

**A New Apterous Species of the Genus *Leptusa*
(Coleoptera: Staphylinidae: Aleocharinae) from
Mt. Ôdaigahara, the Kii Peninsula, Honshu, Japan**

Toshio KISHIMOTO

Japan Wildlife Research Center, 3–10–10 Shitaya, Taito-ku, Tokyo, 110–8676 Japan

Abstract A new species of the genus *Leptusa* KRAATZ is described from Mt. Ôdaigahara, the Kii Peninsula, Japan under the name *Leptusa (Eospisalia) taichii*. A list of the Japanese species of the genus *Leptusa* is also given.

Nine species of the aleocharine genus *Leptusa* KRAATZ have been recorded from Japan. These species belong to five subgenera, *Aphaireleptusa* PACE, *Drepanoleptusa* PACE, *Dysleptusa* PACE, *Eospisalia* PACE, and *Heteroleptusa* PACE. In the Eurasian Continent, for example in Europe and China, many apterous *Leptusa* species exhibit a differentiation into many allopatric species. However, in the Japanese Archipelago, only two apterous species have hitherto been known from mountainous areas of the mainland. One species, *Leptusa (Eospisalia) kitazawai* (SAWADA), was described from the Shiga Heights, Nagano Prefecture, Honshu, and the other one, *L. (E.) ishizuchiensis* PACE was described from Mt. Ishizuchi, Shikoku.

Recently, I was able to collect a series of samples of apterous *Leptusa* on Mt. Ôdaigahara in the central part of the Kii Peninsula, Honshu in the course of researches about nature restoration project by the Ministry of Environment, Japanese Government. After a careful examination, it has become clear that the species belongs to a new species of the subgenus *Eospisalia*. In the present paper, I am going to describe it under the name of *Leptusa (Eospisalia) taichii*.

This paper is dedicated to the memory of the late Mr. Taichi SHIBATA who was an excellent coleopterist and taught me fascination of beetles and led me to coleopterology during my junior high school days.

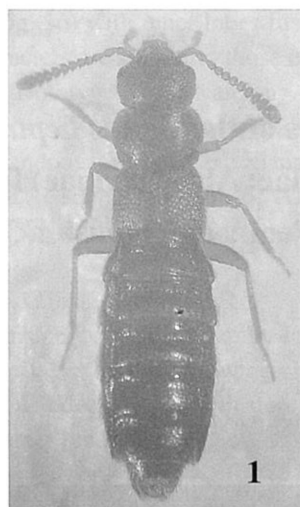


Fig. 1.
Habitus of *Leptusa (Eospisalia) taichii* sp. nov.

Leptusa (Eospisalia) taichii sp. nov.

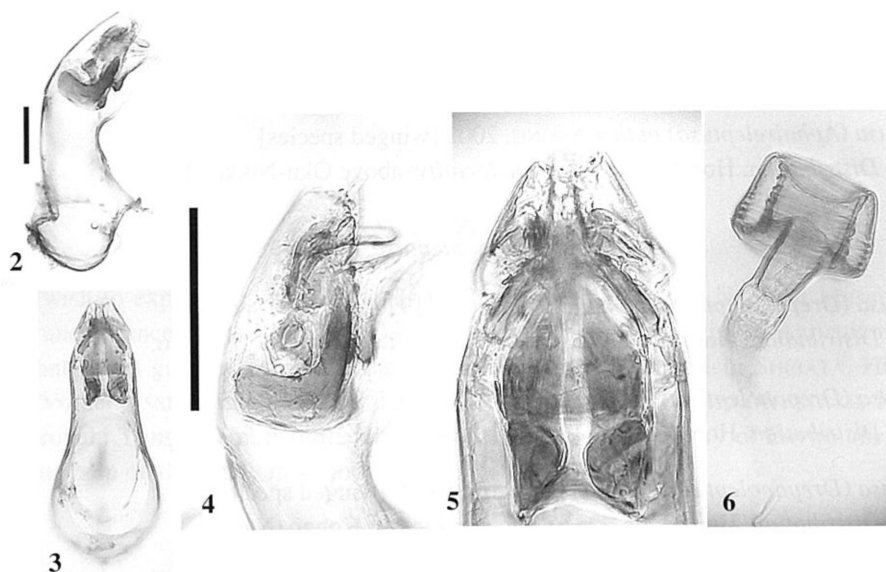
(Figs. 1-6)

Body length: 1.7-2.2 mm (from front margin of head to anal end); 0.8-1.0mm (from front margin of head to apices of elytra).

Body somewhat elongate, constricted at the base of abdomen, somewhat convex above. Color dark reddish brown, 6th to 9th abdominal segments much darker, antennae, mouth parts and legs much paler. Head with rather large punctures densely and coarsely, almost completely mat; eyes relatively large but not prominent, almost of the same length as temples. Antennae reaching posterior margin of pronotum, incrassate apically; 3rd segment slightly elongate, 4th almost quadrate, 5th to 10th transverse and gradually thickened apically; relative length (width) of each segment from base to apex: 1.0 (0.4): 0.8 (0.4): 0.7 (0.4): 0.4 (0.4): 0.4 (0.5): 0.4 (0.5): 0.3 (0.5): 0.4 (0.6): 0.4 (0.6): 0.5 (0.7): 1.1 (0.7). Pronotum 1.14-1.20 times as wide as head and approximately 1.5 times as wide as long; punctation similar to those of head. Elytra shorter than pronotum with much larger and coarser punctures than on head and pronotum. Hind wings reduced. Abdomen elongate foliaceous; punctation moderately fine and sparse; surface more shiny than in head, pronotum and elytra; 3rd segment constricted at base and strongly dilated posteriorly, widest at 5th segment; 7th tergite unmodified; 8th tergite without granules, carinae or distinct fringe.

Male. Eighth abdominal tergite almost truncate apically, with weakly and irregularly sinuate posterior margin; 8th sternite obtusely pointed posteriorly. Viewed ventrally, median lobe ovate at base, as shown in fig 3.

Female. Eighth abdominal tergite almost similar to that of male, but the 8th sternite is much weakly pointed. Spermatheca as shown in fig. 6.



Figs. 2-6. *Leptusa (Eospisalia) taichii* sp. nov. — 2, Median lobe of male genitalia, lateral view; 3, ditto, ventral view; 4, apical part of median lobe of male genitalia, lateral view; 5, ditto, ventral view; 6, spermatheca.

Type series. Holotype: ♂, Mt. Ôdaigahara, Kamikitayama-mura, Nara-ken, Honshu, Japan, 5. IX. 2006, T. KISHIMOTO leg. Deposited in the collection of the National Museum of Nature and Science, Tokyo. Paratypes: 1 ♀, same data as for the holotype; 1 ♂, 2 ♀ ♀, same locality and collector as holotype but 23. VI. 2005. All the paratypes are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Etymology. The specific name is given after the late Taichi SHIBATA who was interested in the beetle fauna of the type locality, Mt. Ôdaigahara, in his lifetime.

Remarks. This new species differs from the known Japanese members of the same subgenus in the following points: from *L. (E.) cornigera* ASSING by reduction of hind wing and shorter elytra with rounded shoulders, from *L. (E.) ishizuchiensis* PACE by larger eyes and broader abdomen, from *L. (E.) kitazawai* by primary sexual characters especially robust median lobe in the male and larger terminal part of spermatheca in the female.

The type series was obtained in a well preserved *Picea jezoensis* var. *hondoensis* forest covered with mosses on the floor. It was never collected from forests with undergrowth of sasa-bamboo, *Sasa japonica*. In about three last decades, the forest of Ôdaigahara, which is the type locality of the present species, was seriously damaged by sika deer (*Cervus nippon*). Rapidly increasing population of the deer greatly affects forest succession or regeneration by browsing on seedling and sapling and by bark stripping on mature trees. *Leptusa taichii* is a good indicator of well preserved *Picea* forest and is suitable as a target species of monitoring for nature restoration project in this area.

List of Japanese Species of the Genus *Leptusa* KRAATZ

Subgenus *Aphaireleptusa* PACE, 1996

Leptusa (Aphaireleptusa) puthzi ASSING, 2002 [winged species]

Distribution. Honshu. *Type locality:* above Oku-Nikko, Tochigi.

Subgenus *Drepanoleptusa* PACE, 1982

Leptusa (Drepanoleptusa) deplanata (SAWADA, 1970) [winged species]

Distribution. Honshu. *Type locality:* Shiga Heights, Nagano.

Leptusa (Drepanoleptusa) ruficornis CAMERON, 1933 [winged species]

Distribution. Honshu. *Type locality:* Kobe, Mayasan, Hyogo.

Leptusa (Drepanoleptusa) yamato (SAWADA, 1990) [winged species]

Distribution. Honshu. *Type locality:* Mt. Kongo, Nara.

Subgenus *Dysleptusa* PACE, 1982

Leptusa (Dysleptusa) honshuica ASSING, 2002 [winged species]

Distribution. Honshu. *Type locality:* Hatchodaira, Yamanashi.

Subgenus *Eospisalia* PACE, 1982

Leptusa (Eospisalia) cornigera ASSING, 2002 [winged species]

Distribution. Honshu. *Type locality:* Pass Kitazawatoge, Yamanashi.

* Subgeneric affiliation of this species is still unstable. ASSING (2002) described the species with a question mark on the subgenus name (*Eospisalia?*) in the original description.

Leptusa (Eospisalia) kitazawai (SAWADA, 1970) [apterous species]

Distribution. Honshu. *Type locality:* Shiga Heights, Nagano.
ssp. *fujensis* Pace, 1982. *Type locality* Mt. Fuji.

Leptusa (Eospisalia) ishizuchiensis PACE, 1982 [apterous species]

Distribution. Shikoku. *Type locality:* Mt. Ishizuchi, Ehime.

Leptusa (Eospisalia) taichii KISHIMOTO sp. nov. [apterous species]

Distribution. Honshu. *Type locality:* Mt. Ôdaigahara, Nara.

Subgenus *Heteroleptusa* PACE, 1989

Leptusa (Heteroleptusa) japonica CAMERON, 1933 [winged species]

Distribution. Kyushu. *Type locality:* Kagoshima.

Acknowledgements

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要 約

岸本 年郎：紀伊半島大台ヶ原産の後翅の退化した *Leptusa* 属の1新種（甲虫目：ハネカクシ科：ヒゲブトハネカクシ亜科）。——— 環境省の自然再生事業で、紀伊半島の大台ヶ原山から発見された、後翅の退化した *Leptusa* 属の1種を検討したところ、*Eospisalia* 亜属に属する新種であることが判明したので、これに *Leptusa (Eospisalia) taichii* という新名を与えて記載した。本種は大台ヶ原山の森林のうちトウヒ-コケタイプの成熟林のみから見出されているが、このタイプの森林は近年、ニホンジカの食害の影響等で面積が縮小している。今後、本種は、森林の保全・再生の状況を評価する指標として有効だと考えられる。なお、本種の種小名は、甲虫研究に大きい功績を残し、筆者に甲虫研究を目指すきっかけをあたえてくださった故芝田太一氏に献名したものである。

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