

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

VI. A New *Pidonia* from the Shin-etsu District,  
Central Honshu, Japan

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**Abstract** A new species of the lepturine genus *Pidonia* is described from the northern side of central Honshu, Japan, under the name of *P. tsutsuii*. Its vertical distribution is noted with reference to the forest zones across the Northern Japanese Alps and the Myōkō–Togakushi Mountains.

The species of the genus *Pidonia* mainly occur in the temperate zone of the Holarctic Region, and about 110 species have been known to belong to this genus. Up to the present, more than 50 species have been recorded from Japan. Most species of the genus *Pidonia* occurring in Japan mainly inhabit the montane deciduous broadleaved forest zone. *Fagus crenata* forests are the most important climax forest type in this zone. It is luxuriant and rich in relict living things, which include many species endemic to Japan. The forests of *Fagus crenata* are strongly influenced by climatic differentiation of mainland Japan into the Pacific and the Japan Sea types. These differences may be the result of heavy winter snowfall on the Japan Sea side of Honshu, in contrast with relatively dry winter on the Pacific side. Studies of the *Pidonia* fauna in the heavy snowy region of the Japan Sea side of Honshu remain still quite insufficient in spite of their importance for analysing the *Pidonia* fauna of Japan from the standpoint of historical biogeography.

Messrs. K. TSUTSUI and S. TAKECHI investigated the *Pidonia* fauna in the heavy snowy region soon after the thawing of snow. They collected 7 species on flowers of *Weigela hortensis* and *Viburnum plicatum* var. *glabrum* in Hisui-kyō, Itoigawa-shi and Hashidate Hisui-kyō, Oumi-machi, Nishikubiki-gun, Niigata Prefecture, the northernmost part of the Northern Japanese Alps on April 28, 1994. These are *P. amentata*, *P. miwai*, *P. aegrota*, *P. discoidalis*, *P. signifera*, *P. chairo* and the new species to be described in this paper.

Description of the new species and some notes on its vertical distribution are given in the following lines. 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. T. KITAMURA,

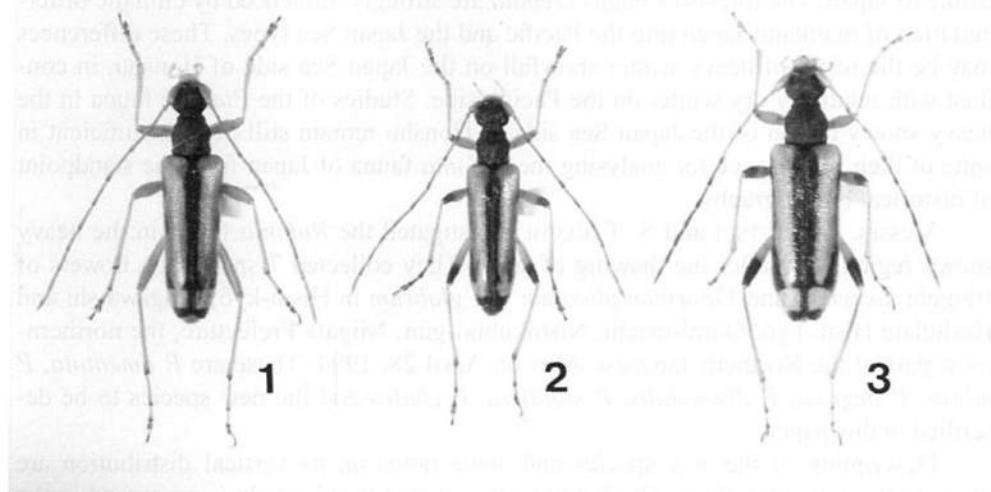
K. MORIKAWA, H. SUDÔ, S. TAKECHI, K. TSUTSUI and S. YAMAYA, who gave me the opportunity to work with these interesting materials.

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

[Japanese name: Hisui-hime-hanakamikiri]

(Figs. 1-8)

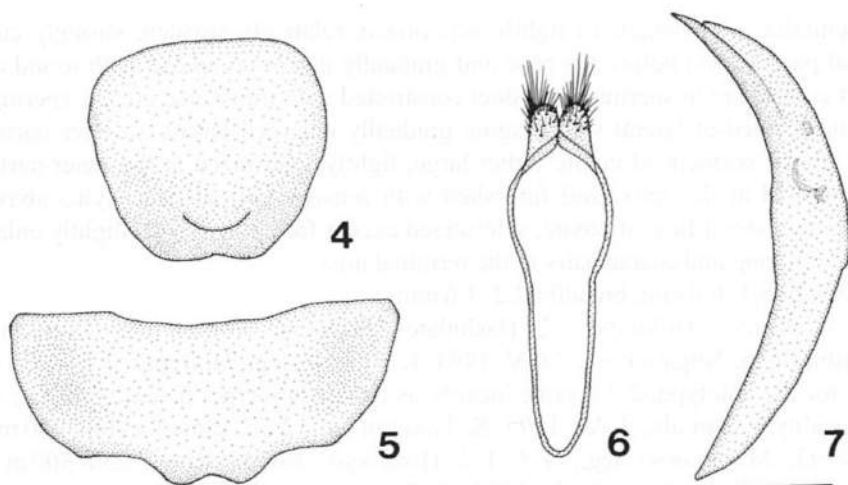
*Male.* Form relatively small, elongate, slightly tapered apicad; colour yellowish fulvous to black and furnished with pale fulvous pubescence. Head black; mouthparts yellowish fulvous except for reddish brown apex of each mandible; antennae fulvous to black; 1st and 2nd segments fulvous; 3rd and following segments infusate at their apices; the black portion of 5th segment the widest. Prothorax and scutellum black. Legs almost fulvous; apices of hind femora infusate, sometimes apices of mid femora slightly infusate; tarsi slightly infusate at apices; claws infusate. Elytra yellowish fulvous with black markings. Ventral surface:— Gena black; gula fulvous, sometimes reddish black; thoraces almost black, sometimes pro-, meso- and metasterna fulvous; abdomen black, 3rd to 5th sternites fulvous. Elytral markings:— Sutural marking narrowly present, vanishing behind scutellum; basal marking narrowly present; humeral angle yellowish fulvous; latero-basal marking small; latero-median marking very small, sometimes entirely absent; latero-posterior marking deltoid, variable, sometimes linearly developing towards base and sometimes reduced to a small spot; apical band broadly present.



Figs. 1-3. *Pidonia (Pidonia) tsutsuii* KUBOKI, sp. nov., from Hashidate Hisui-kyô, Niigata Prefecture; 1-2, ♂, 3, ♀.

Head across the middle of eyes 1.17 times as long as basal width of prothorax; terminal segment of maxillary palpus broadened apically with straight outer margin; temples moderately produced, convergent, gently constricted at neck; frons subvertical and transverse, covered with coarse punctures, bearing a fine but distinct median longitudinal furrow extending backwards to vertex; vertex convex above. Eyes relatively prominent, moderately faceted, strongly emarginate at middle of inner margins. Antennae relatively long and slender; apical two segments surpassing elytral apices; comparative length of each segment as follows:— $5 > 1 + 2 > 3 \cong 6 > 4$ . Prothorax 1.15 times as long as basal width, deeply constricted both behind apex and before base; sides subangular; breadth across prominent portions as broad as or slightly wider than basal width; disc of pronotum convex above, finely and closely punctate and sparsely clothed with fine pubescence. Scutellum small, triangular, slightly longer than broad and bearing thin pubescence on the surface. Elytra 2.71 times as long as basal width, gradually narrowed posteriorly and separately subtruncate at apices; surface sparsely and shallowly punctate and densely clothed with subappressed pubescence; interspace between punctures broader than diameter of each puncture. Legs relatively slender, finely punctate and clothed with short pubescence; femora clavate; hind femora reaching elytral apices; tibiae linear and straight; tarsi densely clothed with short pubescence on under surface. Abdomen elongate and gradually narrowed towards apex; apex of last sternite shallowly emarginate at middle (Fig. 5); apex of last tergite shallowly emarginate; both lateral angles slightly truncate (Fig. 4).

Genitalia:—Median lobe relatively slender, gently curved ventrad and acutely pointed at apex (Fig. 7); lateral lobes distinctly shorter than median lobe, each apex roundly produced and sparsely furnished with relatively long terminal hairs (Fig. 6);



Figs. 4-7. *Pidonia (Pidonia) tsutsuii* KUBOKI, sp. nov., ♂. — 4, Last tergite; 5, last sternite; 6, lateral lobes of male genitalia, ventral view; 7, median lobe of the same, lateral view. Scale: 0.3 mm.

endophallus long and furnished with a pair of falcate sclerites; diverticulum located at the apical portion of endophallus relatively short, thick and spindle-sharped.

Length: 8.5–6.3 mm, breadth: 2.2–1.5 mm.

*Female.* Body coloration and markings distinctly more developed in female than in male. Form more robust. Antennae fulvous to black; 1st and 2nd segments fulvous; 3rd to 5th segments infuscate at their apices; 6th to 11th segments entirely darkened. Legs almost fulvous, apex of each hind femur black, sometimes apex of each mid femur black, and each apex of mid and hind tibiae infuscate. Ventral surface:—Head black; gula reddish brown, sometimes almost black; thoraces almost black, sometimes pro-, meso- and metasterna reddish brown; abdomen almost yellowish fulvous, both sides of 1st to 3rd sternites slightly infuscate.

Elytral markings:—Sutural marking broadly present; basal marking narrowly present; humeral angle yellowish fulvous; latero-basal and latero-median markings small; latero-posterior marking comparatively large, triangulate, sometimes linearly developing towards base; lateral three markings frequently fused with one another, forming a longitudinal submarginal vitta; latero-posterior marking sometimes united with sutural marking at apical part; apical band broadly present.

Head 1.07 times as long as basal width of prothorax. Antennae relatively short, thick and barely reaching elytral apices; comparative length of each segment as follows:— $5 > 1 + 2 > 3 = 6 > 4$ . Prothorax 1.09 times as long as basal width; sides subangular; breadth across prominent portions slightly narrower than basal width. Elytra 2.52 times as long as basal width, almost parallel-sided and separately subtruncate at apices. Legs relatively thick; hind femora not reaching elytral apices. Apex of last sternite round; apical margin of last tergite subtruncate, sometimes slightly emarginate at apex.

Genitalia:—Spermatheca lightly sclerotized, relatively swollen, strongly curved at apical part, widest before the base and gradually narrowed apicad with round apex; the part continuing to spermathecal duct constricted with transverse crease; spermathecal gland located at lateral wall; vagina gradually enlarged basad; valvifer narrowed apicad; apical segment of coxite rather large, lightly sclerotized at the inner part, obtusely pointed at the apex, and furnished with sensory pubescence; stylus abaxially united to the lateral face of coxite, sclerotized except for apex, broad, slightly enlarged apicad, with long and sparse hairs in the terminal area.

Length: 8.1–6.0 mm, breadth: 2.2–1.6 mm.

*Type series.* Holotype: ♂, Hashidate Hisui-kyō, 200 m alt., Oumi-machi, Nishikubiki-gun, Niigata Pref., 28-V-1994, K. TSUTSUI leg. Paratypes: 1 ♂, 2 ♀♀, same data as for the holotype; 2 ♂♂, same locality as for the holotype, S. TAKECHI leg.; 2 ♀♀, same locality, 280 m alt., 3-VI-1995, S. TAKECHI leg.; 2 ♂♂, same locality, 280 m alt., 3-VI-1995, M. KUBOKI leg.; 1 ♂, 1 ♀, Hisui-kyō, Kotaki River, 250–300 m alt., Itoigawa-shi, Niigata Pref., 28-V-1994, S. TAKECHI leg.; 1 ♂, 2 ♀♀, Nougawa Valley, 600 m alt., Nou-machi, Nishikubiki-gun, Niigata Pref., 3-VI-1995, K. TSUTSUI leg.; 1 ♀, Nadachi River, 200 m alt., Nadachi-machi, Nishikubiki-gun, Niigata Pref., 3-VI-

1995, K. TSUTSUI leg.; 3 ♂♂, 3 ♀♀, same locality, 600 m alt., 3~4-VI-1995, K. TSUTSUI leg.; 2 ♂♂, 5 ♀♀, same data, K. MORIKAWA leg.; 2 ♂♂, 13 ♀♀, same data, T. KITAMURA leg.; 1 ♂, Mushio, Nakaotari, 750 m alt., Otari-mura, Kitaazumi-gun, Nagano Pref., 3-VI-1995, M. KUBOKI leg.; 2 ♀♀, same locality, 750-800 m alt., 3-VI-1995, S. TAKECHI leg.; 11 ♂♂, 7 ♀♀, Ootokoro River, 700-800 m alt., Itoigawa-shi, 20-VI-1992, H. SUDÔ leg.; 8 ♂♂, 4 ♀♀, Himekawa-Myôkô-rindô, 1,000 m alt., near Yu-tôge Pass, Otari-mura, 27-VI-1992, M. KUBOKI & H. SUDÔ leg.; 8 ♂♂, 3 ♀♀, Hirogawara, Oomi River, 1,100-1,200 m alt., Otari-mura, 28-VI-1992, M. KUBOKI leg.; 8 ♂♂, 4 ♀♀, Matsuo River, 1,180 m alt., near Otomiyama-tôge Pass, Otari-mura, 27-VI-1992, M. KUBOKI & H. SUDÔ leg.; 2 ♂♂, Otomiyama-tôge Pass, Myôkôkôgen-machi, Nakakubiki-gun, Niigata Pref., 29-VI-1991, S. YAMAYA leg.; 6 ♂♂, 4 ♀♀, Sasagamine, 1,250-1,300 m alt., Myôkôkôgen-machi, 27-VI-1992, M. KUBOKI & H. SUDÔ leg.; 2 ♂♂, Togakushi-bokujô, 1,250 m alt., Togakushi-mura, Kamiminochi-gun, Nagano Pref., 12-VI-1995, M. KUBOKI leg.; 2 ♂♂, 1 ♀, Uenodaira, Okushiga-rindô, 1,000 m alt., Nozawaonsen-mura, Shimotakai-gun, Nagano Pref., 1-VI-1995, K. TSUTSUI leg.; 1 ♂, Zakogawa-rindô, Akiyama, Sakae-mura, Shimominochi-gun, Nagano Pref., 1-VI-1995. T. KITAMURA leg.

*Distribution.* Northern part of Chûbu District (Central Japan).

*Flight periods.* April to July.

*Flower records.* *Weigela hortensis*, *Viburnum plicatum* var. *glabrum*, *Acer*, *Aesculus turbinata*, *Hydrangea petiolaris*.

*Remarks.* This new species is closely similar to *Pidonia signifera* (BATES). The weakly swollen lateral sides of prothorax, the fulvous to reddish black gula in the male and the almost yellowish fulvous abdomen in the female will separate it from *P. signifera*.

This new species is closely allied to *P. michinokuensis* occurring in Tôhoku District. The two species *P. michinokuensis* and *P. tsutsuii* form a species-group in the subgenus *Pidonia* s. str., mainly characterized by the following combination of morphological features: ventral surface of head almost fulvous except for temples in male; ventral surface of abdomen almost yellowish fulvous in female; median lobe of male genitalia relatively slender, gently curved ventrad and acutely pointed at apex.

#### Vertical Distribution of *Pidonia tsutsuii* with Reference to Vegetational Zonations

The vertical vegetational zones on high mountains in Central Japan from low to high altitudes are the piedmont laurel-leaved forest zone, the montane deciduous broadleaved forest zone, the subalpine evergreen coniferous forest zone and the alpine zone. The vertical vegetational zonations are strongly influenced by the climatic differentiation of mainland Japan into the Pacific and the Japan Sea types. IMANISHI (1937) pointed out this phenomenon for the first time based on studies of vegetational zonations of the Northern Japanese Alps. At the southern parts of this area, a mixed transi-

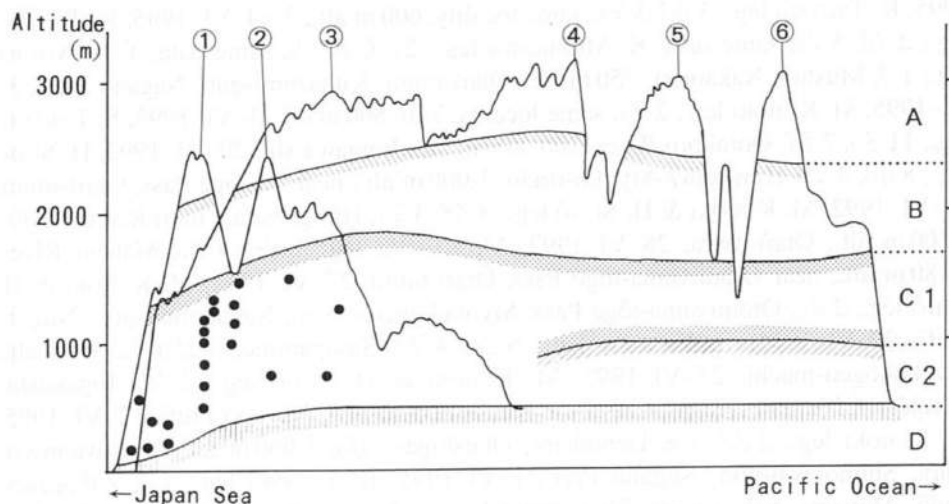


Fig. 8. Vertical distribution of *Pidonia tsutsuii* KUBOKI in connection with vertical vegetational zones of the Northern Japanese Alps and the Myōkō-Togakushi Mountains. — A, Alpine zone; B, subalpine evergreen coniferous forest zone; C, montane deciduous broadleaved forest zone (1, including *Abies homolepis*; 2, including *A. firma*); D, piedmont laurel-leaved forest zone. ①, Mt. Myōkō-san; ②, Mt. Takazuma-yama; ③, Mt. Shirouma-dake; ④, Mt. Hodaka-dake; ⑤, Mt. Norikura-dake; ⑥, Mt. Ontake.

tional forest represented by *Abies firma* occurs between the hilly and montane zones. In the montane zone, the cool-temperate deciduous forests of *Fagus crenata* are mostly replaced by cool-temperate coniferous forests of *Abies homolepis*, *Chamaecyparis obtusa*, *C. pisifera*, etc. At the northern parts of this area, *Fagus crenata* forests predominate in the montane zone and are always bounded by evergreen broadleaved forests of the warm-temperate zone.

*Pidonia tsutsuii* is distributed in the northern part of the Northern Japanese Alps and the Myōkō-Togakushi Mountains. Vertically, it occupies an area from the hilly to the montane deciduous broadleaved forest zone (Fig. 8). It appears in the coastal areas of about 200 m in altitude on the last ten days of April and in the inland areas of about 1,400 m on the last ten days of June. The distributional range of *P. tsutsuii* coincides with that of the cool-temperate deciduous forests of *Fagus crenata*.

## 要 約

窪木幹夫: 東アジア産ヒメハナカミキリ属の知見. VI. 信越地方で発見された *Pidonia* 亜属の1新種. — 本州中部の日本海地域から採集された *Pidonia* 属の1新種, *P. (P.) tsutsuii* ヒスイヒメハナカミキリを記載した. 本種は *P. signifera* (BATES) に似ているが, 前胸側部のふくらみがより弱く, 雄の頭部腹面の総基節が黄褐色から赤みをおびた黒色で, 雌の腹部腹面の黄褐色部がより広い点で区別できる.

北アルプスと妙高・戸隠山塊の植生の垂直分布帯からみて、*P. tsutsuii*の垂直分布域はブナを優占種とする落葉広葉樹林帯と一致する。

### Reference

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*Elytra, Tokyo*, **24** (2): 373, November 15, 1996

## Occurrence of *Siagonium gracile* SHARP (Coleoptera, Staphylinidae) on Izu-ôshima Island, Central Japan

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Fifteen species of staphylinid beetles were recorded from Izu-ôshima Island by ADACHI (1973), AOKI (1954), SAWADA (1971) and WATANABE (1974).

Through the courtesy of Dr. K. KUROSA, Tokyo, a staphylinid beetle obtained by Mr. J. OKUMA on Izu-ôshima Island was given to me. It agrees with *Siagonium gracile* SHARP which is new to the fauna of this island. It is recorded below with the collecting data.

1 ♀, Mt. Mihara-yama, Sueyoshi, Izu-ôshima, 21-IV-1978, J. OKUMA leg.

I thank Dr. K. KUROSA for his kindness in giving me the specimen.

### References

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