

Description of a New Species of Genus *Gymnusa* Gravenhorst (Coleoptera: Staphylinidae) from Hokkaido, Japan

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Abstract A new species of genus *Gymnusa* Gravenhorst, *G. miyashitai* Naomi is described from Hokkaido, Japan. Male aedeagus and some of abdominal terminalia in male and female are illustrated for comparison.

Key words: Coleoptera, Staphylinidae, Aleocharinae, *Gymnusa miyashitai* sp. nov., Japan.

Genus *Gymnusa* Gravenhorst belongs to tribe Gymnusini of the subfamily Aleocharinae in Staphylinidae, and was revised by Klimaszewski (1979, 1982, 1985 and 1992). This genus is characterized and then identified by using the combination of following points: head with three pairs of setigerous pores; labrum transverse; labial palpus present; maxillary palpi 4-segmented, 3rd segment as long as the 4th; galea glabrous; tarsal formula 5-5-5; elytron with outer posterior angle emarginate; and male 9th tergite continuous (not separated in right and left) (Klimaszewski, 1979).

At the present stage nine species of *Gymnusa* have been known from Holarctic region. Miyashita (1993) recorded *Gymnusa inexpectata* Klimaszewski from Hokkaido, Japan. During the course of this study I examined his specimens, and concluded that the species he reported is a new species of this genus. Consequently I described this new species under the name of *Gymnusa miyashitai* Naomi, and the male aedeagus and other important characters of abdomen are illustrated for comparison.

Genus *Gymnusa* Gravenhorst

Gymnusa Gravenhorst, 1806: 173. Type-species: *Gymnusa sinuata* Gravenhorst, 1806 (= *Staphylinus brevicollis* Paykull, 1800), by monotypy. (See Klimaszewski, 1979, p.12 for other references.)

Gymnusa miyashitai Naomi sp. nov.

Gymnusa inexpectata: Miyashita, 1993, Elytra,

Tokyo, 21: 238 (*falsus*).

Male and Female. Body length: 4.0–4.2 mm.

Body black; head very shining; pronotum moderately shining; elytra and abdomen almost opaque; antennae black to dark brown except for reddish 1st segments; maxillary palpi black to dark brown; legs black except for reddish yellow tarsi.

Head broader than long (1.15:1), shorter than (0.8:1) and much narrower than (0.61:1) pronotum, round, with genal areas expanded antero-laterally, expanded areas covered with golden yellowish, moderately dense and long setae, clypeofrontal area beak-shaped; vertex almost glabrous except for three pairs of setae: in one side of head 1 seta placed at medio-internal part of antenna, 1 seta between antennal socket and internal marginal part of eye, 1 seta at internal part behind eye; eyes dorso-lateral in position, elongate oval, weakly and uniformly convex; labrum almost hexagonal, broader than long (1.56:1) with golden yellowish, long and moderately dense setae; antennae slender and long, each segment much longer than broad, very weakly broadened apically, 11th segment moderately pointed, with relative lengths of segments from base to apex as 11:13:12:12:11:10:10:10:11:11:12.

Pronotum much broader than long (1.52:1), shorter than (0.89:1) and narrower than (0.94:1) elytra, strongly convex above, side margins much rounded, anterior and posterior margins weakly rounded; pubescence very fine, dense, regular, dark brown to yellowish brown,

turned posteriorly in median part and postero-laterally in lateral parts. Mesoscutellum invisible above.

Elytra much broader than long (1.45:1), weakly convex above, with sutural area elevated, side margins weakly rounded, posterior margins together forming a shallow median emargination, elytron with the other small emargination at postero-lateral corner; surface variegated with dark brown and golden yellowish pubescence which is fine, regular, and golden yellowish pubescence forming a L-shaped marking on each elytron, a spot of golden yellowish pubescence also placed at latero-median part of each elytron.

Abdomen robust; paratergites distinct and erect; each tergite transversely depressed at base, with fine and regular pubescence which is dark brown or golden yellowish in color, golden yellowish pubescence distributed in anterior part of each paratergite, median longitudinal and lateral parts of each tergite so that each tergite is decorated with three longitudinal bands of golden yellowish pubescence.

Legs relatively short; tibiae each with small but distinct setae at outer parts, its number being less than 10 in each tibia.

Male. Body a little slenderer than in female; abdomen more strongly narrowed posteriorly than in female; 8th tergite and sternite each almost truncate at posterior margins; 9th tergite (Fig. 1A) continuous, with two lateral lobes and two ventral struts; 10th tergite (Fig. 1A) almost trapezoidal almost straight or very weakly rounded at posterior margin; 9th sternite (Fig. 1E) narrow at base, broadened in median part, strongly pointed at apex, with apical part strongly pigmented; aedeagus with median lobe slender, weakly bulbous at base which has plate-like appendage as in Fig. 1C, D, weakly constricted near the middle, then narrowed toward narrowly rounded apex in ventral view, median lobe also provided with vessel-like ventral expansion (a in Fig. 1C, D) which is subtransparent and not strongly sclerotized, but this appendage is completely different from internal structure of median lobe because it is strongly connected with the body of median lobe, internal content of median lobe is developed ventrally as the large gourd-

shaped structure delimited by the dotted line in Fig. 1C, three internal armatures of different shapes found in it (Fig. 1C), anterior two being almost connected, while posterior one sagittal in shape, in lateral view median lobe with its apical part narrow and turning dorsad, without dorsal process; parameres well-developed, consisting of basal stalk, median laminar plate and apical plate (Naomi, 1990), median plate curved ventrally, with its posterior margininal area well-pigmented, and distinctly separated from non-pigmented area, posterior margin crenate, apical plate bilobate, short basal lobe with one seta, long apical lobe with three setae.

Female. Abdomen subparallel-sided or weakly narrowed posteriorly; 8th tergite straight at posterior margin; 8th sternite rounded, but obtusely pointed at the middle of posterior margin; 9th tergite (Fig. 1B) consisting of two lateral lobes which are narrowly separated to each other; 10th tergite rounded at posterior margin, but very weakly and obtusely pointed at the middle (Fig. 1B).

Holotype (Type No., CBM-ZI33061), Chitose-shi, Hokkaido, 7. vi. 1993, K. Miyashita coll. Paratypes: HOKKAIDO: 2 exs., same data as holotype; 1 ex., Ootou, Toyokoro-cho, 24. vi. 1993, K. Miyashita coll.; 4 exs., Kimontou-swamp, Taiki-cho, 23. vi. 1993, K. Miyashita coll.; 4 exs., Tokisatamappu marsh, Tomakomai, 25. vii. 1991, A. Smetana coll.; 5 exs., Kushiro marsh, betw. Horo and Oshima Rivers, 31. vii. 1991, A. Smetana coll.; 3 exs., Iwahogi, Kushiro marsh, 31. vii. 1991, A. Smetana coll.

Distribution. Japan (Hokkaido).

Biological notes. This new species is collected from swampy area of reedy marsh in lowland.

Remarks. *Gymnusa miyashitai* is the 10th species of this genus, and belongs to *variegata*-group according to the key of Klimaszewski (1979). Male aedeagus is most similar to *Gymnusa atra* Casey in its general shape of ventral view and the absence of dorsal process, but the dorsal surface of body is covered with bicolored pubescence as described above. Within the group of *variegata*, *G. miyashitai* is similar in the aedeagus of ventral view to *G. smetanai* Klimaszewski, but this new species has no dorsal process, while the latter has the process strongly protruded dorso-caudally.

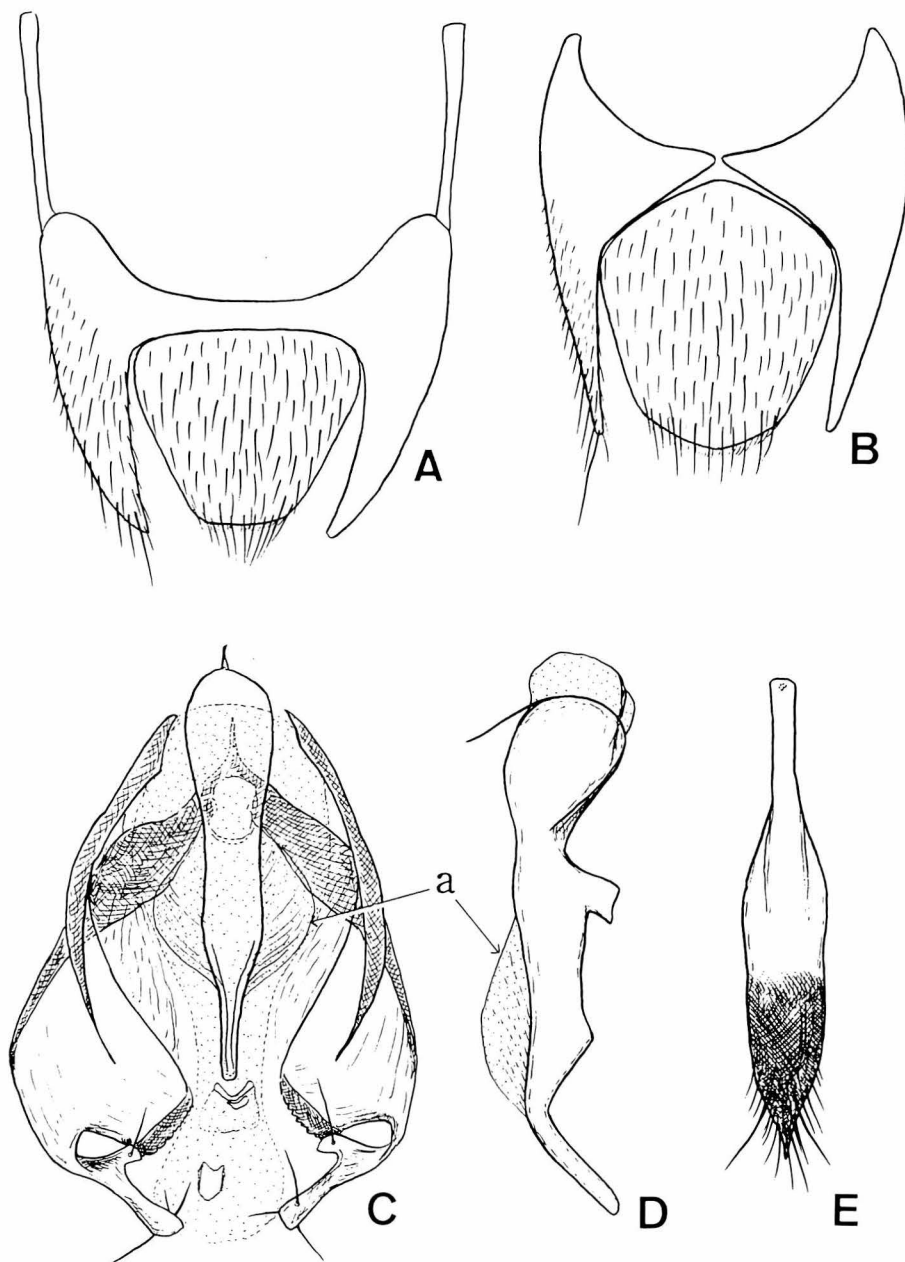


Fig. 1. *Gymnusa miyashitai* Naomi sp. nov. A, Ninth and 10th tergites in male in dorsal view; B, 9th and 10th tergites in female in dorsal view; C, aedeagus in ventral view; D, median lobe of aedeagus in lateral view; E, 9th sternite in male in ventral view.

Etymology. This new species is named after Mr. K. Miyashita, an amateur entomologist of Ebetsu City, Hokkaido who collected this interesting species.

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日本産 *Gymnusa* 属 (コウチュウ目: ハネカクシ科) の 1 新種の記載

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Gymnusa 属はヒゲブトハネカクシ亜科の Gymnusini 族に属し、全北区から 9 種が知られている。日本からはごく最近、Miyashita (1993) によって *Gymnusa inexpectata* Klimaszewski が記録されたにすぎなかった。しかし、詳しい研究の結果、宮下によって日本から記録された種は新種であることが判った。そこで本論文において、本属の 1 新種、*G. miyashitai* Naomi を北海道から採集された標本に基づき記載した。本種は、*Gymnusa* 属の中で *variegata* 種群に分類され、その種群の中では、*G. smetanai* Klimaszewski に近縁であると考えられる。しかし、*miyashitai* は雄交尾器の中央片背方に突起がないことより、後者から容易に区別できる。