

Notes on the Lepturine Genus *Pidonia* (Coleoptera, Cerambycidae)
from East Asia

VIII. A New *Pidonia* from the Subalpine Zone of Chûbu District,
Honshû, Japan

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Abstract A new species of *Pidonia* related to *P. chairo* is described from the sub-alpine zone of Chûbu District under the name of *P. hayakawai*.

The lepturine genus *Pidonia* MULSANT consists of 150 species distributed over the temperate zone of the Holarctic Region. Most of them are known to occur in East Asia. Up to the present, 56 species of the genus *Pidonia* have been recorded from Japan, particularly rich in species in the mountainous areas of Chûbu District. For instance, 29 species occur in Azumi-mura, Minamiazumi-gun, Nagano Prefecture, which is a mountain village with an area of about 400 square kilometers (KUBOKI, 1998). The present paper contains the result of my study on the species of the genus *Pidonia* obtained in the mountainous areas of Chûbu District with a description of *Pidonia* (*P.*) *hayakawai* n. sp. The vertical distributional range of this species is clarified and the correlation of the distribution pattern with vertical vegetational zonations is shown. The holotype designated in this study is preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Before going further, I wish to express my hearty thanks to Messrs. H. EBIHARA, S. FURIHATA, M. IMURA, S. KATO, T. MIKAGE, S. TAKECHI and S. TSUYUKI for their kind offer of valuable specimens.

***Pidonia (Pidonia) hayakawai* KUBOKI, sp. nov.**

[Japanese name: Shinshû-hime-hanakamikiri]

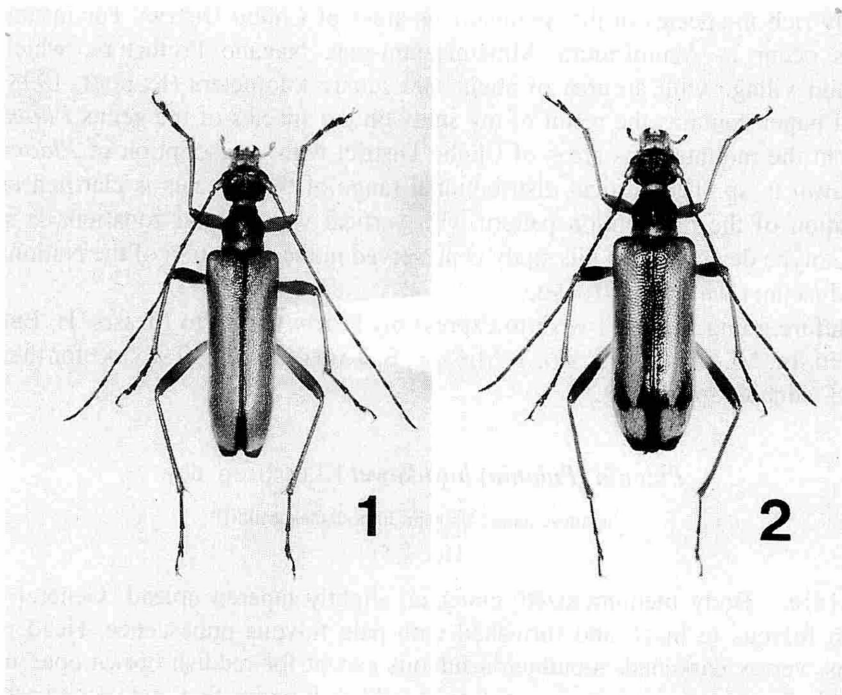
(Figs. 1–5)

Male. Body medium-sized, elongate, slightly tapered apicad. General colour reddish fulvous to black and furnished with pale fulvous pubescence. Head reddish fulvous; vertex darkened; mouthparts fulvous except for reddish brown apex of each mandible; temples reddish brown; antennae reddish fulvous, first and second segments reddish fulvous, third and following segments infusate at their apices. Prothorax red-

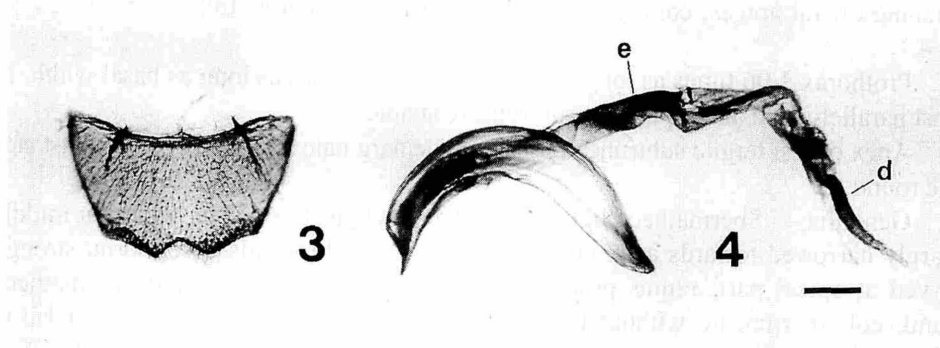
dish fulvous with a pair of black portions which broaden from lateral part to disc. Scutellum reddish fulvous. Legs almost fulvous; each apex of mid and hind femora faintly dark brown; apex of each tarsus infuscate; claws dark brown. Elytra yellowish fulvous with black markings. Elytral markings:—Sutural marking faintly present; basal marking narrowly present; latero-basal and latero-median markings small; apical band broadly present. Ventral surface:—Head, thoraces and abdomen fulvous; first and second sternites black; meso- and metasterna black.

Head across the middle of eyes 1.17 times as wide as base of prothorax; terminal segment of maxillary palpus broadened apically with straight outer margin; temples strongly produced, convergent and abruptly constricted at neck; frons subvertical and transverse, covered with coarse punctures, bearing a fine but distinct median longitudinal furrow extending backwards; vertex fairly flat, weakly convex above, coarsely punctate and sparsely clothed with fine pubescence. Eyes relatively prominent, moderately faceted and strongly emarginate at middle of internal margins. Antennae relatively long and slender; apical one segment surpassing elytral apices; comparative length of each segment as follows: $5 > 3 = 1 + 2 = 6 > 4$.

Prothorax 1.13 times as long as base, dully angulate-prominent laterad just before the middle, deeply constricted both anteriad and posteriad; breadth across prominent



Figs. 1–2. *Pidonia (Pidonia) hayakawai* KUBOKI, sp. nov., from Honzawa Spa, Nagano Prefecture; 1, ♂; 2, ♀.



Figs. 3-4. *Pidonia (Pidonia) hayakawai* KUBOKI, sp. nov., ♂. — 3, Last sternite; 4, median lobe of male genitalia, lateral view; e, endophallus; d, diverticulum. Scale: 0.3 mm.

portions slightly narrower than base; disc of pronotum convex above, finely and closely punctate, sparsely clothed with fine pubescence. Scutellum small and triangular, slightly longer than broad, bearing thin pubescence on the surface. Elytra 2.70 times as long as basal width, gradually narrowed posteriad and separately truncate at apices; surface sparsely and deeply punctate, sparsely clothed with subappressed pubescence; interspace between punctures narrower than diameter of each puncture. Legs relatively slender, clothed with short pubescence; femora clavate; hind femora not reaching elytral apices; tibiae linear, straight; tarsi densely clothed with short pubescence on the under surface.

Abdomen elongate and gradually narrowed towards apex; apex of last tergite round and shallowly emarginate at middle, both lateral angles obtuse; apex of last sternite triangularly emarginate at middle, both lateral angles somewhat angular (Fig. 3).

Genitalia:— Median lobe falcate in lateral view, relatively slender, strongly curved ventrad and sharply pointed at apex (Fig. 4); lateral lobes slightly shorter than median lobe, each apex produced and sparsely furnished with relatively short terminal hairs; endophallus long and furnished with a pair of falcate sclerites; diverticulum relatively short and lanceolate.

Length: 9.7–7.5 mm, breadth: 2.5–1.9 mm.

Female. Body more robust and black markings more enlarged in female than in male. Apex of each maxillary palpus sometimes dark brown. Apex of each mid femur infusate; apical half of each hind femur black. Prothorax almost black except for reddish fulvous apex and base. Elytral markings:— Sutural marking distinctly present, the apex of sutural marking broadened triangularly in apical eighth of elytra; basal marking distinctly present; latero-basal marking small, linear-oblong; latero-median marking very small, oblong; latero-apical marking large, deltoid; apical band broadly present. Ventral surface:— Abdomen almost fulvous; first to third sternites darkened laterad; meso- and metasterna black.

Head 1.04 times as wide as base of prothorax. Antennae relatively short, barely

reaching elytral apices; comparative length of each segment as follows: $5 > 1 + 2 > 3 > 6 > 4$.

Prothorax 1.06 times as long as base. Elytra 2.51 times as long as basal width, almost parallel-sided and separately subtruncate at apices.

Apex of last tergite subtruncate, shallowly emarginate at middle; apex of last sternite round.

Genitalia:— Spermatheca lightly sclerotized, relatively swollen, widest at middle, sharply narrowed towards apex and gradually narrowed towards base; cornu strongly curved at apical part; ramus projected angularly with relatively short spermathecal gland; collum truncate without transverse crease; vagina gradually enlarged basad; valvifer narrowed apicad; apical segment of coxite relatively large, strongly sclerotized at the inner part, obtusely pointed at the apex and furnished with sensory pubescence; stylus abaxially united to the lateral face of coxite broad, sclerotized except for apex, slightly enlarged apicad, with long and sparse hairs in the terminal area.

Length: 10.8–8.0 mm, breadth: 2.9–2.0 mm.

Type series. Holotype: ♂, Honzawa Spa, 2,200 m alt., Mimamimaki-mura, Minamisaku-gun, Nagano Prefecture, 28–VII–2000, M. KUBOKI leg. Paratypes: 7 ♂♂, 5 ♀♀, same data as for the holotype; 1 ♂, 1 ♀, same locality, 19–VII–1981, H. EBIHARA leg.; 2 ♂♂, Shirakomaike, 2,150 m alt., Yachiho-mura, Minamisaku-gun, Nagano Pref., 17–VII–1990, T. MIKAGE leg.; 4 ♂♂, 2 ♀♀, Mugikusa Pass, 2,200 m alt., Yachiho-mura, 14–VII–1984, S. FURIHATA leg.; 1 ♂, Ôkanbasawa, Ashiyasu-mura, Nakakoma-gun, Yamanashi Pref., 31–VII–1984, S. TAKECHI leg.; 1 ♂, 2 ♀♀, same locality, 23–VII–1995, M. KUBOKI leg.; 3 ♂♂, 2 ♀♀, same locality, 1,650–2,100 m alt., 31–VII~1–VIII–1995, M. KUBOKI leg.; 2 ♂♂, 2 ♀♀, Mt. Senjôgatake, 2,050–2,350 m alt., Hase-mura, Kamiina-gun, Nagano Pref., 28~31–VII–1971, M. KUBOKI leg.; 6 ♂♂, 4 ♀♀, same locality, 30~31–VII–1972, M. KUBOKI leg.; 1 ♀, Mt. Ontake, Outaki-mura, Kiso-gun, Nagano Pref., 29–VII–1998, S. KATO leg.; 1 ♂, 1 ♀, Mt. Norikuradake, 27~28–VII–1985, S. TSUYUKI leg.; 2 ♂♂, Sengendaru, Takane-mura, Ôno-gun, Gifu Pref., 24–VI–1997, S. KATO leg.; 1 ♂, 1 ♀, same locality, 2–VII–1994, S. KATO leg.; 1 ♂, 1 ♀, Nigorigo Spa, Osaka-chô, Mashita-gun, Gifu Pref., 10–VII–1988, S. FURIHATA leg.; 1 ♂, 1 ♀, Hiwada-kôgen, 2–VII–1988, S. FURIHATA leg.; 1 ♂, Shimashimadani, Azumi-mura, Minami-azumi-gun, Nagano Pref., 3–VIII–1970, M. KUBOKI leg.; 1 ♂, same locality, 30–VII–1973, M. KUBOKI leg.; 1 ♂, Kamikôchi-Norikura super rindô, 1,665 m alt., Azumi-mura, Minamiazumi-gun, Nagano Pref., 5–VII–1998, M. KUBOKI leg.; 1 ♂, Shirahone Spa, Azumi-mura, 16–VI–1991, S. FURIHATA leg.; 12 ♂♂, 5 ♀♀, Azumi-mura, 27–VI–1987, S. FURIHATA leg.; 5 ♂♂, 4 ♀♀, Migimatadani, Kamitakara-mura, Yoshiki-gun, Gifu Pref., 30–VII–1999, M. KUBOKI leg.; 3 ♂♂, 4 ♀♀, Amou Pass, 1,650 m alt., Kawai-mura, Yoshiki-gun, Gifu Pref., 22–VII–2000, M. KUBOKI leg.; 8 ♂♂, 3 ♀♀, Shaka rindô, 1,100–1,300 m alt., Shiramine-mura, Ishikawa-gun, Ishikawa Pref., 5~6–VI–1999, M. IMURA leg.; 4 ♂♂, 1 ♀, same locality, 1,100 m alt., 28–VI–1999, M. IMURA leg.; 2 ♂♂, same locality, 1,500 m alt., 5–VII–1999, M. IMURA leg.; 1 ♂, same locality, 1,500 m alt., 11–VII–1999, M. IMURA leg.; 1 ♀, same locality, 26–V–1990, T. MIKAGE

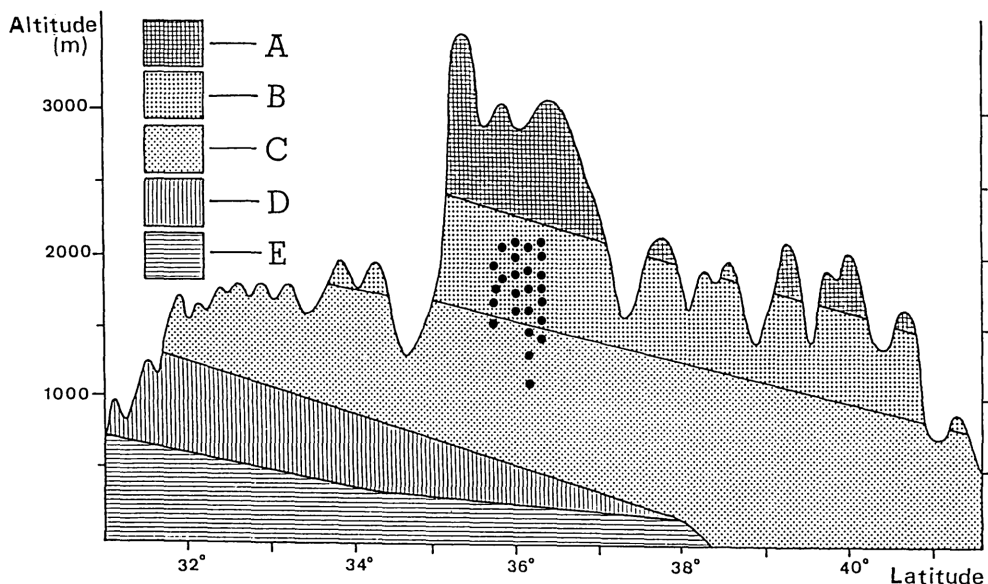


Fig. 5. Vertical distribution of *Pidonia hayakawai* KUBOKI, sp. nov., in connection with vertical vegetational zones of Honshû, Shikoku and Kyushu. — A, Climax of alpine desert, grassland and scrub (including *Pinus pumila* formation); B, climax of conifer forest (*Abies-Picea* formation); C, climax of deciduous broadleaved forest (*Fagus crenata* formation); D, climax of intermediate conifer forest (*Tsuga sieboldi* formation); E, climax of evergreen broadleaved forest (*Castanopsis cuspidata* formation).

leg.; 1♂, same locality, 28-V-1995, M. IMURA leg.; 1♀, same locality, 14-VI-1997, M. KUBOKI leg.

Distribution. Japan (central Honshû).

The vertical distribution of this species is shown in Fig. 5 in connection with the vertical vegetational zones of Japan excluding Hokkaido. Its distributional range is vertically limited to the upper part of the *Fagus* zone and evergreen conifer zone.

I examined a number of specimens belonging to the *chairo* group of the genus *Pidonia* from the subalpine zone of the Yatsugatake Mts., Nagano Prefecture and considered that they were classified into two good species, that is, *P. chairo* TAMANUKI and *P. hayakawai* sp. nov. Similarly, these two species were collected from Azumi-mura, Minamiazumi-gun, Nagano Prefecture.

Flight period. May to August.

Flower records. *Rhododendron fauriae*, *Sorbus commixta*, *Hydrangea petiolaris*, *Actinidia kolomikta*, *Cornus controversa*, *Acer caudatum*, *Rubus* sp., *Arunucus dioicus*, *Filipendula kamschatica*.

Remarks. This new species resembles *P. chairo* TAMANUKI but may be readily distinguished from it by the truncated apices of the elytra, the slender and sharply curved median lobe of male genitalia, the longer and slenderer diverticulum of male

genitalia, the angularly projected ramus of spermatheca in the female and the triangularly and deeply emarginate last sternite with obtuse lateral angles in the male.

This new species is closely allied to *P. falcata* occurring in Kyushu, Shikoku and Chûgoku Districts. The two species *P. falcata* and *P. hayakawai* form a species-group in the subgenus *Pidonia* s. str., which is mainly characterized by the following combination of morphological features: prothorax black except for fulvous apex and base; median lobe of male genitalia falcate in lateral view, relatively slender, strongly curved; apex of last sternite of male triangularly emarginate at middle.

Etymology. The specific name of this new species is given after Mr. Hirofumi HAYAKAWA, Matsumoto-shi, Nagano Prefecture, who is one of the most famous researchers of the insects in the Shinshû districts.

要 約

窪木幹夫：東アジア産ヒメハナカミキリ属の知見。VIII. 本州中部地方の亜高山帯から発見された *Pidonia* 属の1新種。—— 本州中部地方のブナ帯上部から亜高山帯で採集された *Pidonia* 属の新種，*P. hayakawai* シンシュウヒメハナカミキリを記載した。本種は，従来 *P. chairo* ヤノヒメハナカミキリと混同されてきたが，上翅端が切断状であること，雄交尾器の中葉片が細く，より強く湾曲すること，雄交尾器の中葉片のうち陰茎に付着する盲管がより長く，細いこと，雌の受精囊の突出部が角張ること，雄の腹板末端節の側縁角が丸みを帯び，中央が三角形に深く切れ込むことなどで区別できる。八ヶ岳の亜高山帯針葉樹林での調査では，*chairo* 種群に所属する2種のヒメハナカミキリ，*P. chairo* TAMANUKI と *P. hayakawai* sp. nov. が採集された。長野県南安曇村での調査でも，これら2種が採集された。中部地方に分布する *P. hayakawai* は，中国地方西部，四国，九州に分布する *P. falcata* とともに，*Pidonia* 亜属のなかで一つの種群を構成する。なお，種名は長野県松本市扉在住の昆虫研究家早川広文氏に献名した。

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