

*Donacia frontalis* JACOBY from Japan (Coleoptera,  
Chrysomelidae, Donaciinae)

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**Abstract** *Donacia frontalis* JACOBY is recorded from Hyôgo Prefecture, Japan. It is redescribed together with its related species from Japan for facilitating their identification.

*Donacia frontalis* JACOBY has been known from China (CHEN, 1966; TAN *et al.*, 1980). It resembles a Japanese species, *Donacia katsurai* KIMOTO in external morphology. HARUSAWA (1985) pointed out that *D. katsurai* from Aonogahara, Ono City, Hyôgo Prefecture, Japan differs from *D. katsurai* from its type locality, Ashiya City, Hyôgo Prefecture in the shape of the median process in endophallus of the male genitalia. Subsequently, we examined *D. frontalis* from China and found out that “*D. katsurai*” from Ono City corresponds with *D. frontalis* in the median process of the endophallus and several other characters. Therefore, *Donacia* sp. from Ono City, Hyôgo Prefecture is identified with *D. frontalis*. The species is new to the fauna of Honshu, Japan.

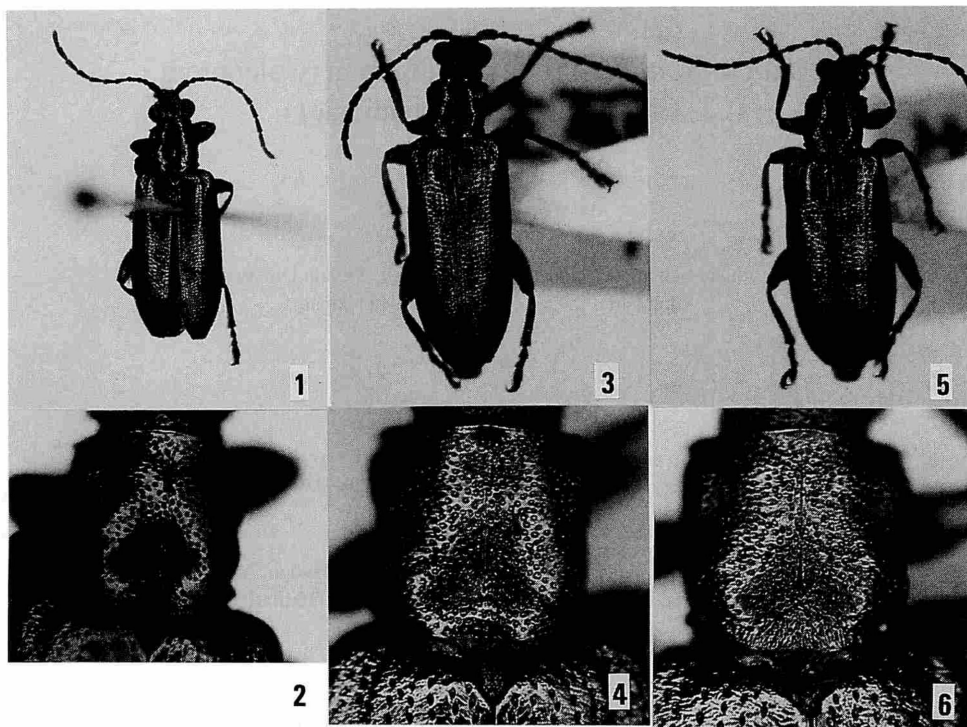
We wish to express our special thanks to Messrs. Koujiro KATSURA (Osaka City), Michiaki HASEGAWA (Toyohashi Museum of Natural History, Toyohashi City), Shige-hiko SHIYAKE (Osaka Museum of Natural History, Osaka City) and Prof. Yorio MIYATAKE (Osaka Aoyama Junior College, Minoo City) for allowing access to the referred materials.

***Donacia frontalis* JACOBY, 1893**

[Japanese name: Aono-nekui-hamushi]

(Figs. 1–4, 7–12, 19, 20, 23–30)

*Donacia frontalis* JACOBY, 1893, *Annl. Soc. ent. Belg.*, **37**: 261.

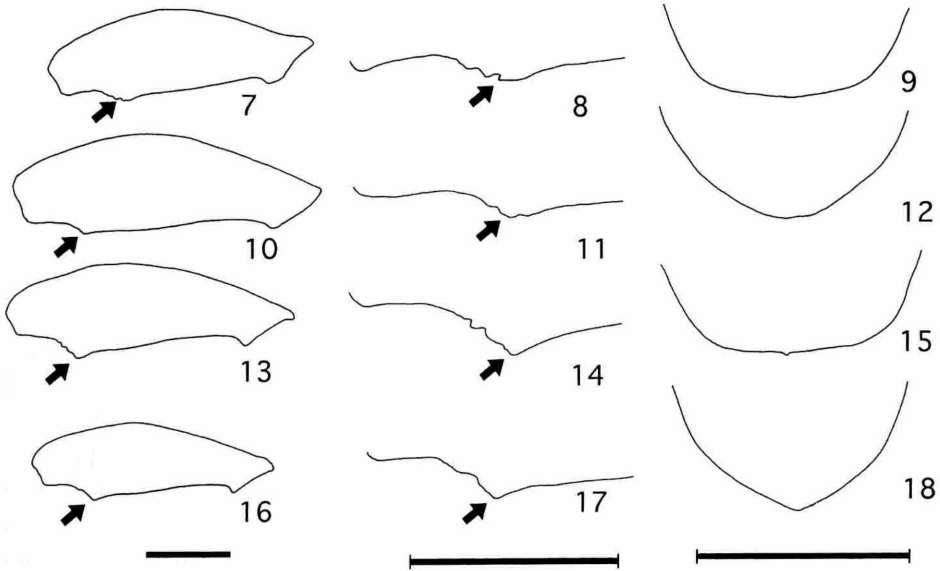


Figs. 1–6. *Donacia* spp., male. — 1–4, *D. frontalis* JACOBY, dorsal view (1–2, Guilin, Guangxi, China; 3–4, Ono City, Hyôgo Pref.). — 5–6, *D. katurai* KIMOTO (Ashiya City, Hyôgo Pref.). Length of body: 1, 5.5 mm; 3, 7.5 mm; 5, 7.2 mm. (Photographs by stereoscopic microscope.)

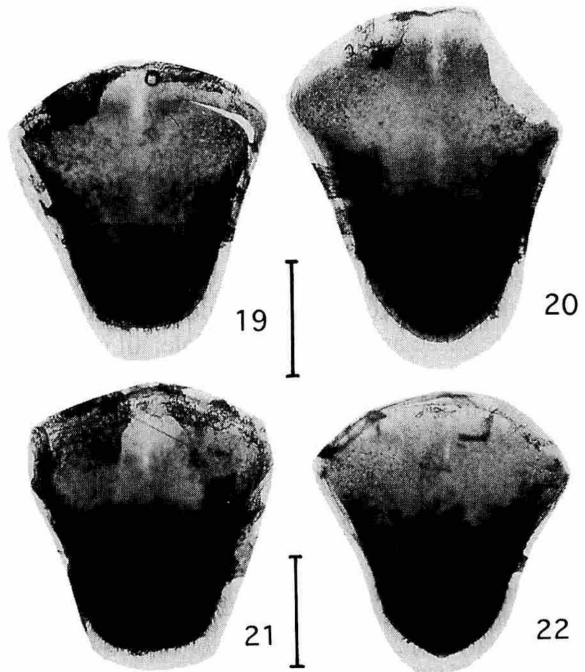
*Description.* Body entirely cupreous, in some males blue. Pronotal outline more or less quadrate; median line fine, sometimes indistinct; callosal sulcus present, though shallow; disc coarsely punctured; basal sulcus shallow. Elytron subparallel-sided from base to the middle and gradually narrowed toward apex, with ten complete punctate striae and a scutellar striole; all intervals shiny; sutural interval gradually narrowing to apex, and rugose; other intervals with deep transverse rugae between them; apex entirely truncate, outer apical angle prominent, inner apical angle nearly right. Metafemur finely dentate in apical-ventral margin. Pygidial apex truncate in male, entirely rounded in female. Median lobe of male genitalia subparallel-sided over much of the length, gradually narrowed at apex with distinct median lip; median process of endophallus robust.

*Length of body.* 5.5 mm (1♂, Guilin, China); 7.1–8.0 mm (6♂♂, Aonogahara, Japan); 8.2 mm (1♀, Aonogahara, Japan).

*New records.* 3♂♂, Hira-ike, Aonogahara, Ono City, Hyôgo Pref., alt. 80 m, Japan, 1–VI–1980, K. HARUSAWA leg. [in coll. OMNH: Osaka Museum of Natural History]; 3♂♂, 2♀♀, Sakasa-ike, Aonogahara, Ono City, Hyôgo Pref., Japan, 1–VI–1980,



Figs. 7-18. Metafemora and pygidium of *Donacia* spp. — 7-12, *D. frontalis* JACOBY from Ono City, Hyôgo Pref. (7-9, male; 10-12, female); 13-18, *D. katsurai* KIMOTO from Ashiya City, Hyôgo Pref. (13-15, male; 16-18, female). 7, 10, 13, 16, metafemora; 8, 11, 14, 17, metafemoral tooth; 9, 12, 15, 18, apex of pygidium. Scale bars=0.5 mm.



Figs. 19-22. Pygidium of *Donacia* spp. — 19-20, *D. frontalis* JACOBY from Ono City, Hyôgo Pref. (19, male; 20, female); 21-22, *D. katsurai* KIMOTO from Ashiya City, Hyôgo Pref. (21, male; 22, female). Scale bars=0.5 mm. (Photographs by light microscope.)

K. HARUSAWA leg. [OMNH]; 9♂♂, 3♀♀, Sakasa-ike, Aonogahara, Ono City, Hyôgo Pref., alt. 80 m, 2-VI-1981, Y. MIYATAKE leg. [OMNH]; 1♀, Hong Kong, 10-V-1926 [in coll. of the Laboratory of Systematic Entomology, Faculty of Agriculture, Hokkaido University, Sapporo].

*Specimens examined.* 1♂, Guilin, Guangxi, China, 12-IV-1952 [OMNH]; 1♂, 1♀, Guilin, Guangxi, China, 30-IV-1952 [OMNH].

*Distribution.* Japan (Honshu: Hyôgo Pref.); China (Heilongjiang, Beijing, Hebei, Shanxi, Jiangxi, Guangxi, Jiangsu and Fujian Provinces) (JACOBY, 1893; GRESSITT & KIMOTO, 1961; CHEN, 1966; TAN *et al.*, 1980).

*Remarks.* *Donacia frontalis* resembles *D. katsurai*. Several features useful for their identification: 1) Apical-ventral margin of metafemur finely dentate in *D. frontalis* (Figs. 7, 8, 10, 11), with a tooth and fine dentation in *D. katsurai* (Figs. 13, 14, 16, 17). 2) Male pygidial apex truncate in the former (Figs. 9, 19), slightly pointed in the latter (Fig. 15). 3) Female pygidial apex entirely rounded in the former (Figs. 12, 20) and pointed in the latter (Figs. 18, 22). 4) Median lobe of male genitalia subparallel-sided over much of the length in the former (Figs. 24, 28) and narrowed subapically in the latter (Fig. 32). 5) Median process of endophallus (median ejaculatory guide+endophallic lateral digit: ASKEVOLD, 1990) robust in the former (Figs. 26, 30), slender in the latter (Fig. 34).

We have not found any other locality in Japan at present, and we have not taken any specimen from Aonogahara, Ono City since 1982.

### *Donacia katsurai* KIMOTO, 1981

[Japanese name: Katsura-nekui-hamushi]

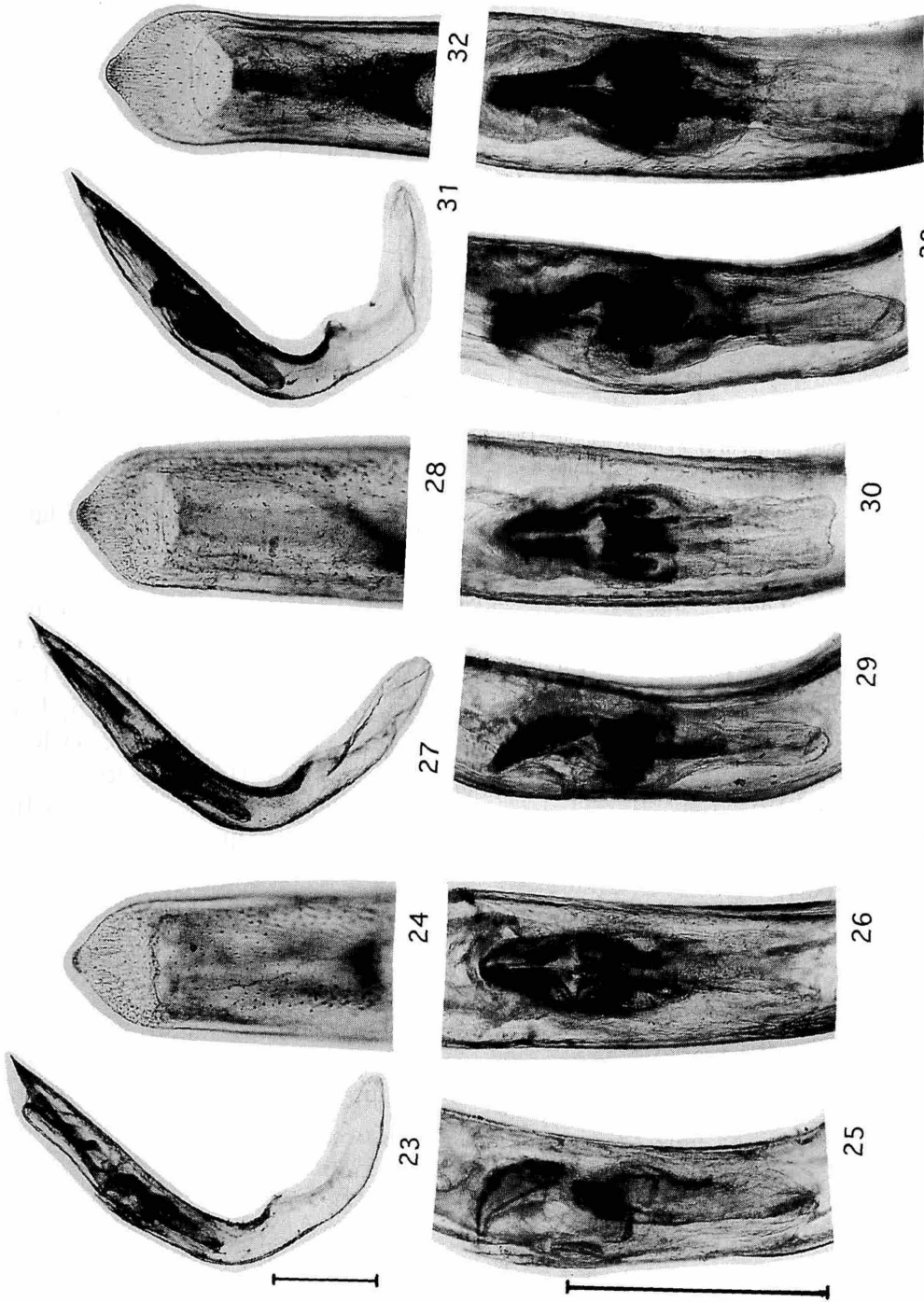
(Figs. 5, 6, 13-18, 21, 22, 31-34)

*Donacia katsurai* KIMOTO, 1981, Bull. Osaka Mus. nat. Hist., (34): 24.

*Description.* Body entirely cupreous, in some females blue. Pronotal outline more or less quadrate; median line fine, sometimes indistinct; callosal sulcus present, though shallow; disc coarsely punctured; basal sulcus shallow. Elytron subparallel-sided from base to the middle and gradually narrowed toward apex; with ten complete punctate striae and a scutellar striole; all intervals shiny; sutural interval gradually narrowing to apex, and rugose; other intervals with deep transverse rugae between them; apex entirely truncate, outer apical angle prominent, inner apical angle nearly right. Metafemur with a tooth and fine dentation on apical-ventral margin. Pygidial apex entirely truncate and slightly pointed in male, pointed in female. Median lobe of male

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Figs. 23-34. Male genitalia of *Donacia* spp. — 23-26, *D. frontalis* JACOBY from Guilin, Guangxi, China; 27-30, *D. frontalis* JACOBY from Ono City, Hyôgo Pref.; 31-34, *D. katsurai* KIMOTO from Ashiya City, Hyôgo Pref. 23, 27, 31, lateral view of median lobe; 24, 28, 32, apex of median lobe, ventral view; 25, 29, 33, lateral view of endophallus; 36, 30, 34, ventral view of endophallus. Scale bars=0.5 mm. (Photographs by light microscope.)



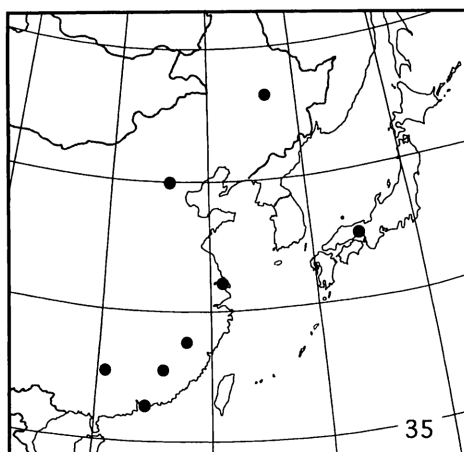


Fig. 35. Distribution of *D. frontalis* JACOBY. Data from GRESSITT and KIMOTO (1961), CHEN (1966), TAN *et al.* (1980) and our specimens examined.

genitalia narrowed subapically, gradually narrowed at apex with distinct median lip; median process of endophallus slender.

*Length of body.* Male, 5.9–7.2 mm; female, 6.3–8.0 mm.

*Specimens examined.* 1♂ [Holotype: OMNH-TI-6], Okuike, Ashiya City, Hyôgo Pref., 18-V-1980, K. KATSURA leg.; 2♂♂, 1♀, Imori-dani, Okuike, Ashiya City, Hyôgo Pref., alt. 550 m, 26-V-1980, K. HARUSAWA leg. [OMNH]; 1♂, Tounomine, Ôkawachi-machi, Hyôgo Pref., 25-V-1992, M. HAYASHI leg.; 1♂, 1♀, near Unaginoteike, Kita-ku, Kobe City, Hyôgo Pref., 31-V-1987, A. ICHIKAWA leg. [OMNH]; 2♂♂, 2♀♀, Mitake-chô, Kani-gun, Gifu Pref., M. HASEGAWA leg.; 8♂♂, 3♀♀, Koigakubo, Tessei-chô, Okayama Pref., 1-VI-1980, K. KATSURA leg. [OMNH]; 1♂, Chôjabara, Geihoku-chô, Hiroshima Pref., alt. 780 m, 5-VII-1981, K. KATSURA leg. [OMNH]

*Distribution.* Japan (Honshu, Kyushu).

## 要 約

林 成多・春沢圭太郎：日本から記録された *Donacia frontalis* JACOBY (甲虫目ハムシ科ネクイハムシ亜科)。—— 兵庫県小野市青野ヶ原産のカツラネクイハムシは、雄交尾器骨片の形状が基準産地のカツラネクイハムシとは異なることが春沢により指摘されていた。検討の結果、この骨片の形状は、中国から知られる *Donacia frontalis* JACOBY のものと一致することが明らかになった。さらに他の部位についても検討した結果、陰茎先端部、尾節板の先端、後腿節の歯の形状なども一致し、基準産地のカツラネクイハムシとは異なる。したがって、青野ヶ原産の標本は *D. frontalis* に同定される。両種は外部形態において酷似しているが、上記の部位を検討することにより区別することができる。*D. frontalis* は新たに日本産ネクイハムシ亜科のメンバーに加わることとなったが、青野ヶ原以外の産地は発見されていない。さらに発見地の青野ヶ

原でも1982年以降の採集記録がなく、早急な分布調査が望まれる。なお、本種の和名のアオノネクイハムシ（新称）は日本での発見地の地名に因んだ。

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