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A New *Ischalia* (Coleoptera, Ischaliidae) from Hokkaido, with a Key to the Japanese Ischaliidae

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Abstract *Ischalia* (*Ischalia*) *horii* sp. nov. is described from Hokkaido, Japan. This new species is closely related to *Ischalia patagiata* Lewis, 1879, but differs from the latter in the shape of the aedeagus. An updated, revised key to the species of Japanese Ischaliidae is also provided.

Ischalia Pascoe, 1860 (Coleoptera, Ischaliidae) is composed of 41 (including 18 Palaeactic Subregional) species in the world (Saitô, 2003, 2011; Young, 2011). The senior author (M. S.) recently had an opportunity to examine unidentified ischaliid material from Hokkaido, Japan, leading to the present paper in which we describe one new species. This new species is the eighth member of the genus from Japan (including *Ischalia* (*I.*) *kunashirica* Nikitsky, 1994 from Kunashir Island). With the additions of three species to Japan since Saitô (2003) presented a key, we also provide a revised key to the ischaliid species of Japan.

The entomological collection codes for each specimen depository are noted below and elsewhere in the text:

National Museum of Nature and Science, Tsukuba (NSMT).

Hokkaido University Museum, Sapporo, Japan (SEHU).

Morphological abbreviations used herein are as follows: L — body length (= length from apical margin of clypeus to elytral apices); W — body width (= across elytral humeri); FW — width across frons (= distance between eyes); TL — temporal length; ED — compound eye diameter; CL — clypeal length; CW — clypeal width; PL — pronotal length; PW — maximum width of pronotum; HW — head width; EL — elytral length; EW — maximum width of elytra; MtiL — metathoracic tibial length; Mta1stL — length of 1st metathoracic tarsomere; AL — length of aedeagus; AW — width of aedeagus.

Ischalia* (*Ischalia*) *horii M. Saitô et Young, sp. nov.

[Japanese name: Oshima-herihanemushi]

(Figs. 1–9)

M a l e. Body elongate, L/W 3.11 & 3.30 (n = 2), parallel sided, moderately flat dorsally, dorsum shiny, elytral surface with feeble luster produced by white, lustrous pubescence; antennae and legs densely, finely pubescent. Dorsal surface of head and pronotum (Fig. 1) entirely black; mouthparts and apex of terminal maxillary palpomere dark yellowish-brown; antennae black. Ventral surface entirely dark brown with luster, covered with white pubescence. Elytra with longitudinal, pale yellow-

ish-brown lateral vitae, slightly narrowing about half-way along the length of elytra, the yellow vita partially interrupted by black pigment subapically (Fig. 3).

Head suboval, sparsely and finely punctate. Frons distinctly raised and inflated at the antennal insertions; vertex distinctly convex, cranium between frons and vertex furrowed; tempora broadly rounded, TL/ED 1.00 & 1.60 (n = 2) in dorsal view. Eyes longitudinally ovate and narrowing ventrally. Clypeus rectangular and flat, CW/CL 1.74 & 1.86 (n = 2), sparsely punctate; anterior margin widely incised, frontoclypeal furrow distinct. Terminal maxillary palpomere (Fig. 7) triangular; aboral margin a little longer than adoral margin; apical margin somewhat shorter than aboral margin, truncate. Antennae (Fig. 4) filiform, extending beyond the basal margin of pronotum at the midlength of the 6th antennomere; terminal segment spindle-shaped; relative lengths of each segment to the 3rd antennomere from basal to apical (n = 1): 0.77, 0.45, 1.00, 0.91, 0.86, 0.77, 0.80, 0.73, 0.77, 0.77, 1.05; ratio of the width to the length of each antennomere from basal to apical (n = 1): 0.89, 0.91, 2.20, 1.90, 1.90, 1.42, 1.46, 1.33, 1.42, 1.42, 1.92.

Pronotum (Figs. 5–6) widely subcampanulate, PW/PL 1.39 & 1.45 (n = 2), PW/HW 1.11 & 1.14 (n = 2), PW/W 0.59 & 0.68 (n = 2), widest behind the middle; lateral margins bordered, arcuate and sinuate before the basal angles; anteriorly rounded, anterior angles indistinct; basal angles acute and produced laterally; basal margin very weakly and widely sinuate; disc gibbous in the anterior 3/5, with a strong longitudinal, median carina which is produced posteriorly beyond the basal margins, transversely concave behind the gibbosity with two pairs of deep foveae along the carina and another pair of larger foveae sublaterally near the base; surface sparsely and finely punctate. Scutellar shield rather large, about as wide as 1/3 of pronotal basal margin, triangular and rounded apically, sparsely and finely punctulate.

Elytra (Figs. 2–3) elongate with lateral margins parallel, EL/EW 2.05 & 2.29 (n = 2), flat, convex along the suture; humeri and apices widely rounded; disc of each very densely and coarsely punctate, punctures much larger than those of head and pronotum; suture very strongly raised to form a roughly punctate costa; each elytron with two pairs of strong and sharp costae: outer lateral pair extending from the base to near the apex along the lateral margins, which are weakly arcuate beyond the humeral region and terminate before reaching the suture; inner pair of short humeral costae inside the lateral costae; humeral costae more elevated than the lateral costae; lateral margins depressed.

Ventral surface sparsely, setiferously punctulate. Hypomeron (Fig. 6) with deep foveae.

Legs slender. MtiL/EL 0.32 (n = 2) and MtiL/EW 0.66 & 0.73 (n = 2). MtaL/Mti1stL about 2.8 (holotype), relative lengths of each metatarsomera to the 1st one from basal to apical (holotype): 1.00, 0.33, 0.28, 0.49.

Aedeagus with fused parameres (Figs. 8–9) elongate, narrowing along the apical 1/3, weakly expanded apically, feebly curved ventrally along apical half (Fig. 9), apex broadly rounded with apical margin subtruncate, AL/AW about 5.4 (holotype).

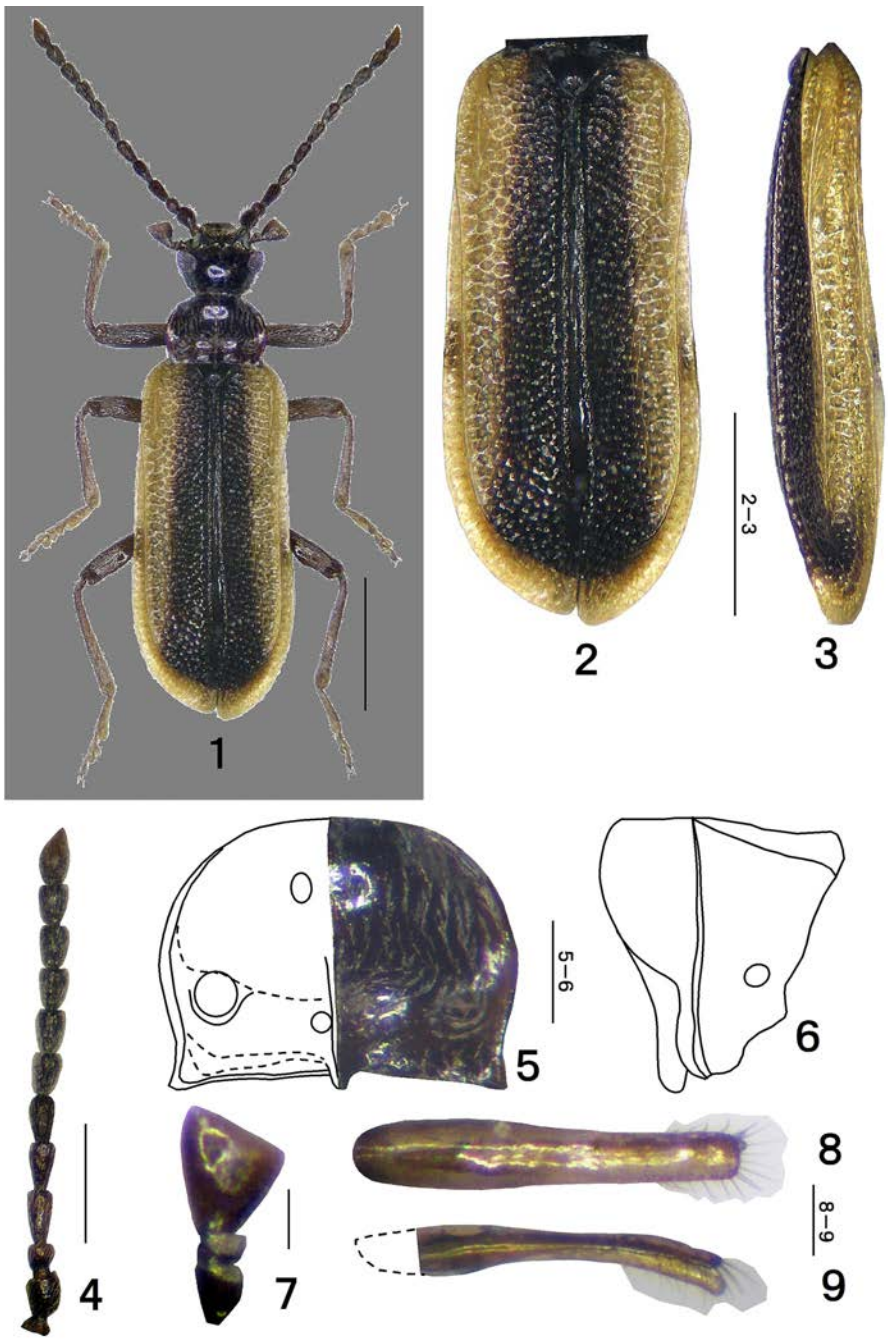
F e m a l e. Unknown.

Measurement (in mm). L: 3.70 (holotype), 4.20 (paratype); W: 1.12 (holotype), 1.35 (paratype); HW: 0.64 (holotype); antennal length: 1.95 (holotype); PW: 0.75 (holotype); EL: 2.80 (holotype); MtiL: 0.90 (holotype); MtaL: 0.65 (holotype); AL: 0.10 (holotype).

Type series. Holotype (Figs. 1–9): ♂, "Japan Hokkaido / Otobe T. / Mt. Otobe-dake / 2004. VII. 3–15 (PT) / Eiji YAMAUCHI leg." (NSMT). Paratype: 1 ♂, "Mt. Otobe alt 980m / Hokkaido Otobe T. / 28. VI–12. VII 1997 / S. HORI leg." (SEHU).

Etymology. The specific name is given in honor of Mr. S. HORI who offered the materials.

Notes. The Japanese species of *Ischalia* may be divided into two species groups as noted in to



Figs. 1–9. *Ischalia* (*Ischalia*) *horii* M. SAITÔ et YOUNG, sp. nov. from Hokkaido, Japan. ——— 1, Habitus (holotype), dorsal view; 2, elytra, dorsal view; 3, ditto, lateral view; 4, antenna; 5, pronotum, dorsal view; 6, ditto, lateral view; 7, maxillary palpus; 8, aedeagus, dorsal view; 9, ditto, lateral view. Scales: 1.0 mm for 1–3, 0.5 mm for 4, 0.2 mm for 5–6, 0.1 mm for 7–9.

the following key. The new species belongs to the *patagiata*-group:

Ischalia patagiata-group

The five species, *I.* (*I.*) *horii* sp. nov., *I.* (*I.*) *kitanoi* M. SAITÔ, 2011, *I.* (*I.*) *patagiata* LEWIS, 1879, *I.* (*I.*) *takane* M. SAITÔ, 1994 and *I.* (*I.*) *toshikoae* M. SAITÔ, 2011, comprising the *patagiata*-group are characterized by having yellow lateral elytral margins which are partially interrupted subapically by black pigment (Fig. 3). *Ischalia* (*I.*) *horii* is distinguished from the other *patagiata*-group species as follows: 1) antennae unicolorous, black (Fig. 4) [antennomeres 10–11 and the distal portion of 9 are yellow in *I.* (*I.*) *kitanoi*]; 2) fused parameres with apex subtruncate (Fig. 8) [emarginate in males of *I.* (*I.*) *patagiata* and *I.* (*I.*) takane; male of *I.* (*I.*) *kitanoi* unknown].

Key to the Species of Japanese Ischaliidae

1. Elytra with lateral margins widely yellow (Figs. 1–3); elytral yellow margins partially interrupted by black pigment subapically (Fig. 3) (*patagiata*-group). ····· 2
– Elytra each with a pair of longitudinal yellow vitae separated in part by black pigment (*luteolineata*-group). ····· 6
2. Antennomeres 10–11 and the distal portion of 9 yellow. ····· *I.* (*I.*) *kitanoi* M. SAITÔ, 2011
– Apical three antennomeres dark. ····· 3
3. Fused parameres with apical margin subtruncate. ····· *I.* (*I.*) *horii* sp. nov.
– Fused parameres apically emarginate. ····· 4
4. Elytra with lateral margins weakly expanded backward; width of elytral yellow margins wider than inner black areas. ····· *I.* (*I.*) *takane* M. SAITÔ, 1994
– Elytra with lateral margins parallel; width of elytral yellow margins as wide as inner black areas. ····· 5
5. Fused parameres with apical margin small circlely incurved; sutural costae of elytra smooth without hairs. ····· *I.* (*I.*) *patagiata* LEWIS, 1879
– Fused parameres with apical margin widely incurved; sutural costae of elytra coarsely punctate and rugose with hairs. ····· *I.* (*I.*) *toshikoae* M. SAITÔ, 2011
6. Elytra with lateral margins yellow. ····· *I.* (*I.*) *arakii* M. SAITÔ, 2003
– Elytra with lateral margins black. ····· 7
7. Width of each yellow vitae distinctly narrower than inner black area. ····· *I.* (*I.*) *luteolineata* PIC, 1912
– Width of each yellow vitae as wide as inner black area. ····· *I.* (*I.*) *kunashirica* NIKITSKY, 1994

Acknowledgements

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要　　約

斎藤昌弘・Daniel K. YOUNG：北海道産ヘリハネムシ属 *Ischalia*（鞘翅目ヘリハネムシ科）1 新種の記載.

――― 北海道より採集された本属の 1 種を新種オシマヘリハネムシ *Ischalia* (*Ischalia*) *horii* M. SAITÔ et YOUNG,

sp. nov. と命名記載した．本種はナミヘリハネムシ *Ischalia patagiata* Lewis, 1879 のグループに含まれるが，触角先端数節の色彩および交尾器側片先端の形状で識別される．本種で日本産ヘリハネムシ属は 8 種となり，検索表を示した．

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