematic status solely on HABU’s accounts. Through the courtesy of Dr. STORK and Dr. HINE, I was given an opportunity of examining the type series of this species. After a careful examination of male genital organ of the type specimens, it became evident that HABU’s identification of the species in question was right and that the remaining two forms must belong to new species.

Although there still remain many problems especially concerning generic classification of platynine carabids, I prefer to follow TANAKA’s view (1985, p. 125) for the time being. In this paper, I recognize seven species of this subgenus and place them in the genus *Colpodes* with some hesitation.

Materials

This study is based on the examination of approximately 350 specimens. Most of them were collected by myself. The type materials of *Colpodes bentonis* were borrowed from the Natural History Museum, London. HABU's materials were studied in the National Institute of Agro-environmental Sciences, Tsukuba, and the Aomori Prefectural Museum.

Abbreviations

In the key and descriptions, the following abbreviations are used: HW – greatest width of head; PW – greatest width of pronotum; PL – length of pronotum, measured along the median line; PA – width of pronotal apex; PB – width of pronotal base; EW – greatest width of elytra; EL – greatest length of elytra; WL – greatest length of hind wing; TV – length of claw segment of metatarsus; TI – length of segment I of metatarsus; M – arithmetic mean; NHM – Natural History Museum, London; NSMT – National Science Museum (Nat. Hist.), Tokyo; NAS – National Institute of Agro-environmental Sciences, Tsukuba; AM – Aomori Prefectural Museum.

Acknowledgements

I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for critically reading the manuscript of this paper. Thanks are also due to Dr. Nigel E. STORK and Dr. Stuart J. HINE of the Natural History Museum, London, for loan of type materials under their care, and to Dr. Takeshi MATSUMURA and Dr. Shin-ichi YOSHIMATSU of the National Institute of Agro-environmental Sciences, Tsukuba, and Mr. Satoshi YAMAUCHI of the Aomori Prefectural Museum for giving me opportunities of examining materials studied by HABU.

My deep indebtedness is also due to the following colleagues and friends, whose kind aid and support enabled the completion of this paper: Dr. Kazuo TANAKA, Dr. Yûki IMURA, Dr. Sadahiro OHMOMO, Dr. Katsuyuki TERADA, Messrs. Hideo AKIYAMA, Hirofumi HAYAKAWA, Naoyuki HIKIDA, Yukihiko HIRANO, Hanmei HIRASAWA, Atsuo IZUMI, Toshiro KISHIMOTO, Minoru NUMATA, Hideo OHKAWA, Minoru TAO and Katsuro YAHIRO.

I am also indebted to my daughter, Asako, for her aid in searching for carabid beetles in the field.

Subgenus *Negreum* HABU

Negreum HABU, 1958, Bull. natn. Inst. agric. Sci., Tokyo, (C), (10): 46; type species: *Agonum ehikoense* HABU; 1978, Carab. Platynini in Fauna Japonica, Tokyo, 152. — TANAKA, 1985, Coleopt. Japan Col., Osaka, 2: 126. — NAKANE, 1986, Nat. & Ins., Tokyo, 21 (10): 19.

Diagnostic accounts were given by HABU in 1958 and 1978. This subgenus is

characterized by the following combination of morphological features: size medium; elytra with metallic lustre; antennal segment II with a long seta and at least two medium-sized or short setae at subapical part; sternites without pubescence in ♂ and ♀. Of the seven species recognized herein, six are flightless, but they still retain reduced hind wings. Only a single species, *C. yasuii* is fully winged and undoubtedly capable of flying.

The following key is probably adequate for identifying specimens from West and South Japan, as the three species are not only discriminated by their external features but also allopatric. If a specimen is obtained from a known locality or range, it is rather easily determined. The remaining four species are very closely similar to one another in external morphology. Besides, two different species show sympatry at one station. They can be classified with confidence only on shape of male genital organ.

It is true that all the members of *Negreum* and *Hikosanoagonum* (HABU, 1954, p. 327) share the same feature of antennal segment II. Actually, *Colpodes ehikoensis* was originally regarded as a member of the latter subgenus. However, they are distinguished from each other by slight differences of tarsal structure and presence or absence of pubescence on sternites. Though DARLINGTON (1952) regarded the former as an important character, his accounts were brief, and he considered the latter to be either secondary sexual or specific. It is to be hoped that thorough revisional study of Asian platynines will be made before long.

Colpodes sylphides (HABU) (1975, p. 19) has three setae on antennal segment II, though HABU placed it in another subgenus, *Glaucagonum*. My examination showed that the three setae are almost the same in length. For this reason, I interpret the similarity between the members of *Negreum* and *C. sylphides* as a result of parallel evolution. In this paper, therefore, I prefer to follow the arrangement given by HABU.

Key to the Species

1. Pronotum transverse (PW/PL 1.37); hind wings developed (WL/EL 1.53); claw segment of each metatarsus almost smooth or with microscopic hairs on ventro-lateral sides. *C. (N.) yasuii* (HABU).
- Pronotum cordate or subcordate; hind wings reduced (WL/EL 0.3–0.6). 2.
2. Pronotum subcordate, with obtuse hind angles. 3.
- Pronotum cordate, with acute hind angles. 4.
3. Elytra oblong-oval; sides of pronotum dark brown. *C. (N.) periotetes* (HABU).
- Elytra elongated ovate; sides of pronotum brown or reddish brown.
 *C. (N.) ehikoensis* (HABU).

Colpodes (Glaucagonum) sylphides (HABU)

Specimens examined. 1 ♂, Hatsuno, Amami-oshima Is., Kagoshima Pref., 6-IV-1972, IMAMURA leg.; 1 ♂, Shinkogachi, Amami-oshima Is., Kagoshima Pref., 10-III-1993, T. KISHIMOTO leg.

4. Aedeagus gently arcuate; ventral margin slightly emarginate and not convex in lateral view; sagittal aileron absent. *C. (N.) mutator* BATES.
 — Aedeagus straight; ventral margin straight or convex a little behind middle in lateral view 5.
 5. Aedeagus with a short apical lobe; ventral margin more convex.
 *C. (N.) asakoe* sp. nov.
 — Aedeagus with an elongate apical lobe; ventral margin almost straight or a little convex 6.
 6. Aedeagus with almost straight apical lobe; ventral margin a little convex; sagittal aileron absent. *C. (N.) amagisanus* sp. nov.
 — Aedeagus with abruptly bent apical lobe; ventral margin almost straight or slightly convex; sagittal aileron present. *C. (N.) bentonis* BATES.

Colpodes (Negreum) yasuii (HABU)

[Japanese name: Yasui-morihirata-gomimushi]

(Figs. 1–2)

Platynus (Negreum) yasuii HABU, 1974, Ent. Rev. Japan, Osaka, 27: 26, fig. 8, pl. 5–2; type locality: Mt. Hateruma, Iriomote Is.

Agonum (Negreum) yasuii: HABU, 1978, Carab. Platynini in Fauna Japonica, Tokyo, 164, figs. 261, 266, 271, 294–296, pl. 16–4.

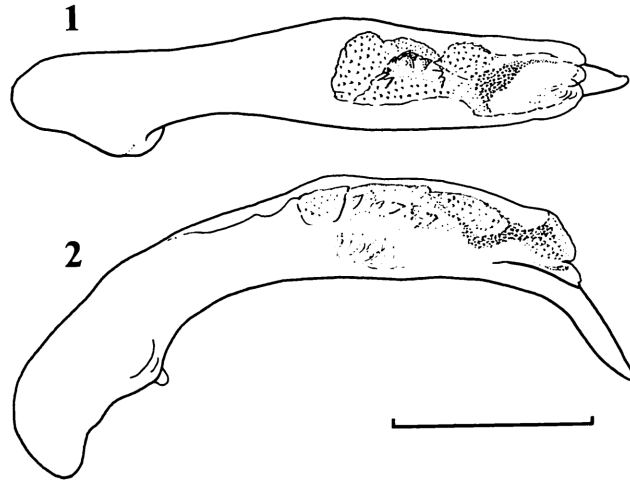
Additional description based on a newly obtained male:—

Length: 9.43 mm (from apical margin of clypeus to apices of elytra).

Body elongate, with rather wide pronotum; head almost smooth and convex; frontal furrows linear, divergent posteriorly and extending a little beyond mid-eye level; eyes moderately convex; PW/HW 1.48; sides of gula with several irregular wrinkles; microsculpture almost vanished; antennal segment I thick (about 2.89 times as long as wide), with a long seta; segment II with a long seta and two medium-sized setae; relative lengths of antennal segments as follows:— I: II: III: IV: V: VI \doteq 1: 0.54: 1.19: 1.15: 1.15: 1.17.

Pronotum transverse, widest at about 3/5 from base; PW/PL 1.37; PW/PA 1.71; PW/PB 1.31; apex widely emarginate, much narrower than base, PA/PB 0.77; apical angles strongly produced and rounded at the tips; sides rather strongly arcuate; reflexed lateral borders very wide; basal foveae deep, and with several punctures; median line shallow but clearly impressed, reaching neither apex nor base; apical transverse impression very shallow; hind angles obtuse; base almost straight, but slightly arcuate at the sides; basal part moderately convex; posterior marginal seta situated just before hind angle; microsculpture almost vanished, though partially existing as irregular meshes.

Wings developed, WL/EL 1.53. Elytra elongated ovate; EW/PW 1.63; EL/EW 1.56; sides evenly arcuate, with shallow preapical emargination; three dorsal pores on interval III, the first adjoining stria III, the second lying on interval III, the third



Figs. 1–2. Aedeagus of *Colpodes (Negreum) yasuii* (HABU) from Is. Ishigaki-jima; 1, dorsal view; 2, left lateral view. (Scale: 0.5 mm.)

adjoining stria III on the left elytron, all the three pores adjoining stria III on the right one; first pore situated at 1/4, the second at middle, the third at 3/4 from base, respectively; striae shallow, slightly crenulate at basal parts, becoming shallower towards apices, and smooth at apical parts; scutellar striole rather long; intervals smooth, a little convex, but flat at apices; microsculpture consisting of wide or transverse meshes; marginal series composed of 20 pores.

Posterior margin of metafemur with 2 setae on the left, and 3 setae on the right; claw segment of metatarsus with several microscopic hairs below; TI/TV 0.78.

Aedeagus long and slender, hardly arcuate at median part, basal part rather strongly produced ventrad; sagittal aileron absent; apical lobe long, nearly parallel-sided, narrowed from apical third, and blunt at the extremity in lateral view; viewed dorsally, apical part slightly inclined to the right; inner sac covered with very minute spinules or scales and teeth.

Specimens examined. 1 ♀ (holotype), “Mt. Hateruma Iriomote Is. 28. VII. 1965 M. Yasui”/“Holotype *Platynus yasuii* Habu” [NAS]; 1 ♂, Mt. Omoto-dake, Ishigaki Is., 31–V–1973.

Range. Japan (Is. Ishigaki-jima; Is. Iriomote-jima).

Colpodes (Negreum) peliotes (HABU)

[Japanese name: Nisehikosan-morihirata-gomimushi]

(Figs. 3–4)

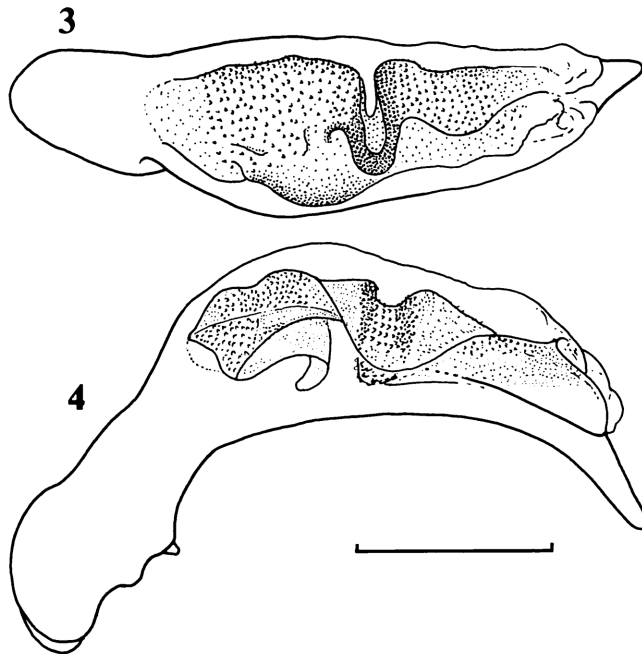
Platynus (Negreum) peliotes HABU, 1974, Ent. Rev. Japan, Osaka, 27: 23, figs. 7, 9–10, pl. 5–1; type locality: Hananoego, Yaku Is.

Agonum (Negreum) ehikoense: HABU, 1958, Bull. natn. Inst. agric. Sci., Tokyo, (C), (10): 49, 51 [*partim*].
Agonum (Negreum) peliotes: HABU, 1978, Carab. Platynini in Fauna Japonica, Tokyo, p. 159, figs. 260, 264, 277, 280–282, 293, pl. 16–3.

Length: 9.49–10.09 mm (from apical margin of clypeus to apices of elytra).

Head convex and smooth; frontal furrows wide, shallow, divergent posteriad and reaching anterior supraorbital pores; PW/HW 1.35, 1.35; eyes rather flat; microsculpture not sharply impressed though consisting of polygonal or wide meshes, partially obliterated; sides of gula either with several wrinkles or smooth; antennal segment I either with a long seta and a short seta or with only a long seta; segment II with a long seta and two medium-sized setae; relative lengths of antennal segments as follows:— I: II: III: IV: V: VI: XI \doteq 1: 0.44: 0.94: 1.03: 0.97: 0.93: 0.84.

Pronotum subcordate widest at about 5/8 from base; PW/PL 1.13, 1.14; apex weakly emarginate, a little narrower than base; PW/PA 1.54, 1.56; PW/PB 1.46, 1.52; PA/PB 0.95, 0.97; apical angles produced and rounded at the tips; sides moderately arcuate in front, and then either simply convergent towards hind angles or very slightly sinuate just before hind angles; reflexed lateral borders wide, joining the sides of basal foveae, and narrowed towards apices; base almost straight at median part, though arcuate at the sides; basal foveae deep, elongate and with several coarse punctures; median line and apical transverse impression very shallow; microsculpture not sharply



Figs. 3–4. Aedeagus of *Colpodes (Negreum) peliotes* (HABU) from Is. Yaku-shima; 3, dorsal view; 4, left lateral view. (Scale: 0.5 mm.)

impressed, but consisting of transverse and wide meshes on lateral and basal parts.

Wings reduced, WL/EL 0.66. Elytra oblong-oval, widest at about middle; EW/PW 1.62, 1.63; EL/EW 1.59, 1.64; three dorsal pores present on interval III, first pore adjoining stria III, second one adjoining stria II or III, third one adjoining stria II; additional pore rarely present between first and second pores; striae weakly crenulate and entire, though disappearing at the apex, striae V and VI free at the apices; scutellar striole rather long, hardly crenulate; intervals almost flat or a little convex at basal parts, and flat at apical parts; microsculpture consisting of transverse meshes.

Posterior margin of each metafemur with 3 setae; proximal 2 segments of meso- and metatarsi each with inner and outer sulci, though the inner one is rudimentary or disappears; claw segment of metatarsus with several microscopic setae below; TI/TV 1.02.

Aedeagus rather short; apical lobe elongate and rounded at the extremity in lateral view; sagittal aileron present; inner sac covered with scales or teeth.

Specimens examined. ♂ (holotype), “Hananoego Yaku Is. 14. VIII. 1965 H. Konishi”/“Holotype *Negreum peliotes* Habu” [NAS]; 2 ♂♂, Mt. Miyanoura-dake, Yaku Is., Kagoshima Pref., 1–VIII–1976, S. MORITA leg.

Range. Japan (Is. Yaku-shima).

Colpodes (Negreum) ehikoensis (HABU)

[Japanese name: Hikosan-morihirata-gomimushi]

(Figs. 5–7)

Agonum (Hikosanoagonum) ehikoensis HABU, 1954, Bull. natn. Inst. agric. Sci., Tokyo, (C), (4): 331, figs. 14, 15–c, pl. 3, figs. 4, 8; type locality: Mt. Hiko.

Agonum (Hikosanoagonum) raizanum HABU, 1954, Bull. natn. Inst. agric. Sci., Tokyo, (C), (4): 330, pl. 3, fig. 5.

Colpodes raizanus: HABU, 1955, Kontyû, Tokyo, 23: 156, fig.

Agonum (Negreum) ehikoense: HABU, 1958, Bull. natn. Inst. agric. Sci., Tokyo, (C), (10): 51, figs. 11, 16; 1978, Carab. Platynini in Fauna Japonica, Tokyo, 161, figs. 258–259, 265, 274, 279, 283–286, 287–289, 291, pl. 3–3.

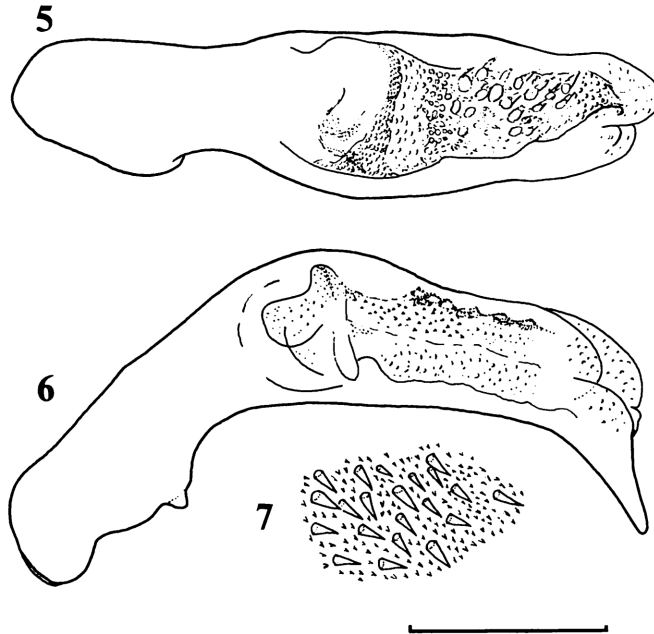
Agonum (Negreum) raizanum: HABU, 1958, Bull. natn. Inst. agric. Sci., Tokyo, (C), (10): 51, figs. 12–13.

Colpodes ehikoensis: NAKANE, 1963, Icon. Ins. Japon. Col. nat. ed., Tokyo, 2: 40, pl. 20, fig. 15.

Agonum raizanum: TAKAKURA, 1972, Kita-Kyûshû no Konchû, Kokura, 17: 66.

Specimens examined. 16 ♂♂, 11 ♀♀, Mt. Yamaingiri, Izumi-mura, Kumamoto Pref., 12~13–IX–1992, S. MORITA leg.; 3 ♂♂, 4 ♀♀, Mt. Tara-dake, Nagasaki Pref., 20–V–1977, S. MORITA leg.; 1 ♂, same locality, 15–IX–1981, S. MORITA leg.; 4 ♂♂, 3 ♀♀, Mt. Hiko-san, Fukuoka Pref., 7–VI–1981, S. MORITA leg.; 2 ♂♂, 3 ♀♀, Tsuchigoya, Mt. Ishizuchi-san, Ehime Pref., 4~7–IX–1980, S. MORITA leg.; 1 ♀, Mt. Jakuchisan, Yamaguchi Pref., 21–IX–1981, S. MORITA leg.; 4 ♂♂, Mt. Gori-san, Kake-chô, Hiroshima Pref., 25–VII–1976, T. KOSAKA leg.; 1 ♂, 2 ♀♀, Mt. Iwawaki-san, Osaka Pref., 14–X–1981, S. MORITA leg.

Range. Japan: Honshu (Kinki District, Chûgoku District); Shikoku; Kyushu.



Figs. 5-7. Aedeagus of *Colpodes (Negreum) ehikoensis* (HABU) from Mt. Gori-san; 5, dorsal view; 6, left lateral view; 7, everted dorsal wall of inner sac, showing sclerotized teeth. (Scale: 0.6 mm.)

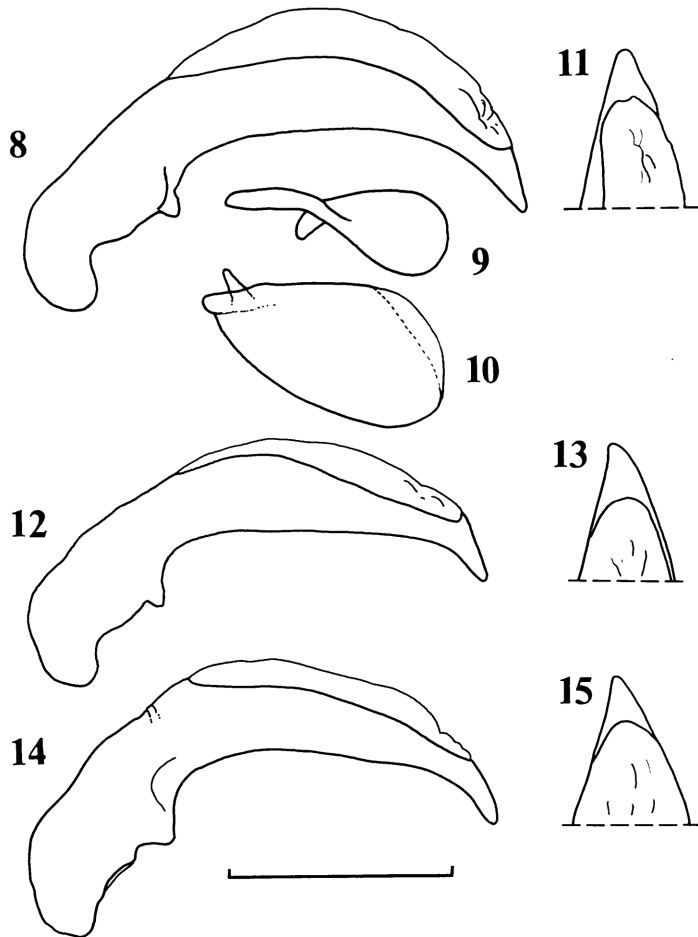
Notes. It seems unnecessary to redescribe this species, because its accounts were made several times by HABU. Of these, structure of the male genital organ is of special interest from the taxonomic point of view, since his account (1978, pp. 163-164) goes as follows: "The aedeagus has inside a mass of seven to twelve small teeth at or before the middle near the dorsal side, but they are sometimes absent." A careful study of my collection has revealed that this species is variable in the number of teeth even within the same population. I herewith give one of the examples showing this fact. My observation of 4 males from a single population (Mt. Gori-san, Hiroshima Prefecture) can be summarized as follows:— inner sac covered with sclerotized scales or teeth and 20-23 large teeth; large teeth heavily sclerotized and situated at the dorsal wall of inner sac; rarely a medium-sized tooth present.

Colpodes (Negreum) mutator BATES

[Japanese name: Fukushima-morihirata-gomimushi]

(Figs. 8-15)

Colpodes mutator BATES, 1883, Trans. ent. Soc. London, 1883: 259; type locality: Fukushima (= Kiso-fukushima). — NAKANE, 1963, Icon. Ins. Japon. Col. nat. ed., Tokyo, 2: 40, pl. 20, figs. 17.



Figs. 8–15. Male genital organ of *Colpodes (Negreum) mutator* BATES, showing the variation according to populations; left lateral view (8, 12, 14), right style (9), left style (10), apical part of aedeagus, apico-dorsal view (11, 13, 15). — 8–11, Specimen from Aoki-kōsen; 12–13, specimen from the Kitahira-tōge; 14–15, specimen from the Honzawa-dani in Horigane-mura. (Scale: 1.00 mm.)

Agonum (Negreum) mutator: HABU, 1958, Bull. natn. Inst. agric. Sci., Tokyo, (C), (10): 49, figs. 2, 5, 7, 17; 1978, Carab. Platynini in Fauna Japonica, Tokyo, 154, figs. 9, 257, 262, 267, 272, 276, 278, 290, pl. 16–1.

Specimens examined. 1 ♂, 1 ♀, Abe-tōge, Shizuoka Pref., 29–VII–1970, Y. IMURA leg.; 4 ♀♀, same locality, 3~4–VII–1977, S. MORITA leg.; 2 ♂♂, 2 ♀♀, same locality, 24–VI–1978, S. MORITA leg.; 6 ♂♂, 7 ♀♀, same locality, 19~20–IX–1980, S. MORITA leg.; 1 ♀, Uedo, Riv. Abe-gawa, Shizuoka Pref., 17–XI–1984, S. MORITA leg.; 10 ♂♂, 19 ♀♀, Aoki-kōsen, Yamanashi Pref., 30–VI~1–VII–1978, S. MORITA

leg.: 1 ♂, Mt. Ohdaigahara, Nara Pref., 8-VIII-1976, T. YAMASHITA leg.: 1 ♂, Kitahira-tôge, Shiga Pref., 17-IX-1977, S. MORITA leg.: 1 ♂, Honzawa-dani, Horiganemura, Nagano Pref., 29-IV-1992, H. HIRASAWA leg.

Range. Japan: Chûbu District (Yamanashi Pref., Nagano Pref., Shizuoka Pref., Ishikawa Pref., Gifu Pref.); Kinki District (Shiga Pref., Nara Pref.).

Notes. As was already mentioned in the introduction of this paper, remarkable similarity of the species occurring in Chûbu and Kantô districts makes their classification difficult. Configuration of aedeagus serves as one of the most important characters for identification and is shown in figures.

Colpodes (Negreum) bentonis BATES

[Japanese name: Benton-morihirata-gomimushi]

(Figs. 16-26)

Colpodes Bentonis BATES, 1883, Trans. ent. Soc. London, **1883**: 258; type locality: Nikko.

Agonum (Negreum) bentone: HABU, 1958, Bull. natn. Inst. agric. Sci., Tokyo, (C), (10): 50, figs. 3, 4, 6.

Agonum (Negreum) bentonis: HABU, 1978, Carab. Platynini in Fauna Japonica, Tokyo, 157, figs. 263, 268-270, 273, 275, 292, pl. 16-2.

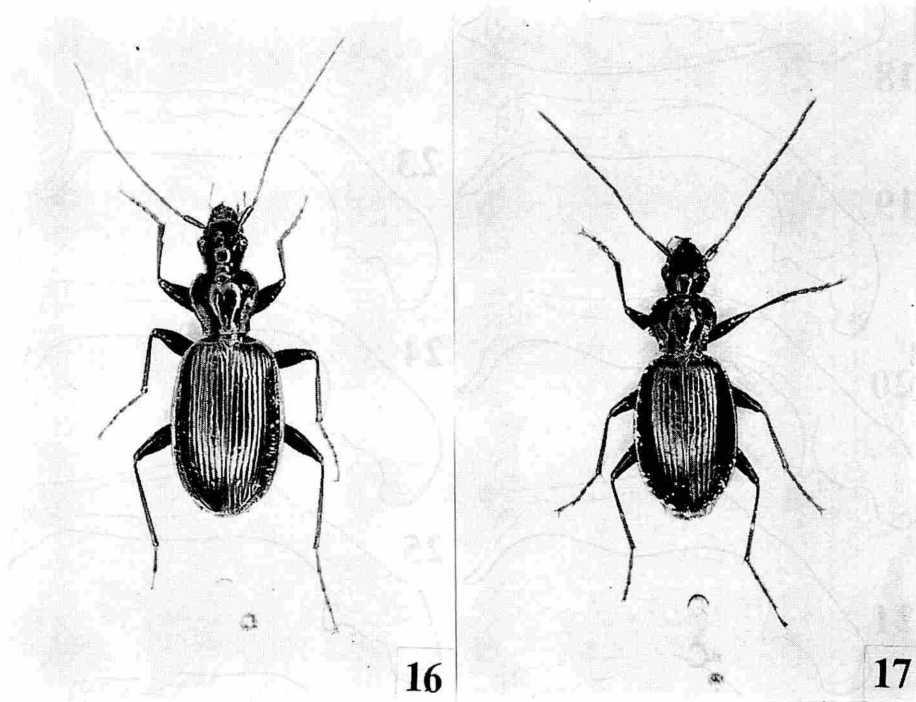
Colpodes bentonis: NAKANE, 1963, Icon. Ins. Japon. Col. nat. ed., Tokyo, **2**: 40, pl. 20, fig. 16. — TANAKA, 1985, Coleopt. Japan Col., Osaka, **2**: 126, pl. 23, fig. 30.

Length: 9.34-11.95 mm; 10.14 mm (holotype) (from apical margin of clypeus to apices of elytra).

Head convex and smooth; eyes rather flat; frontal furrows deep, linear and a little divergent posteriad; neck narrow; neck constriction rarely distinct; microsculpture composed of wide or polygonal meshes but partially disordered; sides of gula with many oblique wrinkles; antennal segment I usually with a long seta and 1 or 2 short seta(e), rarely with a long seta and 3 or 4 or 5 short setae; segment II usually with a long seta and 2 or 3 short setae; relative lengths of antennal segments as follows:— I: II: III: IV: V: VI: XI \cong 1: 0.38: 0.89: 0.95: 0.93: 0.89: 0.82.

Pronotum variable in form, usually cordate; in the Aomori specimen collected by LEWIS, pronotum wider (see the data of PW/PL in Table 1); apex widely emarginate; apical angles produced and rounded at the tips; sides arcuate in front, convergent posteriorly, and weakly sinuate before hind angles; reflexed lateral borders usually wide and narrowed towards apices; basal foveae elongate, rather deep, and with several coarse punctures; hind angles acute; microsculpture composed of fine transverse meshes, and of wide ones on basal part.

Wings reduced, WL/EL 0.33-0.36. Elytra oblong-ovate; shoulders rounded; sides gently arcuate, and rather deeply emarginate before apices; striae smooth or slightly crenulate; scutellar striole rather short; interval III usually with 3 or 4 dorsal pores, anterior one adjoining stria III and the others adjoining stria II or rarely lying on interval III; in the holotype, interval III with 4 dorsal pores, anterior two pores



Figs. 16–17. *Colpodes (Negreum) bentonis* BATES; 16, ♂ (holotype); 17, ♂ (specimen collected by G. LEWIS).

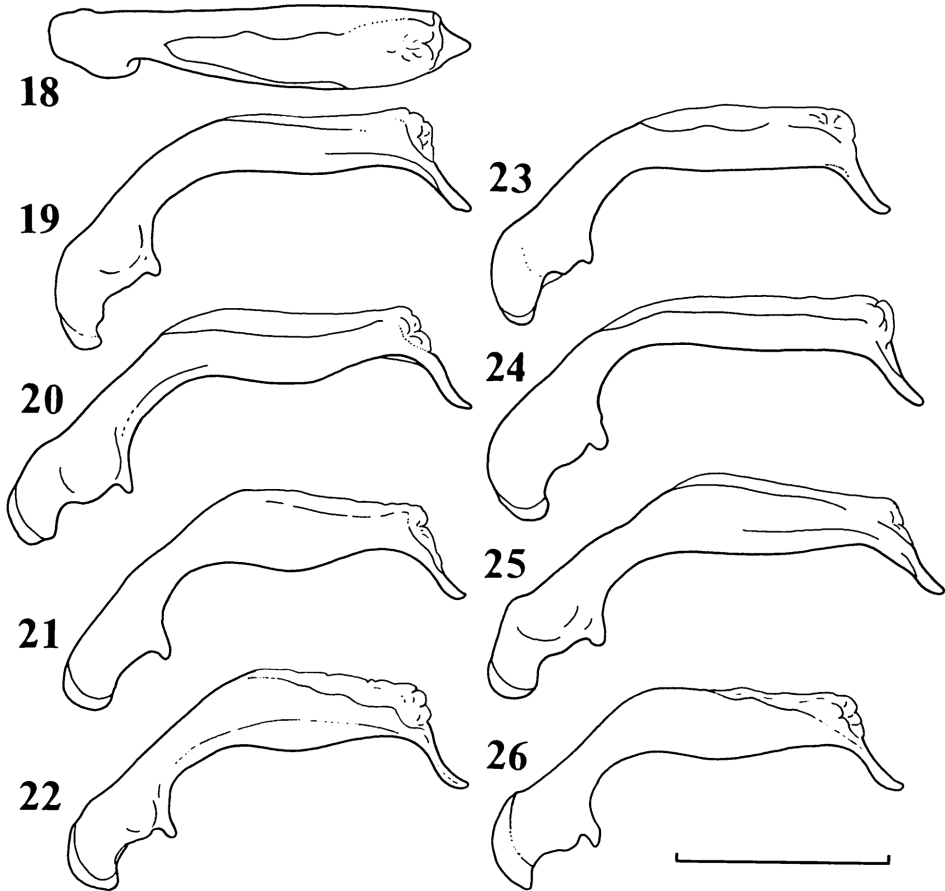
adjoining stria III, third pore adjoining stria II, and the remaining one lying on interval III close to stria II on the left elytron, anterior pore adjoining stria III, the others lying on interval III close to stria II on the right; intervals weakly convex; microsculpture composed of very fine transverse meshes; marginal series of umbilicate pores 19–20 in number.

Ventral side smooth except for mesepisternum, mesosternum and sternites I which bear several coarse punctures; apex of anal sternite widely arcuate in ♂.

Posterior margin of each metafemur usually with 4 setae, rarely with 5 setae; TI/TV 0.87–1.35.

Aedeagus elongate; viewed laterally, apical lobe bent and rounded or simply rounded at the extremity; sagittal aileron present; in profile, ventral margin almost straight or slightly convex a little behind middle.

Specimens examined. ♂ (holotype), “Type H.T.”/“Japan. G. Lewis. 1910–230.”/“Nikko. 3. VI.–21. VI. 80.”/“*Colpodes bentonis* Bates” [NHM]; 1 ♂, “Japan G. Lewis. 1910–320”/“Awomori. 2. IX.–9. IX. 80.”/“*Colpodes bentonis* Bates” [NHM]; 1 ♀, Nurukawa-onsen, Hiraka-machi, Aomori Pref., 24–IX–1950, K. SHIMOYAMA leg. [AM]; 1 ♂, Tsuruoka, Yamagata Pref., 29–VI–1971, K. SHIRAHATA leg. [NAS]; 1 ♂, Kuro-



Figs. 18–26. Aedeagus of *Colpodes (Negreum) bentonis* BATES, showing variation according to populations; dorsal view (18); left lateral view (19–26). — 18, Specimen from Marunuma; 19, same specimen; 20, specimen from Mt. Hikage-yama; 21, specimen from Mt. Mitô-san; 22, another specimen from Mt. Mitô-san; 23, the holotype from Nikko; 24, specimen from Mt. Narabe-yama; 25, specimen from Mt. Kaikoma-ga-take; 26, specimen from Daibosatsu. (Scale: 1.00 mm.)

kawa, Niigata Pref., 25–VIII–1957, K. BABA leg. [NAS]; 1 ♂, Hôshi~Mikuni-tôge, Gunma Pref., 11–VIII–1954, A. HABU leg. [NAS]; 1 ♀, Kirizumi-onsen, Matsuedachô, Gunma Pref., 22–VII–1990, T. KISHIMOTO leg.; 2 ♂♂, same locality, 16~17–V–1992, T. KISHIMOTO leg.; 6 ♂♂, 15 ♀♀, Mt. Hikage-yama, Ueno-mura, Gunma Pref., 19–IX–1992, S. MORITA leg.; 1 ♂, Marunuma, Gunma Pref., 21~22–VI–1982, S. MORITA leg.; 1 ♂, Ootakisawa, Kuriyama-mura, Tochigi Pref., 16–X–1988, H. OHKAWA leg.; 1 ♂, Mt. Kôshin-zan, Tochigi Pref., 24–IX–1990, H. OHKAWA leg.; 1 ♂, Meotobuchi, Kuriyama-mura, Tochigi Pref., 1–IX–1990, H. OHKAWA leg.; 1 ♂, 2 ♀♀, Mt. Narabe-yama, Tochigi Pref., 4–III–1973, S. MORITA leg.; 1 ♂, same locality,

Table 1. Standard ratios of body parts in *Colpodes (Negreum) bentonis* BATES.

	PW/HW	PW/PL	PW/PA	PW/PB	PA/PB	EW/PW	EL/EW
Holotype Nikko ♂	1.39	1.14	1.46	1.46	1.00	1.64	1.56
1 ♂ Aomori	1.37	1.22	1.50	1.41	0.94	1.56	1.55
1 ♂ Marunuma	1.31	1.12	1.52	1.43	0.98	1.66	1.51
1 ♂ Meotobuchi	1.35	1.17	1.46	1.40	0.96	1.63	1.51
1 ♂ Kirizumi	1.32	1.09	1.45	1.42	0.98	1.69	1.55
1 ♂ Mt. Hikage-yama	1.31	1.08	1.58	1.41	0.89	1.69	1.50
1 ♂ Mt. Kôshin-zan	1.32	1.16	1.42	1.48	1.04	1.68	1.47
1 ♂ Daibosatsu	1.40	1.09	1.59	1.52	0.96	1.57	1.47
10 ♂♂ Mt. Mitô-san	1.37 (1.33– 1.45)	1.12 (1.06– 1.20)	1.57 (1.53– 1.61)	1.52 (1.45– 1.57)	0.97 (0.93– 1.02)	1.61 (1.54– 1.78)	1.52 (1.44– 1.57)
1 ♂ Mt. Gozen-yama	1.32	1.11	1.56	1.56	1.00	1.73	1.45
1 ♂ Mt. Kumotori-yama	1.39	1.16	1.57	1.57	1.00	1.61	1.49
1 ♂ Mt. Kaikoma-ga-take	1.33	1.14	1.50	1.44	0.96	1.53	1.47
10 ♀♀ Mt. Mitô-san	1.39 (1.30– 1.46)	1.14 (1.07– 1.20)	1.55 (1.48– 1.62)	1.48 (1.41– 1.54)	0.96 (0.88– 1.03)	1.69 (1.63– 1.76)	1.49 (1.40– 1.55)

4–V–1977, H. OHKAWA leg.; 3 ♂♂, 4 ♀♀, same locality, 23–I–1993, H. OHKAWA leg.; 2 ♂♂, Mt. Bukô, Saitama Pref., 2–VI–1955, M. ONO leg. [NAS]; 2 ♀♀, Mt. Ryôgami-san, Saitama Pref., 11~12–VI–1978, S. MORITA leg.; 1 ♂, Mt. Kumotori-yama, Tokyo, 20~21–VIII–1976, S. MORITA leg.; 1 ♂, 1 ♀, Mt. Gozen-yama, Tokyo, 24–IV–1974, S. MORITA leg.; 1 ♀, Mt. Mitake-san, Tokyo, 4–VI–1976, S. MORITA leg.; 10 ♂♂, 14 ♀♀, Mt. Mitô-san, Tokyo, 9–VII–1978, S. MORITA leg.; 1 ♀, Mt. Ohtake-san, Tokyo, 22–V–1973, S. MORITA leg.; 2 ♂♂, Mt. Amari-yama, Yamanashi Pref., 16–VI–1973, S. MORITA leg.; Mt. Kaikoma-ga-take, Yamanashi Pref., alt 1,200 m, 16~17–VIII–1982, S. & E. MORITA leg.; 1 ♂, Hikawa-rindô, Yamanashi Pref., 22–VI–1985, K. YOSHIHARA leg.; 1 ♂, Daibosatsu, Yamanashi Pref., 28–VIII–1986, S. OHMOMO leg.; 1 ♂, Masutomi-kôsen, Yamanashi Pref., 1–VII–1989, A. IZUMI leg.; 1 ♂, Kanayama, Yamanashi Pref., 29–V–1993, Y. HIRANO leg.; 1 ♂, Shiga-kôgen, Nagano Pref., IX–1960, J. MINAMIKAWA leg. [NAS]; 1 ♂, 1 ♀, Tobira-dam, Matsumoto-shi, Nagano Pref., 20~29–VI–1992, H. HAYAKAWA leg.; 1 ♂, 1 ♀, Inakoyu, Mt. Yatsu-ga-take, Nagano Pref., 14–VI–1992, H. HAYAKAWA leg.; 1 ♂, Unazukionsen, Toyama Pref., 15–III–1958, K. BABA leg. [NAS].

Range. Japan: Tôhoku District (Aomori Pref., Yamagata Pref.), Kantô District

(Gunma Pref., Tochigi Pref., Saitama Pref., Tokyo), Chûbu District (Nagano Pref., Yamanashi Pref., Toyama Pref.).

Notes. The most distinctive feature of this species is the characteristic configuration of its aedeagus. The genitalia of 40 males have been studied. Variation in configuration of aedeagus is presented in Figs. 19–26. In the populations of the Okutama mountains, the aedeagus is relatively short and robust; its ventral margin is more convex a little behind middle in profile. In the populations of the western part of Tochigi Prefecture including the type locality, the aedeagus is relatively slender and its ventral margin is straight in profile. In the population of Mt. Hikage-yama of the southwestern corner of Gunma Prefecture, the aedeagus is elongate with a large basal part.

It is possible that they may be classified at least into three geographical races: population of the western side of Tochigi Prefecture, populations of the Okutama mountains and Daibosatsu, and populations of Chûbu District. However, it seems better to refrain from splitting them into three subspecies. As is shown on the accompanying sketch map, there are several wide blanks. It is to be hoped that more materials of the species will be found in these areas by future investigations.

Colpodes (Negreum) amagisanus MORITA, sp. nov.

[Japanese name: Amagi-morihirata-gomimushi]

(Figs. 27–35)

Agonum bentone: HIRANO, 1968, Kanagawa-chûhō, Yokohama, (29): 144.

Length: 10.71–11.70 mm in the Amagi-san specimens, 11.79 mm in the Futago-yama specimen (from apical margin of clypeus to apices of elytra).

Colour as in *C. (N.) bentonis* though the appendages are lighter.

Head convex and smooth; frontal furrows short, rather deep, and divergent posteriorly and reaching anterior supraorbital pores; eyes rather flat; microsculpture not sharply impressed, though consisting of isodiametric meshes, rarely partially disordered; sides of gula usually with many oblique wrinkles; apex of labrum slightly emarginate or almost straight; each antennal segment I usually with a long seta and 2 or 3 short setae, rarely with a long seta and 1 or 4 short seta(e); segment II usually with a long seta and 2 or 3 short setae, rarely with a long seta and 4 short setae; relative lengths of antennal segments as follows:— I: II: III: IV: V: VI: XI \div I: 0.37: 0.85: 0.98: 0.94: 0.93: 0.82 in the Amagi-san specimens, 1: 0.26: 0.85: 0.98: 0.95: 0.93: 0.84 in the Futago-yama specimen.

Pronotum cordate, convex, variable in shape and widest at $2/3$ – $3/5$ from base; apex weakly emarginate, rarely almost straight at middle, a little narrower than base; apical angles rounded; sides moderately arcuate in front, convergent posteriorly, and sinuate before hind angles, which are acute; reflexed lateral borders narrow; anterior marginal setae inserted at the widest part, rarely with an additional seta, posterior ones

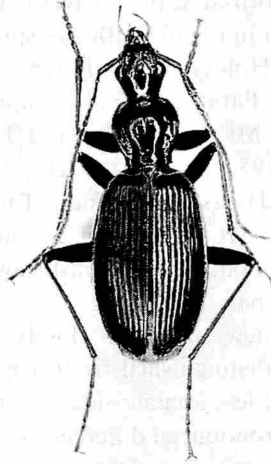


Fig. 27. *Colpodes (Negreum) amagisanus* sp. nov., from Mt. Amagisan.

inserted a little or just before hind angles; basal foveae deep and elongate, usually with several coarse punctures, rarely almost smooth; median line distinct, reaching neither apex nor base; base almost straight at middle though briefly and arcuately oblique inside each hind angle; microsculpture composed of fine transverse meshes, of wide or isodiametric meshes on basal part.

Wings reduced, WL/EL 0.34. Elytra oblong-oval, widest at about 3/5 from base; surface weakly convex; shoulders effaced; sides gently arcuate, and slightly emarginate before apices; apices almost conjointly rounded though forming a small re-entrant angle at suture; striae smooth; scutellar striole rather short and smooth; additional pore absent near basal pore; interval III usually with 3 dorsal pores, anterior one adjoining stria III and the others adjoining stria II, rarely with 4 dorsal pores, of which the anterior 2 adjoin stria III and the others adjoin stria II; intervals weakly convex; microsculpture composed of fine transverse meshes; marginal series of umbilicate pores 19–20 in number.

Ventral side smooth except for mesepisternum and sides of mesosternum which bear several coarse punctures; in ♂, apex of anal sternite slightly emarginate.

Legs slender; posterior margin of each metafemur with 4 or 5 setae; claw segment of metatarsus usually with many short hairs, rarely with about 10 short hairs on ventrolateral sides; proximal 3 segments of meso- and metatarsi each with inner and outer sulci, though the inner sulcus is rudimentary or disappears, especially in segments II and III; TI/TV 1.23 in the Amagisan specimens, 1.21 in the Futago-yama specimen.

Aedeagus robust and elongate; ventral side slightly convex at about middle in lateral view; sagittal aileron absent; apical lobe long, straight, and simply rounded at the extremity; viewed dorsally, apical lobe slightly inclined to the right; inner sac covered with sclerotized scales or teeth; styles broad, left style being larger than the right. Apical styli in female with five spines on outer margin.

Type series. Holotype: ♂, allotype: ♀, Mt. Amagi-san, 18-VII-1975, S. MORITA leg. (NSMT). Paratypes: 3 ♂♂, same data; 2 ♀♀, 8-V-1993, same locality, S. MORITA leg.; 1 ♂, Mt. Futago-yama, 9-IX-1956, Y. HIRANO leg.; 1 ♀, Mt. Ô-yama, Tanzawa, 23-III-1973, S. MORITA leg.; 1 ♀, Mt. Tôno-take, Tanzawa, 9-X-1973, S. MORITA leg.; 1 ♂, Higashizawa-rindô, Tanzawa, 20-X-1993, Y. HIRANO leg.

Type locality. Mt. Amagi-san, Shizuoka Prefecture; Mt. Futago-yama (Hakone), Mt. Ô-yama, Mt. Tôno-take, Higashizawa-rindô (Tanzawa), Kanagawa Prefecture, central Honshu, Japan.

Notes. This new species is closely allied to *C. (N.) bentonis* of the Okutama mountains, but is distinguished from it by the following points: 1) elongate body, 2) less convex eyes, 3) less arcuate sides of pronotum, and 4) more oblique elytral shoulders. The most pronounced difference is in the configuration of aedeagus: in this new species, the aedeagus is more robust, its ventral margin is more convex a little behind middle in profile, the apical lobe is straight in lateral view, and the sagittal aileron is absent.

***Colpodes (Negreum) asakoeae* MORITA, sp. nov.**

[Japanese name: Akagi-morihirata-gomimushi]

(Figs. 36-46)

Colpodes bentonis: OHKAWA, 1990, Mem. Tochigi pref. Mus., (8): 13.

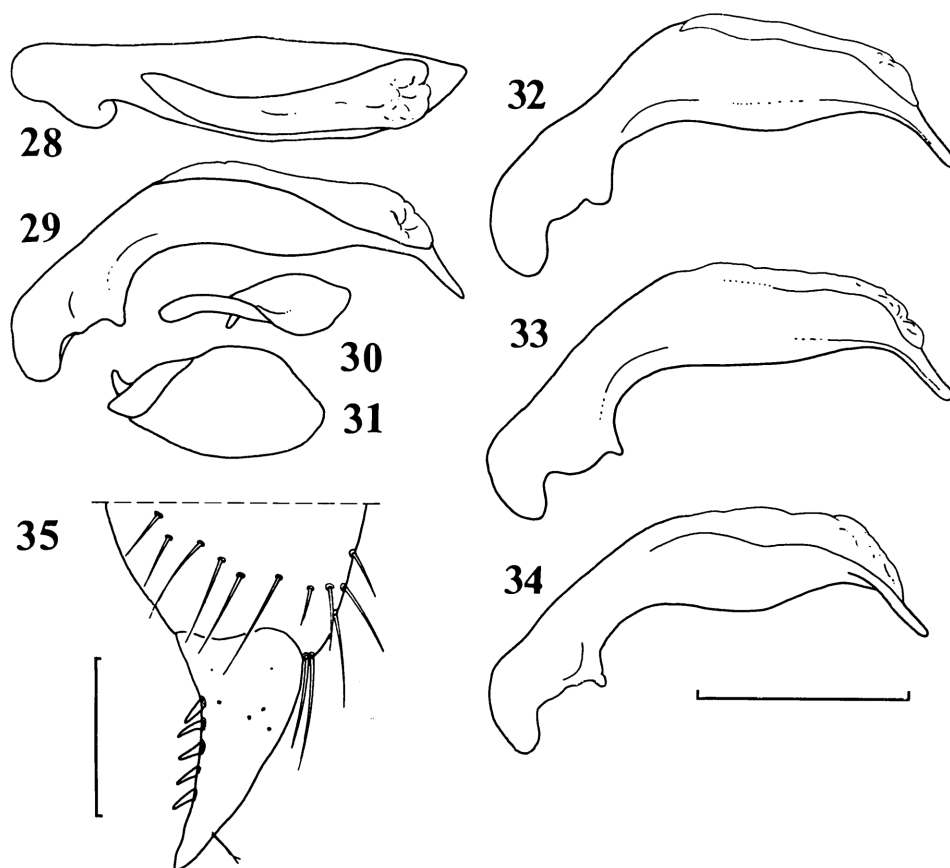
Length: 9.94-11.03 mm (from apical margin of clypeus to apices of elytra).

Very closely allied to *C. (N.) bentonis*, from which it cannot be distinguished with confidence by external morphology: in many individuals, the pronotum has more strongly arcuate sides, sides of gula are almost smooth or provided with several shallow wrinkles, and the elytral intervals are more convex especially at the apical part. Evidently different from *C. (N.) bentonis* in certain details of aedeagus: aedeagus robust with short apical lobe; basal part with small sagittal aileron; apical part voluminous.

Colour as in *C. (N.) bentonis*. Head convex and smooth; frontal furrows rather deep, wide and divergent posteriad, and then reaching anterior supraorbital pores; eyes rather convex; genae very slightly convex; sides of gula usually with several shallow wrinkles, rarely almost smooth; neck wide; apex of labrum usually straight, rarely slightly emarginate; antennal segment I usually with a long seta and 2 or 3 short or medium-sized setae, rarely with a long seta and 1 or 4 short or medium-sized seta(e); segment II with a long seta and 2 or 3 or 4 short or medium-sized setae; relative lengths of antennal segments as follows:— I: II: III: IV: V: VI: XI \cong 1: 0.38: 0.84: 0.91: 0.87: 0.85: 0.80.

Table 2. Standard ratios of body parts in *Colpodes (Negreum) amagisanus* sp. nov.

	PW/HW	PW/PL	PW/PA	PW/PB	PA/PB	EW/PW	EL/EW
3 ♂♂ Mt. Amagi-san	1.35 (1.31– 1.37)	1.07 (1.02– 1.11)	1.52 (1.46– 1.60)	1.45 (1.44– 1.46)	0.95 (0.91– 1.00)	1.66 (1.58– 1.71)	1.56 (1.48– 1.64)
3 ♀♀ Mt. Amagi-san	1.35 (1.31– 1.38)	1.12 (1.09– 1.15)	1.55 (1.49– 1.58)	1.46 (1.43– 1.50)	0.95 (0.91– 1.00)	1.72 (1.69– 1.75)	1.48 (1.47– 1.49)
1 ♂ Mt. Futago-yama	1.35	1.13	1.56	1.46	0.94	1.66	1.57
1 ♂ Higashizawa	1.33	1.10	1.48	1.44	0.97	1.58	1.60



Figs. 28–35. Genitalia of *Colpodes (Negreum) amagisanus* sp. nov. — 28–34. Male genitalia; aedeagus, dorsal view (28), aedeagus, left lateral view (29, 32–34), right style (30), left style (31). — 28–31, Specimen from Mt. Amagi-san; 32, another specimen from Mt. Amagi-san; 33, specimen from Mt. Futago-yama; 34, specimen from Higashizawa-rindō. (Scale: 1.00 mm.) — 35, Right stylus; specimen from Mt. Amagi-san. (Scale 0.2 mm.)

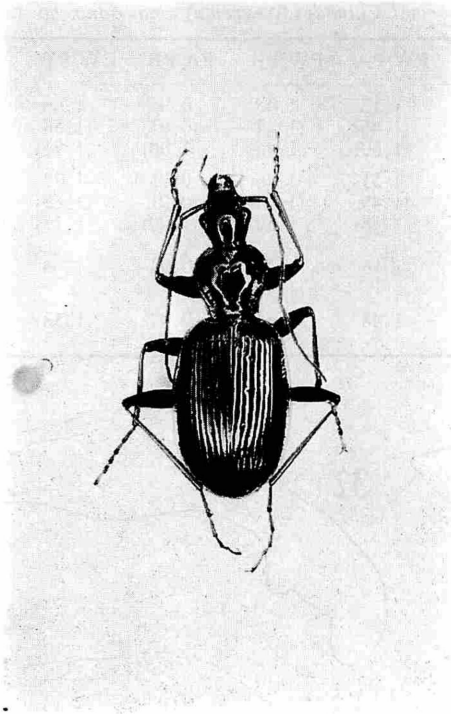


Fig. 36. *Colpodes (Negreum) asakoe*
sp. nov., from Mt. Akagi-san.

Pronotum cordate, convex, and widest at about 3/5 from base; apex deeply emarginate, rarely straight at middle, a little narrower than base; apical angles produced and widely rounded; sides usually strongly arcuate in front, convergent posteriorly and then sinuate before hind angles, which are acute; reflexed lateral borders narrow; anterior marginal setae inserted at the widest part, posterior ones inserted just before hind angles; basal foveae deep and elongate, usually with several fine or rather coarse punctures; median line very shallow, reaching neither apex nor base; base almost straight; microsculpture composed of fine transverse meshes.

Wings reduced, WL/EL 0.30. Elytra oblong-ovate, widest at about middle; shoulders rounded; sides gently arcuate, and shallowly emarginate before apices; striae smooth or very slightly crenulate; scutellar striole rather short; interval III usually with 4 dorsal pores, anterior 2 pores adjoining stria III and the others adjoining stria II; rarely 3 or 5 dorsal pores present, first pore adjoining stria III, second pore usually adjoining stria III, rarely adjoining stria II or lying on interval III, the others usually adjoining stria II, rarely adjoining stria III or lying on interval III; intervals convex; microsculpture composed of fine transverse meshes though partially disordered; marginal series of umbilicate pores 19–20 in number.

Ventral side smooth except for mesepisternum, mesosternum and sternite I which bear several coarse or fine punctures; apex of anal sternite widely arcuate in ♂, and with a pair of setae, extremely rarely with an additional seta on each side in the spec-

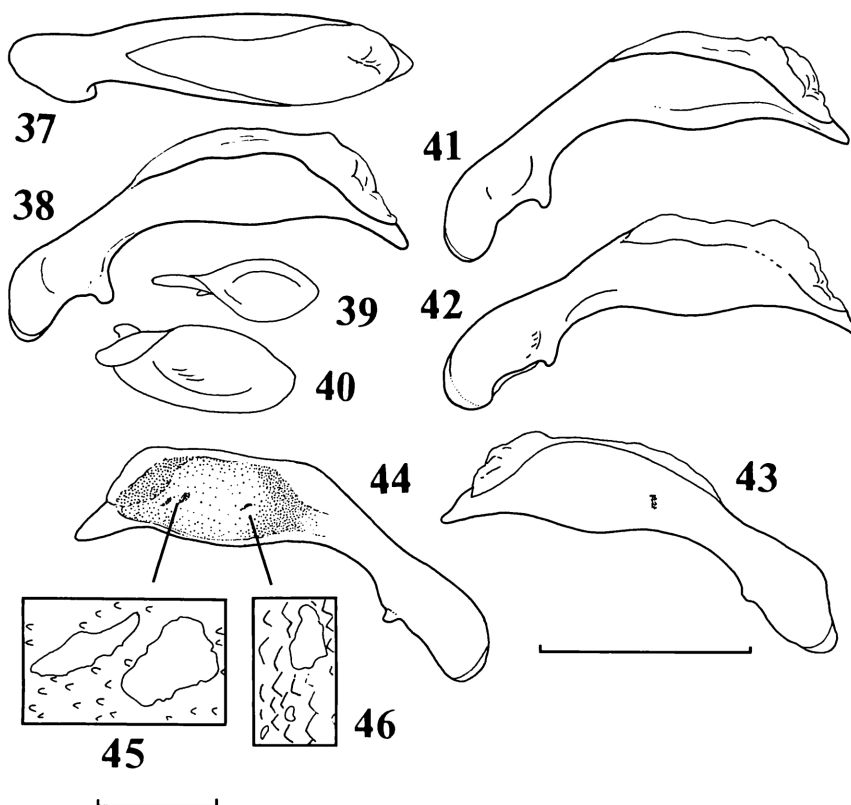
Table 3. Standard ratios of body parts in *Colpodes (Negreum) asakoe* sp. nov.

	PW/HW	PW/PL	PW/PA	PW/PB	PA/PB	EW/PW	EL/EW
10 ♂♂ Mt. Akagi-san	1.39 (1.36- 1.44)	1.18 (1.13- 1.24)	1.56 (1.49- 1.66)	1.46 (1.39- 1.50)	0.93 (0.90- 0.98)	1.56 (1.51- 1.62)	1.53 (1.48- 1.58)
14 ♀♀ Mt. Akagi-san	1.41 (1.35- 1.52)	1.18 (1.13- 1.23)	1.55 (1.49- 1.62)	1.47 (1.38- 1.63)	0.95 (0.88- 1.02)	1.63 (1.57- 1.67)	1.46 (1.42- 1.50)
10 ♂♂ Mt. Yamizo-san	1.38 (1.32- 1.43)	1.17 (1.12- 1.21)	1.55 (1.43- 1.63)	1.43 (1.35- 1.46)	0.93 (0.90- 0.96)	1.57 (1.50- 1.64)	1.51 (1.48- 1.53)
10 ♀♀ Mt. Yamizo-san	1.39 (1.33- 1.42)	1.18 (1.13- 1.24)	1.55 (1.48- 1.63)	1.43 (1.37- 1.50)	0.92 (0.86- 0.97)	1.64 (1.59- 1.70)	1.48 (1.42- 1.59)
1 ♂ Sandogoya-onsen	1.42	1.20	1.60	1.42	0.88	1.59	1.50
2 ♀♀ Sandogoya-onsen	1.34 (1.33- 1.35)	1.21 (1.17- 1.24)	1.47 (1.42- 1.51)	1.48 (1.47- 1.48)	1.01 (0.98- 1.04)	1.70 (1.68- 1.71)	1.44 (1.42- 1.46)
4 ♂♂ Mt. Narabe-yama	1.39 (1.36- 1.41)	1.13 (1.07- 1.16)	1.57 (1.52- 1.60)	1.48 (1.45- 1.53)	0.95 (0.91- 0.97)	1.62 (1.56- 1.66)	1.49 (1.45- 1.53)
3 ♀♀ Mt. Narabe-yama	1.38 (1.35- 1.42)	1.14 (1.13- 1.14)	1.54 (1.48- 1.59)	1.45 (1.42- 1.48)	0.96 (0.92- 1.00)	1.68 (1.64- 1.71)	1.47 (1.46- 1.48)
1 ♂ Mt. Kosabi-yama	1.30	1.07	1.50	1.47	0.98	1.64	1.46
1 ♂ Fujimishita	1.39	1.20	1.58	1.44	0.91	1.53	1.54
1 ♂ Nanairi	1.44	1.18	1.61	1.55	0.96	1.51	1.53
1 ♀ Nanairi	1.46	1.21	1.57	1.52	0.97	1.57	1.46

imens from Mt. Yamizo-san.

Posterior margin of each metafemur usually with 3 or 4 setae, rarely with 2 or 6 setae; claw segment of each metatarsus with many short hairs and several microscopic ones on ventro-lateral sides; proximal 3 segments of meso- and metatarsi each with inner and outer sulci, though the inner sulcus is sometimes rudimentary, especially in segments II and III; in the specimens from Mt. Yamizo-san, all the sulci are usually deeper than in the specimens from Mt. Akagi-san; TI/TV 1.12.

Aedeagus robust and weakly bent at basal third; sagittal aileron small; ventral margin convex a little behind middle in profile; viewed laterally, apical lobe short and gradually narrowed towards apex, which is simply rounded. Inner sac covered with scales or teeth; in two specimens from Mt. Yamizo-san, inner sac with one or five sclerotized part(s) (not copulatory pieces) on the right wall. Styles broad, left style larger than the right. Apical styli in female with 4 spines on outer margin; spines variable in form, usually proximal one rather long and pointed at apex, the others very short and rounded at apices.



Figs. 37–46. Male genitalia of *Colpodes (Negreum) asakoe* sp. nov.; aedeagus, dorsal view (37), aedeagus, left lateral view (38, 41–42), aedeagus, right lateral view (43–44), right style (39), left style (40). — 37–40, Specimen from Mt. Akagi-san; 41, specimen from Mt. Narabeyama; 42, specimen of Sandogoya-onsen; 43, specimen from Mt. Yamizo-san, showing the position of sclerotized part; 44, another specimen from Mt. Yamizo-san, showing the position of sclerotized parts (scale: 1.0 mm); 45, two sclerotized parts; 46, three sclerotized parts (scale 0.1 mm).

Type series. Holotype: ♂, allotype: ♀, Mt. Akagi-san, 16–V–1990, S. & A. MORITA leg. (NSMT). Paratypes: 1 ♀, Mt. Akagi-san, 17–VI–1981, S. MORITA leg.; 13 ♂♂, 8 ♀♀, same locality, 26–V–1990, S. & A. MORITA leg.; 6 ♂♂, 8 ♀♀, same locality, 15–V–1993, S. MORITA leg.; 1 ♂, 2 ♀♀, Sandogoya-onsen, Tochigi Pref., 7~9–IX–1979, S. MORITA leg.; 1 ♂, Mt. Kosabi-yama, Kuroiso-shi, Tochigi Pref., 13–XI–1988, H. OHKAWA leg.; 1 ♂, Fujimishita, Tokura, Gunma Pref., 7–VIII–1988, H. AKIYAMA leg.; 1 ♂, 1 ♀, Midorisawa-rindō, Shioya, Tochigi Pref., 21–V–1989, A. IZUMI leg.; 1 ♂, 1 ♀, Nanairi, Hinoemata-mura, Fukushima Pref., 22~24–VI–1990, T. KISHIMOTO leg.; 1 ♂, Mt. Yamizo-san, Tanakura-machi, Fukushima Pref., 20–V–1988, H. OHKAWA leg.; 1 ♂, 2 ♀♀, same locality, 5–V–1992, M. NUMATA leg.; 9 ♂♂, 6 ♀♀, same locality, 24–V–1992, M. NUMATA leg.; 44 ♂♂, 11 ♀♀, same locality, 18–

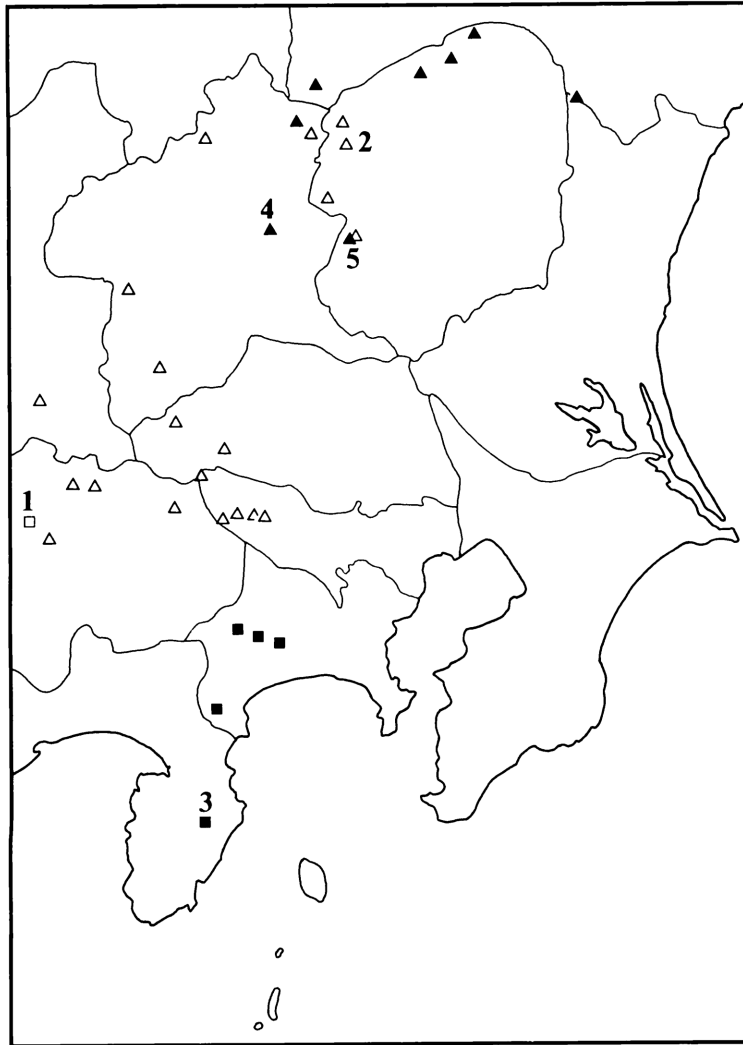


Fig. 47. Map showing the distribution of *Colpodes (Negreum) bentonis*, *C. (N.) mutator*, *C. (N.) amagisanus* sp. nov., and *C. (N.) asakoe* sp. nov., in the Kantô District, the southernmost part of the Tōhoku District and the easternmost part of the Chūbu District in central Honshu, Japan. \triangle - *C. (N.) bentonis*; \square - *C. (N.) mutator*; \blacksquare - *C. (N.) amagisanus* sp. nov.; \blacktriangle - *C. (N.) asakoe* sp. nov. — 1, Aoki-kōsen (showing the eastern limit of distribution of *C. (N.) mutator*); 2, Mt. Amagi-san (type locality of *C. (N.) amagisanus* sp. nov.); 3, Nikko (type locality of *C. (N.) bentonis*); 4, Mt. Akagi-san (type locality of *C. (N.) asakoe* sp. nov.); 5, Mt. Narabe-yama (sympatric site of *C. (N.) bentonis* and *C. (N.) asakoe* sp. nov.).

IV-1993, M. NUMATA leg.; 3 ♂♂, 2 ♀♀, Mt. Yamizo-san, Daigo-machi, Ibaraki Pref., 3-V-1992, M. NUMATA leg.; 1 ♂, Mt. Narabe-yama, Tanuma-chō, Tochigi Pref., 23-XII-1984, H. OHKAWA leg.; 4 ♂♂, 3 ♀♀, same locality, 23-I-1993, H. OHKAWA leg.

Locality. Gunma Prefecture (Mt. Akagi-san, Fujimishita); Tochigi Prefecture (Sandogoya-onsen, Mt. Kosabi-yama, Midorisawa-rindô, Mt. Narabe-yama); Ibaraki Prefecture (Mt. Yamizo-san); Fukushima Prefecture (Nanairi, Mt. Yamizo-san).

Notes. What was most unexpected was the sympatric occurrence of this new species and *C. (N.) bentonis* on Mt. Narabe-yama, Tochigi Prefecture. This was discovered by recent investigations made by Mr. OHKAWA. According to him, this new species coexists with *C. bentonis* under the same large stone. Incidentally, I myself visited the mountain more than twenty years ago with Dr. UÉNO and Mr. OHKAWA. At that time, our main purpose was to obtain trechine carabid beetles, so that only three specimens of *C. bentonis* were found as a by-product.

In general appearance and body size as well as in coloration, this new species resembles *C. bentonis*, and in fact, the two can be distinguished with certainty only by the shape of male genitalia.

This new species is dedicated to my daughter, Asako, one of the collectors of this beetle.

要 約

森田誠司: *Negreum* 亜属に所属するヒラタゴミムシ類。—— わが国に分布する *Negreum* 亜属に属するヒラタゴミムシ類について簡単に述べ、2新種を追加した。なかでもベントンモリヒラタゴミムシは、基準標本がまったく調査されずに再記載されてきたため、ロンドンの自然史博物館所蔵の基準標本を調査し、じゅうらいの見解が正しかったことを明らかにした。

残念ながら、ヒラタゴミムシ類の属・亜属の段階での分類体系は、じゅうぶんに確立されていない。たとえば、HABU (1978) の行ったわが国の種に対する研究結果と、DARLINGTON (1952) の New Guinea の種に対する研究を比べても、取り上げた特徴が一致せず整合性が見られない。ここでは、触角の第2節の末端近くに1本の長毛と2本以上の短毛をもつこと、腹節に細毛を欠くこと、上翅に金属光沢をもつこと、付節の基部2-3節両側に溝をもつことで、*Negreum* 亜属が、わが国に産するほかの亜属とは明確に区別されるため、HABU の処置にしたがって亜属として認めた。また、属の方の処置は、*Agonum* があまりにも異質的な群をまとめたものであるように思われるので、田中 (1985) に従い *Colpodes* を用いた。多くのオサムシ科の甲虫では、陰茎内部のキチン化した部分が種を識別するためにもっとも重要な特徴のひとつとなることがよく知られている。しかし、この亜属の種のうち、この特徴を観察することのできたヒコサンモリヒラタゴミムシとアカギモリヒラタゴミムシの2種では、同一産地のものなかでさえ内部構造に変異が見られるので、それらが種を識別する特徴にはならないことを図示した。

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