

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

X. A New *Pidonia* from Mt. Misen, Southern Honshu, Japan

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**Abstract** *Pidonia* (*Omphalodera*) *nakabayashii* sp. nov. is described from Mt. Misen of the Kii Peninsula, southern part of Honshu, Japan. The new species is similar to *P. (Omphalodera) testacea* distributed in Chubu District of Honshu, Japan, but can be distinguished by weakly developed genae, weak prominent of pronotal sides, rounded apex of eighth abdominal tergite and different structure of male genitalia. Its vertical distribution is noted with reference to the vertical vegetational zonation of Japan.

The lepturine genus *Pidonia* MULSANT consists of seven subgenera and about 150 species are distributed over the temperate zone of the Holarctic Region (KUBOKI, 2003). The subgenus *Omphalodera*, containing four species, shows a limited distribution in eastern Asia: one species in eastern China, and three species in Japan of which one is distributed also in the Asian continent.

The field surveys on the pidonian fauna of Mt. Misen (1,915 m alt.) of the Kii Peninsula, southern part of Honshu, Japan were conducted by the author in 1994 and 1995. As a result, two species of the subgenus *Omphalodera*, *P. (O.) puziloi* and *P. (O.) nakabayashii* sp. nov. were obtained.

The eastern side of Mt. Misen between 1,500 m and 1,800 m in altitude is covered with a deciduous broad-leaved forest mainly composed of *Quercus mongolica*, *Acer* spp. and *Fagus crenata*. The summit of Mt. Misen and its western side between 1,600 m and 1,915 m in altitude, are covered with a natural forest dominated by *Picea jezoensis*, *Abies veitchii*, *Tsuga diversifolia* and *Magnolia sieboldii japonica* etc. *Pidonia puziloi* was widely distributed in the broad-leaved forest, and *P. (O.) nakabayashii* sp. nov. inhabited the conifer forests. The vertical distributional range of this new species is clarified and its correlation with the distribution pattern of vertical vegetational zonations is shown in Fig. 8. The holotype designated in this study is preserved in the collection of the National Museum of Nature and Science, Tsukuba and some remnant material are preserved in the author's collection.

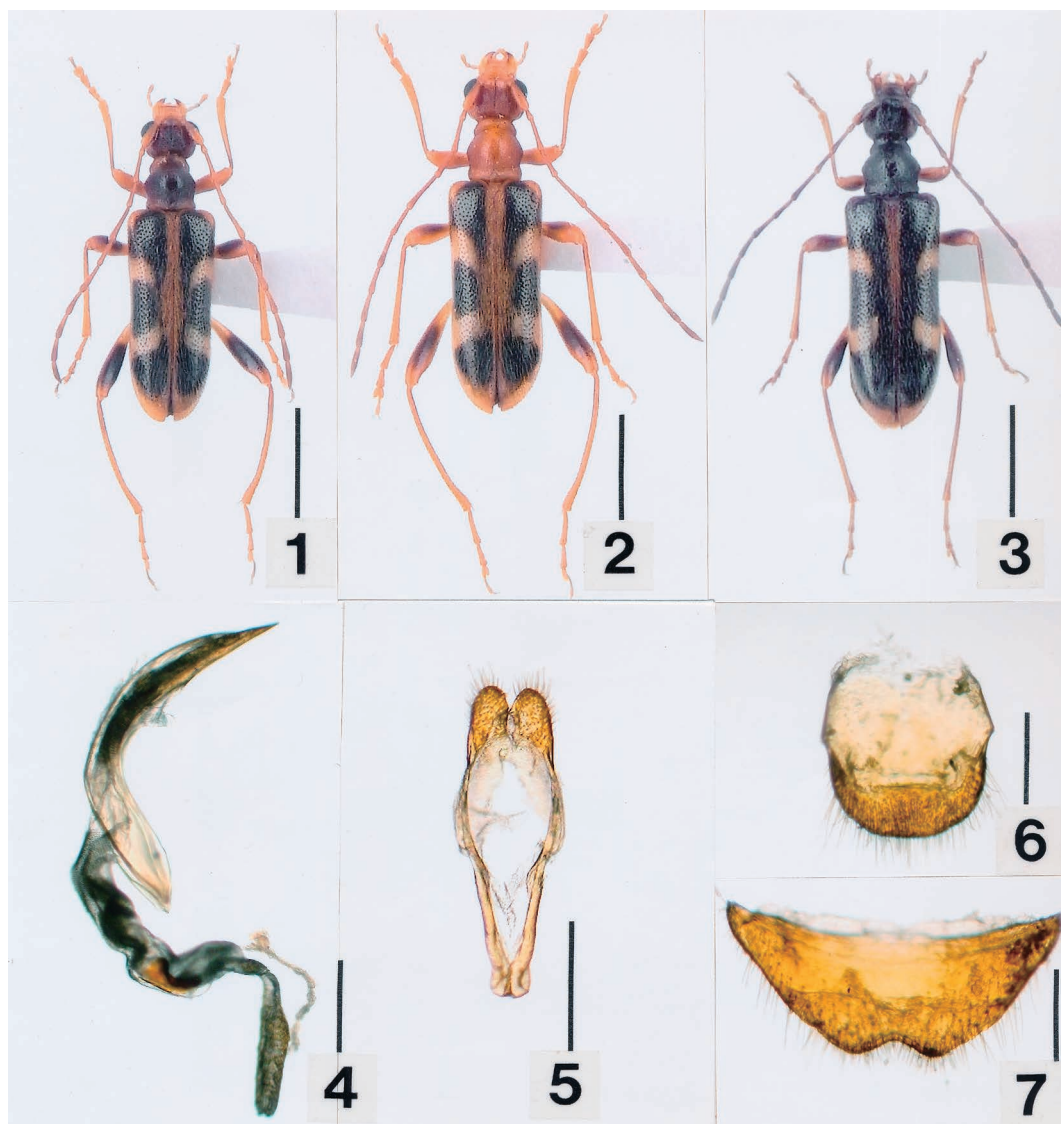
Before going further, I wish to express my hearty thanks to Messrs. Kanji HAYASHI, Tokushima, Hiroto HIRAYAMA, Tokyo, the late Shoji KATO, Aichi, Akio KURIHARA, Tokyo, Hiroyuki NAKABAYASHI, Niigata and the late Kazutoshi SUZUKI, Kanagawa for providing many interesting materials for this taxonomic study.

***Pidonia (Omphalodera) nakabayashii* KUBOKI, sp. nov.**

[Japanese name: Kii-hime-hanakamikiri]

(Figs. 1–7)

**M a l e.** Body minute to small, roundish, slightly tapered apicad, coarsely punctured, distinctly shining, sparsely furnished with rather long suberect hairs on dorsal surface, especially on elytra, and covered with fulvous pubescence on ventral surface.



Figs. 1-7. *Pidonia (Omphalodera) nakabayashii* KUBOKI, sp. nov., from Mt. Misen, Nara Prefecture. — 1 & 2, Male habitus; 3, female habitus; 4, median lobe of male genitalia; 5, tegmen of male genitalia; 6, eighth tergite of male; 7, seventh sternite of male. Scale bars: 3 mm for Figs. 1-3, 0.3 mm for Figs. 4-7.

General colour reddish brown to black and furnished with pale fulvous pubescence. Head reddish brown to black; vertex darkened; mouthparts fulvous to brown except for reddish brown apex of each mandible; eyes black; temples reddish brown; antennae largely yellowish brown, sometimes apical five segments slightly darkened apicad. Prothorax variable among reddish to dark brown, both apex and base yellowish to reddish brown. Scutellum reddish fulvous. Legs yellowish brown, sometimes femora brown apically; apex of each tarsus weakly darkened; claws yellowish brown. Elytra blackish brown with two pairs of arcuate whitish fulvous markings at basal 1/3 and at apical 1/3; vittae along suture narrowly reddish brown; humeral angle of each elytron reddish brown; apex of each elytron

yellowish brown. Ventral surface of head, thoraces and abdomen almost yellowish brown; first and second sternites black to dark brown; meso- and metasterna dark brown.

Head subquadrate, distinctly broader across the middle of eyes than basal width of prothorax (1.16 : 1); terminal segment of maxillary palpus broadened apically; temple fairly 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 short, stout and slender; apical segment barely not reaching elytral apices; comparative length of each segment as follows:  $5 > 1 + 2 > 3 = 4 = 6$ .

Prothorax 1.05 times as wide as base, dully angulate-prominent laterad just before the middle, deeply constricted both anteriorly and posteriorly; breadth across prominent 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 2.48 times as long as basal width, gradually narrowed posteriorly and conjointly rounded at apex; surface finely and deeply punctate, sparsely clothed with suberect, rather long pubescence; diameter of each puncture varies, and interspace between punctures narrower than diameter of each puncture in whitish yellow area, but broader in brown area.

Legs relatively slender, clothed with short pubescence; femora strongly clavate; hind femora reaching elytral apices; hind tibiae linear, weakly arcuate inwards; tarsi densely clothed with short pubescence on under surface; first segment of metatarsus shorter than second and third segments taken together; third segment strongly dilated apically and deeply emarginate at middle of apex.

Abdomen gradually convergent towards apex; eighth tergite densely clothed with long pubescence with rounded apex (Fig. 6); seventh sternite sparsely clothed with long pubescence with triangularly emarginate apex at middle (Fig. 7).

Genitalia: — Median lobe falcate in lateral view, relatively slender, strongly curved ventrad and sharply pointed at apex; tegmen distinctly shorter than median lobe and conspicuously bilobed at the apex in ventral view, each lobe somewhat long, narrowed towards apex, weakly bending inwards and bearing relatively short terminal hairs; its apico-lateral margin round (Fig. 5); base of tegmen forming struts consolidated together with sclerotized membrane; endophallus long and furnished with a large sclerite; diverticulum relatively long, broad and bilobed at the apex (Fig. 4).

Length: 7.6–5.8 mm, breadth: 2.1–1.5 mm.

**F e m a l e.** Body more robust and black markings more enlarged than in male. Head almost black; mouthparts dark brown; apex of each maxillary palpus brown. Apical half of each mid femur infuscate; each hind femur almost black except for fulvous base. Prothorax almost black. Elytra almost blackish brown with two pairs of arcuate whitish fulvous markings.

Ventral surface of head reddish brown; thoraces yellowish to reddish brown; meso- and metasterna darkened; abdomen yellowish to reddish brown; first to fourth sternites narrowly darkened laterad.

Head 1.04 times as wide as base of prothorax. Antennae relatively short, the apical segment reaching to about apical 2/3 of elytra; comparative length of each segment as follows:  $1 + 2 > 5 > 3 = 6 > 4$ . Prothorax 1.05 times as wide as base. Elytra 2.43 times as long as basal width, almost parallel-sided and conjointly rounded at apex. Hind tibiae linear. Apex of eighth tergite subtruncate; apex of seventh sternite round, shallowly emarginate at middle.

Genitalia: — Spermatheca small, lightly sclerotized and comma-shaped, with rounded apical part; collum of spermatheca sharpened like a tube without transverse crease; vagina broad; spermathe-

cal gland short and open to near the apex of spermatheca; spermathecal duct entering into the base of vagina; paraproct short, fairly narrowed towards apex; coxite somewhat narrowed towards apex; coxite lobes relatively broad, rounded, sclerotized at inner part and furnished with sensory pubescence; stylus relatively large, sclerotized except for apex and abaxially united to coxite, bearing sensory pubescence.

Length: 7.5–5.5 mm, breadth: 2.0–1.4 mm.

*Type series.* Holotype: ♂, Mt. Misen, 1,900 m alt., Tenkawa-mura, Yoshino-gun, Nara Prefecture, S. Honshu, Japan, 10–VII–1994, M. KUBOKI leg. Paratypes: 4 ♂♂, 5 ♀♀, same data as for the holotype; 5 ♂♂, 5 ♀♀, same locality, 15–VII–1995, M. KUBOKI leg.; 17 ♂♂, 7 ♀♀, western side of Mt. Misen, 10 to 11–VII–1994, M. KUBOKI leg.; 38 ♂♂, 13 ♀♀, same locality, 15 to 16–VII–1995, M. KUBOKI leg.; 10 ♂♂, 5 ♀♀, same locality, 15 to 16–VII–1995, S. KATO leg.; 10 ♂♂, 5 ♀♀, same locality, 15 to 16–VII–1995, A. KURIHARA leg.; 24 ♂♂, 8 ♀♀, same locality, 14 to 16–VII–1990, H. NAKABAYASHI leg.; 6 ♂♂, Hakkyougatake, 1,840 to 1,915 m alt., Tenkawa-mura, 21–VII–1981, K. SUZUKI leg.; 11 ♂♂, 1 ♀, same locality, 17–VII–1988, K. SUZUKI leg.; 1 ♂, 1 ♀, Mt. Shakagatake, Totsukawa-mura, Yoshino-gun, Nara Prefecture, 3–VII–2011, K. HAYASHI leg.

*Distribution.* Mt. Misen of the Kii Peninsula (Honshu). The vertical distribution of this species is shown in Fig. 8 in connection with the vertical vegetational zones of Japan excluding Hokkaido. Its distributional range is vertically limited to the evergreen conifer zone of Mt. Misen.

*Flight period.* July.

*Records of visiting flower.* *Magnolia sieboldii japonica*, *Hydrangea petiolaris*.

*Remarks.* This new species resembles *P. testacea* (MATSUSHITA, 1933) but may be readily dis-

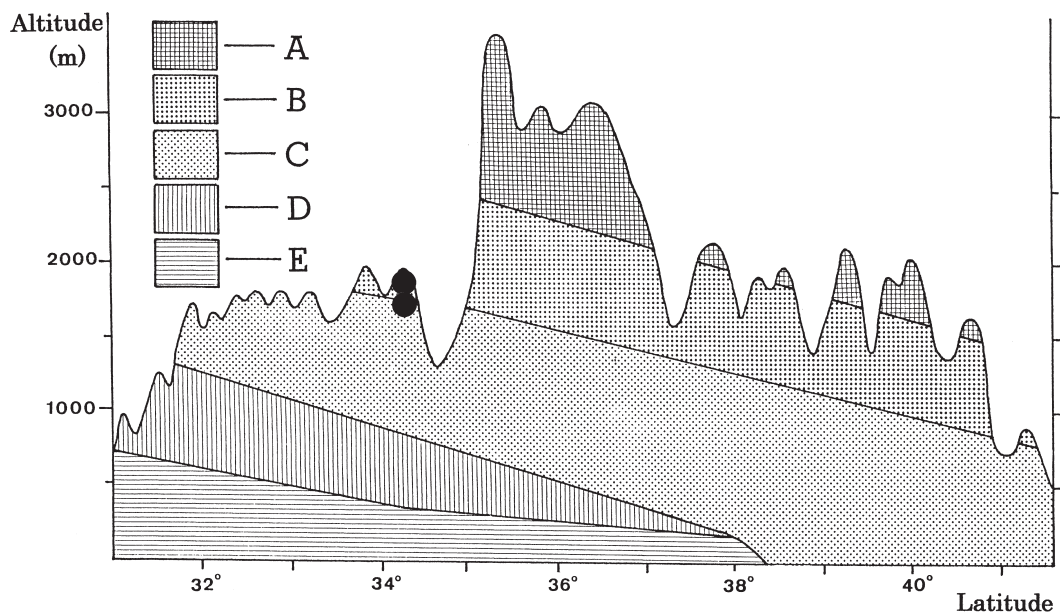


Fig. 8. Vertical vegetational zones of Honshu, Shikoku and Kyushu with plots of distribution of *Pidonia nakabayashii* KUBOKI, sp. nov. (●). — A, Alpine desert, grassland and scrub (including *Pinus pumila* formation); B, conifer forest (*Abies-Picea* formation); C, deciduous broadleaved forest (*Fagus crenata* formation); D, intermediate conifer forest (*Tsuga sieboldi* formation); E, evergreen broadleaved forest (*Castanopsis cuspidata* formation).

tinguished from it by the following points: 1) temples less strongly produced, 2) sides of pronotum less strongly prominent, 3) eighth tergite of male round at apex, 4) seventh sternite of male triangularly and deeply emarginate at apex, and 5) diverticulum of male genitalia longer.

*Etymology.* The species name of this new species is given after Mr. Hiroyuki NAKABAYASHI, who is one of the most famous researchers of the cerambycid beetles in Japan.

## 要 約

窪木幹夫：東アジア産ヒメハナカミキリ属（鞘翅目カミキリムシ科）の知見。X. 弥山産ヒメハナカミキリ属の1新種。——紀伊半島の亜高山帯針葉樹林で採集された *Pidonia* 属 *Omphalodera* 亜属の新種, *P. (O.) nakabayashii* sp. nov. キイヒメハナカミキリを記載した。従来, 本種は *P. (O.) testacea* (MATSUSHITA) ニセフタオビヒメハナカミキリと混同されてきた (SAITO & SAITO, 1992; KATO, *et al.*, 1995)。しかし, 本種はこれと比較して, 頬の発達はより弱く, 前胸側部の突出はより弱く, 雄の第8節背板の先端は丸みを帯び, 雄の第7節腹板の側縁角はなく, 中央先端は三角形に深く切れ込み, 雄交尾器の中葉片の内囊に付着する盲管がより長いことなどで区別できる。弥山での垂直分布の調査では, *P. puziloi* は山地帯の落葉広葉樹林, *P. nakabayashii* sp. nov. は亜高山帯の針葉樹林から採集された。なお, 種名はカミキリムシ研究家の中林博之氏に献名した。

## References

- KUBOKI, M., 2003. A new subgenus of the genus *Pidonia* MULSANT (Coleoptera: Cerambycidae). *Ent. Rev. Japan*, **58**: 1–6.  
 SAITO, S., & A. SAITO, 1992. A new *Pidonia* from Mt. Misen and cohabitants. *Acta Coleopterol. Japon.*, (2): 18–25.  
 KATO, A., K. MIZUNO & R. IWATA, 1995. Cerambycid beetles of Nara Prefecture, Japan. *Publications from Kansai Coleopterist' Saloon*, (10): 1–140.

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