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Notes on the Family Histeridae from Eastern Hokkaido

By

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Introduction

Although the Histeridae have been recorded from Hokkaido, we still have only fragmentary knowledge about the fauna of its eastern area (called Dôtô area). According to IJIMA (1975, 1984, 1988) and Kushiro Insect Lovers' Society (1987), only three species have been recorded from this part of the island.

In June of 1992, I had an opportunity to participate in an extensive survey of the beetle fauna of the area, sponsored by the Natural History Research Project of the Japanese Islands (National Science Museum, Tokyo). I visited many places in the Dôtô area with Drs. S.-I. UÉNO and A. SAITO for intensive collecting. Near the Kushiro Moor, I used traps baited with chicken for cadavericolous beetles. Among the collection made on that occasion I have found nine species of histerid beetles.

Besides, I had an opportunity to examine a specimen of *Margarinotus* (*Kurilister*) *kurbatovi* (TISHECHKIN) collected from the area, the species that has not been recorded from Japan, in the collection of Dr. S. HISAMATSU of Ehime University.

In the present paper, new collecting data of the species of the family Histeridae in the Dôtô area are given, and a species, *M.* (*K.*) *kurbatovi* (TISHECHKIN), is newly recorded from Japan and redescribed.

I wish to express my heartfelt thanks to Dr. S.-I. UÉNO (Natural Science Museum, Tokyo) for giving me an opportunity to attend this survey and his critical reading of the present manuscript, and Professor M. SATÔ (Nagoya Women's University), Professor Y. NISHIKAWA (Ohtemon-Gakuin University), Dr. A. SAITO (Natural History Museum and Institute, Chiba), Mr. K. SAITÔ (Hokkaido National Fisheries Research Institute, Kushiro), for their kind collaboration through the field works. My cordial thanks are also due to Dr. S. HISAMATSU (Ehime University), Mr. M. SAITÔ (Fukui), and Mr. Y. SAKAMAKI (Hokkaido University) for allowing me to examine their collections, and Mr. K. IJIMA (Kushiro) who gave me a useful piece of information about *Platysoma deplanatum*. My thanks are due to Mr. S. AKIMOTO (Hokkaido University) for his kind suggestion.

Explanations for Collection Data

Hosooka: Hosooka, Kushiro-chô, Kushiro Moor, 9-VI-1992, M. ÔHARA leg.
Kushiro Zoo: Kushiro Zoo, Yamahana, Kushiro City, 9-VI-1992, M. ÔHARA leg.

* Otaru Museum, Otaru.
小樽市博物館

Mokoto-yama: Mokoto-yama, Higashi-mokoto-mura, near Kussharo-ko, 6-VI-1992, M. ÔHARA leg.
Onbetsu: Onbetsu, 31-V-1992, S.-I. UÉNO, A. SAITO et M. ÔHARA leg.
On'nenai: On'nenai, Tsurui, Kushiro Moor, 9-VI-1992, M. ÔHARA leg.
Shimohoro: Shimohoro, Tsurui, Kushiro Moor, 1 & 9-VI-1992, M. ÔHARA leg.
Shimosetsuri: Shimosetsuri, Tsurui, Kushiro Moor, 9-VI-1992, S.-I. UÉNO, A. SAITO et M. ÔHARA leg.
Shimokutchoro: Shimokutchoro, Shibecha, Kushiro Moor, 9-VI-1992, M. ÔHARA leg.
Takkobu: Takkobu, Kushiro-chô, Kushiro Moor, 9-VI-1992, M. ÔHARA leg.

Enumeration

Family Histeridae

Subfamily Abraeinae

Tribe Plegaderini

1. *Plegaderus* (*Plegaderus*) *marseuli* REITTER, 1877

Plegaderus marseuli REITTER, 1877, 371; HISAMATSU, 1985, 222.
Plegaderus (*Plegaderus*) *marseuli*: MAZUR, 1984, 13.

Specimens examined. 1 ex., Mokoto-yama, collected from under bark of *Abies sachalinensis*.

Subfamily Saprininae

2. *Gnathoncus rotundatus* (KUGELANN, 1792)

Hister rotundatus KUGELANN, 1792, 304.
Gnathoncus rotundatus: MAZUR, 1984, 105.
Gnathoncus nanus: HISAMATSU, 1985, 222.

Specimens examined. 16 exs., Shimohoro, collected from captive fox dung; 1 ex., Kushiro Zoo, collected from animal dung.

3. *Hypocaccus* (*Baeckmanniolus*) *varians varians* (SCHMIDT, 1890)

Saprinus varians SCHMIDT, 1890, 55.
Hypocaccus (*Baeckmanniolus*) *varians varians*: MAZUR, 1984, 100; HISAMATSU, 1985, 223.

Specimens examined. 3 exs., Onbetsu, collected under a carrion of a dog, on sea beach.

Subfamily Histerinae

Tribe Histerini

4. *Margarinotus* (*Ptomister*) *agnatus* (LEWIS, 1884)

Hister agnatus LEWIS, 1884, 135.
Margarinotus (*Ptomister*) *agnatus*: ÔHARA, 1989, 15.

Specimens examined. 5 exs., Kushiro Zoo, collected from under a carrion of a bird; 8 exs., On'nenai, collected by bait trap with chicken; 1 ex., Shimohoro, collected from captive fox dung.

5. *Margarinotus* (*Ptomister*) *weymarni* WENZEL, 1944

Margarinotus weymarni WENZEL, 1944, 127; Kushiro Insect Lovers' Society, 1987, 16.
Margarinotus (*Ptomister*) *weymarni*: ÔHARA, 1989, 19.

Specimens examined. 2 exs., On'nenai, collected by bait trap with chicken; 3 exs., Shimohoro, collected from fox dung.

This species was recorded by Kushiro Insect Lovers' Society (1987) from Hyôsetsu-numa, Kiritappu Moor.

6. *Margarinotus* (*Ptomister*) *striola striola* (C. R. SAHLBERG, 1819)

Hister striola C. R. SAHLBERG, 1819, 25.
Margarinotus (*Ptomister*) *striola striola*: ÔHARA, 1989, 24.

Specimens examined. 1♂, Kushiro Zoo, collected from under a carrion of a bird.

7. *Margarinotus* (*Kurilister* **stat. nov.**) *kurbatovi* (TISHECHKIN, 1992), **comb. nov.**

Kurilister kurbatovi TISHECHKIN, 1992, 328 [Kuriles, SW Kunashiri Is.].

Specimens examined. 1♂, Rausu, Hokkaido, Japan, 26-VII-1962, K. UEDA leg. (HISAMATSU coll.).

Specimens from other localities in Japan are as follows: 1♂, Mt. Tsurugi, Shikoku, 12-VII-1976, S. HISAMATSU leg. (HISAMATSU coll.); 1♀, Karikomi-ike, Koike, Fukui, Honshu, 6-VII-1981, M. SAITÔ leg.; 1♂, Yûbari, Hokkaido, Y. SAKAMAKI leg.

Remarks. Though this species was originally described by TISHECHKIN (1992) based on a single male specimen under a new genus, *Kurilister*, I regard it as a member of the genus *Margarinotus* MARSEUL *sensu* WENZEL, 1944, and *Kurilister* as a subgenus of *Margarinotus* for the following reasons: 1) *Kurilister* evidently has all the key features of the genus *Margarinotus*, that is, median lobe of the male genitalia thick with sclerotized median armature, sessil receptacles of the spermatheca of

Table 1. Biometric data for *Margarinotus* (*Kurilister*) *kurbatovi* (TISHECHKIN).

Part measured	Male	Female (n=1)
APW	1.14 (1.14) 3	1.18
PPW	2.64–2.76 (2.72±0.03) 3	2.87
PL	1.34–1.50 (1.43±0.04) 3	1.46
EL	2.05–2.24 (2.15±0.04) 3	2.28
EW	2.83–3.01 (2.94±0.05) 3	3.15
ProW	1.73–1.85 (1.77±0.03) 3	1.93
ProL	0.75–0.79 (0.78±0.01) 3	0.83
PyL	0.94–1.05 (1.00±0.03) 3	1.70
PTL	1.02–1.14 (1.06±0.03) 3	1.06
MSTL	1.18–1.22 (1.20±0.01) 3	1.22
MTTL	1.46–1.61 (1.51±0.04) 3	1.58

Measurements in mm. APW–width between anterior angles of pronotum; PPW–width between posterior angles of pronotum; PL–length of pronotum in middle; EL–length of elytron along sutural line; EW–maximal width between outer margins of elytra; ProW–maximal width of propygidium in mesial; ProL–length of propygidium in mesial; PyL–length of pygidium; PTL–length of protibia; MSTL–length of mesotibia; MTTL–length of metatibia. The table reads: range (mean±standard error) number of specimens measured.

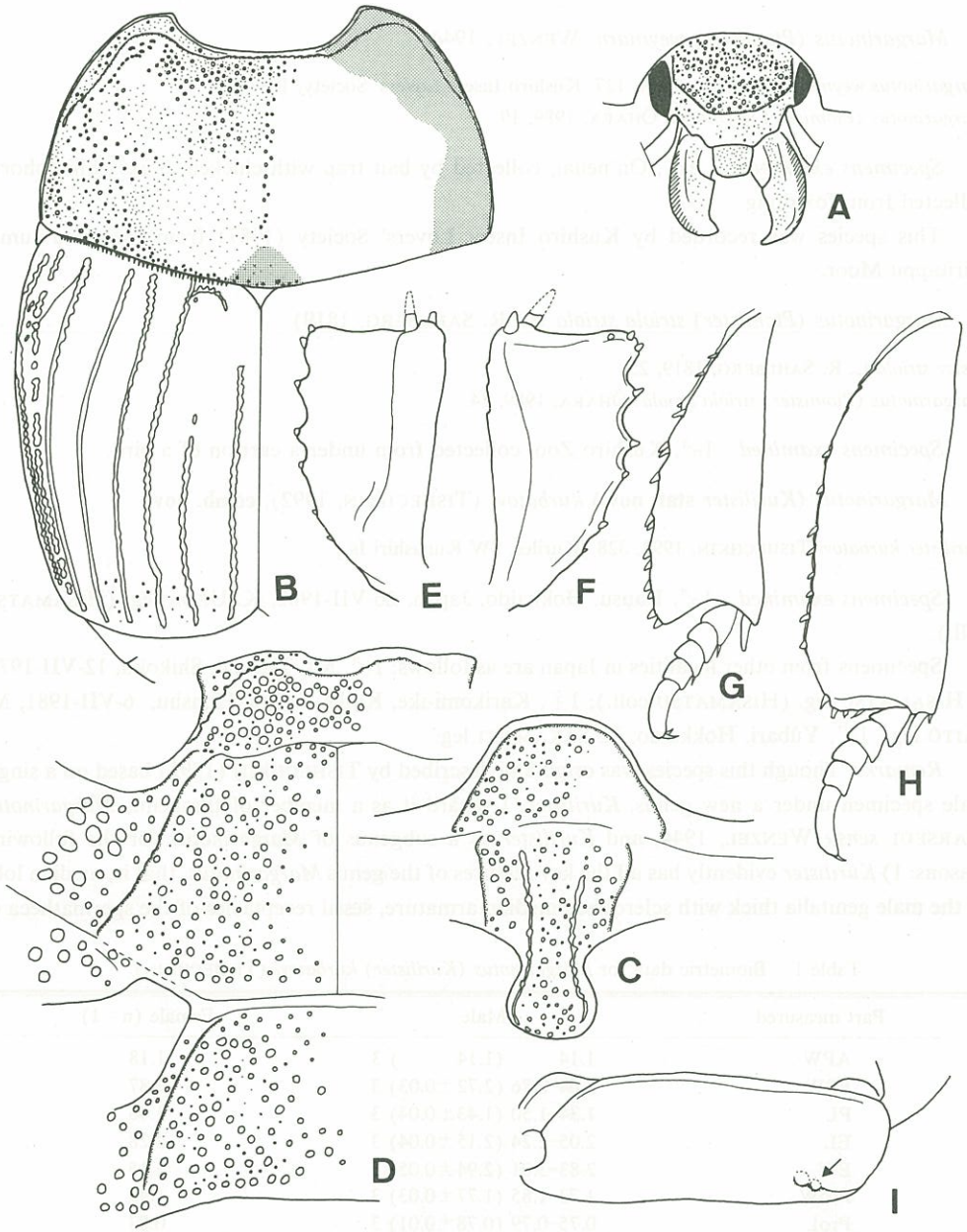

Fig. 1. *Margarinotus* (*Kurilister*) *kurbatovi* (TISHECHKIN). A: Female, adult, head, frontal view. B: Pronotum and left elytron, dorsal view. Dotted areas of pronotum are strongly depressed. C: Prosternum, ventral view. D: Meso- and metasterna, ventral view. E: Left protibia, dorsal view. F: Ditto, ventral view. G: Left mesotibia, dorsal view. H: Left metatibia, dorsal view. I: Left profemur, ventral view.

the female genitalia not slender, sac-like and coiled at the base, and attached on bulsa copulatrix, the posterior marginal stria on the profemur not entire, present on apical fourth, and the external subhumeral stria of elytron entire; and 2) *Margarinotus* is rather heterogeneous and contains widely

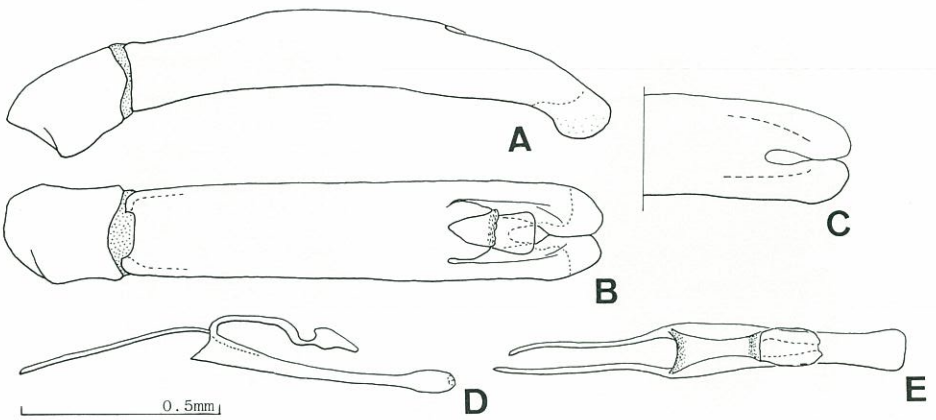

Fig. 2. *Margarinotus* (*Kurilister*) *kurbatovi* (TISHECHKIN); male genitalia. A: Aedeagus, lateral view. B: Ditto, dorsal view. C: Caudal apex of aedeagus, ventral view. D: Median lobe, lateral view. E: Ditto, dorsal view.

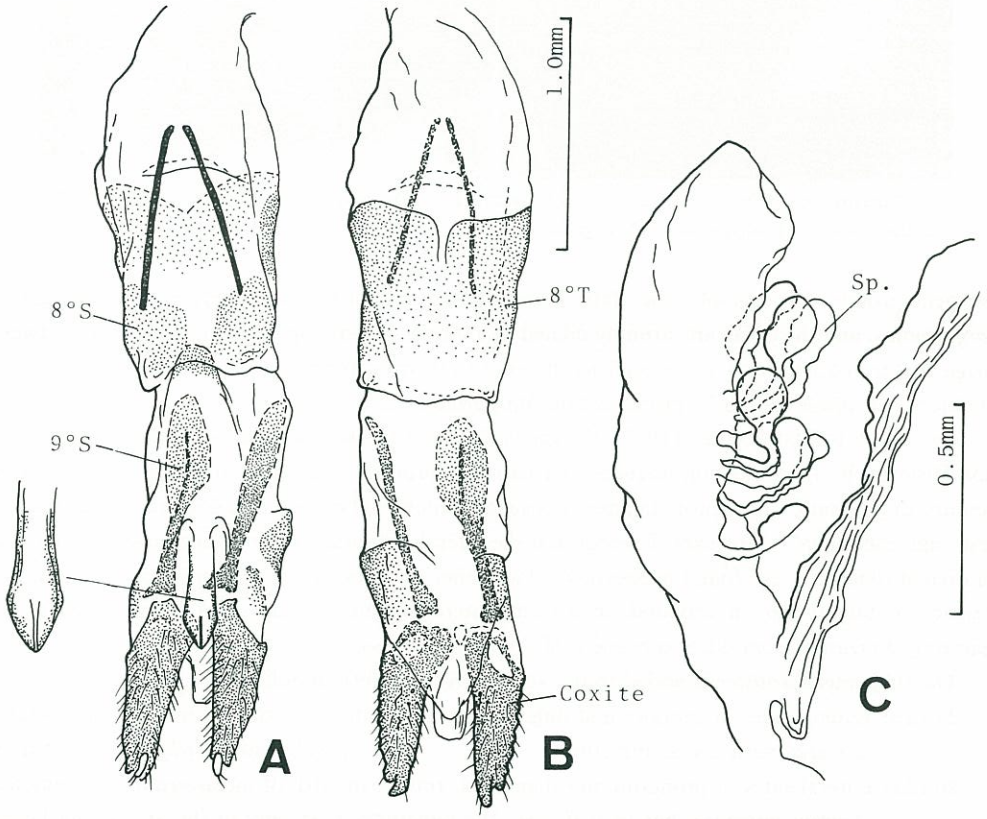

Fig. 3. *Margarinotus* (*Kurilister*) *kurbatovi* (TISHECHKIN); female genitalia. A: Eighth and 9th sternites and tergites, ventral view. B: Ditto, dorsal view. C: Spermatheca (right side). 8°S and 9°S: sternites of 8th and 9th abdominal segments; 8°T: tergite of 8th abdominal segment; Sp: spermatheca.

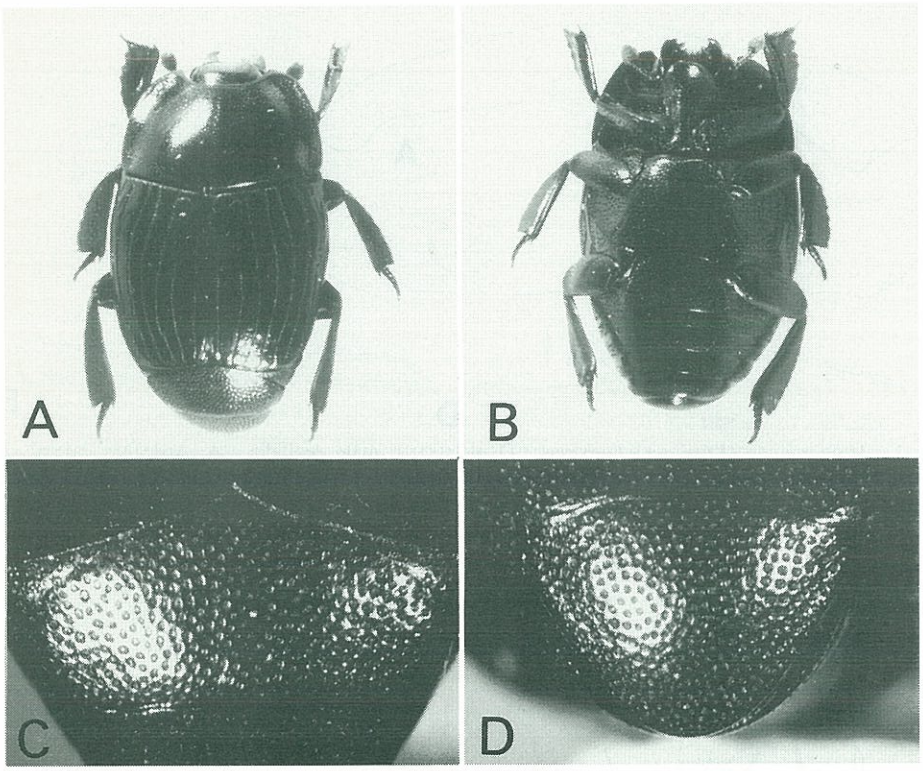

Fig. 4. *Margarinotus* (*Kurilister*) *kurbatovi* (TISHECHKIN). A: Female, adult, dorsal view. B: Ditto, ventral view. C: Propygidium. D: Pygidium.

divergent groups, for example, the elytra have shining and projecting tubercles in the subgenus *Margarinotus*, and the tibiae are strongly dilated in *Stenister*. In my opinion, the differences between *Margarinotus* and *Kurilister* is not sufficiently large to warrant their separation at the generic level. Therefore, *Kurilister* should be placed within *Margarinotus* as a subgenus.

According to TISHECHKIN (1992), the genus *Kurilister* is distinguished from other genera of the tribe Histerini by the following features: "structure of pronotum, absence of lateral pronotal stria, presence of punctation [on] pronotal, mesosternal and intercoxal metasternal disk, [and] structure of meso- and metatibia". However, I recognized the lateral pronotal stria in Japanese specimens, and the dilated tibiae are also found in *Stenister*. Two other features, strongly depressed pronotum and presence of punctation on pronotal, meso- and intercoxal metasternal disks, may be useful for separating *Kurilister* from other subgenera of the *Margarinotus*.

The subgenus *Kurilister* is added to my key (ÔHARA, 1989), as follows:

2a (2b) Lateral sides of pronotum strongly depressed. Intercoxal disk of metasternum wholly covered with coarse punctures. .....subgenus *Kurilister* TISHECHKIN.

2b (2a) Lateral sides of pronotum not depressed. Intercoxal disk of metasternum not punctate (rarely punctate, but in that case, the punctures exist only in the area along lateral metasternal stria.).

Though the species of the genus *Margarinotus* are usually met under animal carcasses, this

species has been found on decayed trees. It may live either under the barks or on fungi.

Redescription. Body length: PPL (=length from anterior angles of pronotum to apex of pygidium), male 4.0–4.25 mm, female 4.4 mm; PEL (=length from anterior angles of pronotum to apex of elytron), male 3.6–3.86 mm, female 4.0 mm. Width, male 2.83–3.01 mm, female 3.15 mm. Biometric data are shown in Tabel 1. Body oblong-oval and black; legs, antennae and depressed areas along lateral margins of pronotum fuscous.

Frontal stria of head (Fig. 1A) strongly impressed, its lateral portions parallel to each other, and anterior portion feebly arcuate. Frontal disk surrounded by frontal stria densely covered with large and deep punctures; interspaces among the punctures intermingled with fine ones. Area between frontal stria and the margin only clothed with fine punctures. Labrum nearly square and finely punctate. Mandible long and abruptly curved inwards near the apex. Inner side of mandible without denticle.

Pronotum (Fig. 1B) transverse and strongly depressed on each lateral side, in particular behind apical and basal angles. Marginal pronotal stria briefly interrupted behind head and complete laterally. Inner lateral pronotal stria present in apical half on lateral portion, sometimes complete, and complete in anterior portion. Outer lateral stria absent. Surface of pronotum covered with large and fine punctures, the former dense along margin and apical half of sutural line, and the latter covering the whole surface, though becoming sparser near the lateral sides.

Elytra (Fig. 1B) finely punctate, the punctures becoming coarser apically. Basal margin of elytron strongly crenate. Marginal epipleural stria complete and crenate. Marginal elytral stria absent. Epipleural area with 2 or 3 rows of coarse punctures. External subhumeral stria well impressed and complete, though obsolete in the median portion, where it is represented by large punctures. Interstice between external and internal subhumeral striae with a short row of large punctures on basal third. Oblique humeral stria impressed on basal third, not crenate. First to 4th dorsal elytral striae well impressed, crenate and complete. Fifth dorsal and sutural striae present on apical two-thirds, the former a little shorter than the latter. Basal rudiment of 5th dorsal stria represented by an arc at the base.

Pygidia with alutaceous ground sculpture. Propygidium (Fig. 4C) covered with coarse and ocellate punctures, intermingled with microscopic punctures. Pygidium (Fig. 4D) densely covered with deep ocellate punctures, the punctures becoming finer apically, and intermingled with microscopic punctures.

Prosternal lobe (Fig. 1C) truncate at apex, its marginal striae complete. Disk of the lobe coarsely punctate. Prosternal keel coarsely punctate, interspaces among the coarse punctures clothed with fine punctures. Carinal stria present on each lateral side of the keel, the posterior ends of the striae not connected with each other along posterior margin of the keel. Prosternal keel and lobe covered with feeble alutaceous ground sculpture.

Anterior margin of mesosternum (Fig. 1D) feebly emarginate, its marginal stria complete. Disk of mesosternum coarsely punctate, the punctures gradually becoming larger laterally, and interspaces among the punctures clothed with fine punctures. Meso-metasternal suture complete and obtusely angulate at middle. Lateral stria of metasternum extending posteriorly and obliquely, and sometimes united with the oblique stria which extends inwardly from the middle of metasternal-metepisternal suture. Intercoxal disk of metasternum densely and coarsely punctate, the punctures a little smaller than mesosternal ones; fine punctures intermingled with coarse ones. Lateral disk sparsely covered

with large and ocellate punctures, and intermingled with fine punctures among them; surface of the disk without hair. Intercoxal disk of 1st abdominal sternite striate on each side, and coarsely and densely punctate, and interspaces among the punctures clothed with fine punctures.

Protibia (Fig. 1E–F) strongly compressed, dilated and with 7 feeble denticles on the outer margin. Surface of protibia with alutaceous ground sculpture, and sparsely punctate. Tarsal groove nearly straight, though feebly curved basally. Meso- and metatibiae strongly compressed and dilated (Fig. 1G–H).

Male genitalia as shown in Fig. 2.

Female genitalia as shown in Fig. 3.

Distribution. Japan (Chishima Isls., Hokkaido, Honshu, Shikoku). New to Japan (proper).

8. *Margarinotus* (*Grammostethus*) *niponicus* (LEWIS, 1895)

Hister niponicus LEWIS, 1895, 188.
Margarinotus niponicus: IJIMA, 1984, 115.
Margarinotus (*Grammostethus*) *niponicus*: ÔHARA, 1989, 37.

This species was recorded by IJIMA (1984) from Wakayama-numa, Hamanaka-chô.

9. *Atholus duodecimstriatus quatuordecimstriatus* (GYLLENHAL, 1808)

Hister quatuordecimstriatus GYLLENHAL, 1808, 83.
Atholus duodecimstriatus quatuordecimstriatus: ÔHARA, 1993, 135.

Specimens examined. 26 exs., Kushiro Zoo, collected from animal dung; 4 exs., Shimohoro, collected from captive fox and mink dung; 8 exs., Shimosetsuri, collected from cow dung; 1 ex., Takkobu, collected from cow dung; 4 exs., Hosooka, collected from cow dung.

10. *Atholus pirithous* (MARSEUL, 1873)

Hister pirithous MARSEUL, 1873, 224.
Atholus pirithous: ÔHARA, 1993, 141.

Specimens examined. 12 exs., Kushiro Zoo, collected from animal dung; 5 exs., Shimosetsuri, collected from cow dung; 2 exs., Shimokutchoro, collected from cow dung.

11. *Merohister jekeli* (MARSEUL, 1857)

Hister jekeli MARSEUL, 1857, 417.
Merohister jekeli: ÔHARA, 1992, 378.

Specimens examined. 1 ex. (dead individual), Shimohoro, found under mink dung.

Tribe Platysomatini

12. *Platysoma deplanatum* (GYLLENHAL, 1808)

Hister deplanatus GYLLENHAL, 1808, 85.
Platysoma calatum [sic]: IJIMA, 1975, 211.
Platysoma rasile: IJIMA, 1988, 37.
Platysoma deplanatum: ÔHARA, 1986, 100.

This species was recorded by IJIMA (1975, 1988), under the name *P. calatum* [sic] and *P. rasile* respectively, from Futatsuyama and Raibetsu.

Summary

Twelve species of the family Histeridae are recorded from eastern Hokkaido. Of these, *Margarinotus* (*Kurilister*) *kurbatovi* (TISHECHKIN) is newly recorded from Japan and redescribed. The genus *Kurilister* TISHECHKIN is reduced to subgeneric rank in the genus *Margarinotus* MARSEUL *sensu* WENZEL (1944).

要　　約

北海道東部からエンマムシ科12種を記録した．このうち9種は1992年6月に実施した現地調査により採集されたものである．また，ヒラタカクヒメエンマムシ *Margarinotus* (*Kurilister*) *kurbatovi* (TISHECHKIN) を日本から初記録し，再記載した．TISHECHKIN の設立した属 *Kurilister* を，ヒメエンマムシ属 *Margarinotus* の1亜属に降格させた．その理由として，*Kurilister* はヒメエンマムシ属の特徴的な形質をすべてもつこと，ヒメエンマムシ属は多くの異質なグループを含む属であり，*Kurilister* はその範囲に含まれると考えられることが挙げられる．

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