Hibanobambusa kamitegensis (Poaceae: Bambusoideae),
a New Species from Fukui Prefecture, Honshu, Japan

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A new species of Hibanobambusa (Poaceae: Bambusoideae), H. kamitegensis M. Kobay. & Wakasugi is described from Fukui Pref., Honshu, Japan. H. kamitegensis is distinguished from H. tranquillans (Koidz.) Maruy. & H. Okamura in having glabrous prophylla borne on mid-culm node, culm-sheaths slightly pubescent with retrorse minute hairs and scattered spreading long hairs, slanted upper margin of foliage leaf-sheaths with sickle-shaped auricles, leaf surface pubescent with scattered deciduous long hairs, and slightly shorter and wider leaf-blades with longer petioles.

Key words: Bambusoideae, Fukui Prefecture, Hibanobambusa kamitegensis, Japan, new species.

The genus Hibanobambusa was described by Maruyama et al. (1979) based on its type, H. tranquillans (Koidz.) Maruy. & H. Okamura as a putative intergeneric hybrid between Phyllostachys and Sasa. Its distribution range was restricted to only four localities, i.e., Mt. Hiba-yama (the type locality of Semiarundinaria tranquillans Koidz.), Shimane Prefecture, Shôbara, Hiroshima Prefecture (Hirose 1986), Takahashi, Okayama Prefecture (Katayama 2007), and Fukui, Fukui Prefecture (Kobayashi 2001, 2011). During an inventory for the "Flora of Fukui Prefecture" (2003), one of us (TW) found a clump of unknown bamboo that apparently has an affinity with H. tranquillans, at Kamitega, Fukui, Fukui Prefecture in 2000. A small clump of the plant about 4×5 m-wide was located in the vicinity of an old shrine at an altitude of 150 m. The stand was surrounded with scattered vegetation including Cryptomeria japonica, Castanea crenata, Paulownia tomentosa, Armeniaca mume, Phyllostachys bambusoides and others. The specimens of the bamboo were precisely studied with vegetative organs in comparison with the specimens of H. tranquillans from the type locality (M. Kobayashi & Y. Sugimura 161-1–5, FUK 15046–15050) and some clumps cultivated at the Fuji Bamboo Garden, Shizuoka Prefecture, originally introduced from the type locality (H. Kashiwagi, 23 Dec. 2010, TNS-VS-1140662–1140666). After comparing the specimens from Kamitega with H. tranquillans in detail, we concluded that the plants represent an undescribed species of Hibanobambusa. Here we describe H. kamitegensis as a distinct, new species endemic to Fukui, Fukui Prefecture, Japan.
Fig. 1. Holotype of *Hibanobambusa kamitegtensis* M. Kobay. & Wakasugi (T. Wakasugi 6081–10, FUK 15010) from Fukui Prefecture, Japan.
Fig. 2. *Hibanobambusa kamitegensis*. A. Culm with a sympodial rhizome in the amphipodial system. B. Young shoot with reflected sheath-blades. C. Auriculated oral setae. D. Prophyll at a mid-culm node. Scale: 10 cm (A, B), 1 cm (C, D).
Taxonomic treatment

_Hibanobambusa kamitegensis_ M. Kobay. & Wakasugi, sp. nov. [Figs. 1–4]

**Type:** JAPAN. Honshu: Fukui Pref., Fukui-shi, Kamitega, 8 June 2000, T. Wakasugi 6081-10/11 (FUK 15010–holotype, Fig. 1; T. Wakasugi 6081-1/9/11, 11/11, FUK 15000–15009–isotypes).

Rhizome amphipodial–mainly monopodial and partly sympodial. Culm 1 cm in diameter, 3–4 m in height, erect or slightly procumbent at base, hollow, slightly sulcate with monocladal branching. Prophylla borne on mid-culm glabrous, margin minutely ciliate. Culm-sheaths deciduous, slightly pubescent with retrorse, minute hairs and scattered, spreading long hairs, or persistent on the distal internodes of branch complements. Foliage leaf-sheaths pubescent with scattered, deciduous, long hairs, upper margin slanted, with sickle-shaped auricles, ligule 1.5 mm long, truncate. Oral setae brushy, ca. 10 mm long. Foliage leaf blades tesselated, ovate-lanceolate, acuminate, 172–274 mm long, 40–70 mm wide, abaxially pilose along the midribs and/or veins only at base. Petioles 8–15 mm long. Flowers unknown.

Japanese name: [Echizen-In’yō (nom. nov.)]. 新和名：エチゼンイ ンヨウ


The plant has an amphipodial rhizome system combining with monopodial and sympodial rhizomes (Fig. 2) suggesting that one of the parental taxa belongs to the _Sasa_ group. The plant has monocladal, i.e., one-branch per node, branch complement of several wide ellipsoidal, lanceolate leaf-blades on the top of the twig with long brushy oral setae born on each culm node, the culm-sheaths partially persistent at distal nodes on each branch complement, while deciduous on the mid-culm (Figs. 1, 3), showing that the species is a member of the genus _Hibanobambusa_, thus, diagnostic morphological features of the genus _Sasa_ on one hand, appear with characters of the genus _Phyllostachys_ on the other hand. Sheath-blade on the mid culm nodes of young shoot reflect (Fig. 2) suggesting that one parental species of _Phyllostachys_ belongs to sect. _Phyllostachys_ (Renvoize and Hodkinson 1997).

The specimen has several distinct morphological features as shown in Table 1. Prophylla embracing buds borne on mid-culm are glabrous and its margin has minute ciliate hairs (Fig. 2D), while _H. tranquillans_ is pubescent with dark brownish short hairs on the upper half surface and the margin is ciliated. Culm-sheaths are slightly pubescent with retrorse minute

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<th>Table 1. Comparison of diagnostic morphological features between <em>Hibanobambusa kamitegenresis</em> and <em>H. tranquillans</em></th>
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<td><strong>H. kamitegensis</strong></td>
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<td>Prophylla on the mid-culm bud</td>
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<td>Culm-sheath</td>
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<td>Leaf-sheath</td>
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<td>Upper margin of leaf-sheath</td>
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<td>Auricle</td>
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<td>Ligule</td>
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<td>Abaxial surface of leaves</td>
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<td>Petiole length (mm)</td>
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<td>Leaf blade length (mm)</td>
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<td>Leaf blade width (mm)</td>
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Fig. 3. *Hibanobambusa kamitegensis*. Culm and branch complements. Scale: 10 cm.
hairs and scattered spreading long hairs, while H. tranquillans is mixed with spreading and retrorse long hairs. Leaf-sheath in the specimen are scattered with deciduous long hairs, whereas glabrous in H. tranquillans. As shown in Fig. 4, upper margin of foliage leaf-sheaths were slanted, with sickle-shaped auricle, truncate ligule, and pubescent only at the leaf-base alongside the rib or veins, while in H. tranquillans, the upper-margin horizontal, with ellipsoidal auricle, obtuse ligule, and glabrous at the blade-base. When comparing foliage leaf blade length among the leaves longer than 20 cm, foliage leaf-blade of the specimens were a little bit shorter and wider with longer petioles than those of H. tranquillans (Table 1). These features made us classify this specimen as a new species of Hibanobambusa, H. kamitegensis after the type locality in Fukui, Fukui Prefecture. In which the Japanese name, Echizen-inyo; i.e., “Echizen” means the ancient name of the Fukui area.

We are indebted to Mr. Harutsugu Kashiwagi, the Fuji Bamboo Garden for providing us a cultivated specimen of Hibanobambusa tranquillans. We also thank Mr. Kazuhiro Miki for providing us a scarce reference on the distribution of H. tranquillans in Hiroshima Prefecture.

References
Katayama H. 2007. Hibanobambusa tranquillans (Koidz.) Maruy. & H. Okamura was found at Kawakamicho and another newpoint, Kosecho. Both are in Takahashi-City, Okayama Pref., The Reports of the Fuji Bamboo Garden 51: 27–30 (in Japanese).
クの標本を詳細に形態比較した結果、未記載の新種という結論に達したので、エチゼンインヨウ（新称）Hibanobambusa kamitegensis M. Kobay. & Wakasugiとして報告した。種形容語は基準産地の上天下（かみてが）に因む。

エチゼンインヨウは次のような形態的特徴を有している（インヨウチクに見られる形質を括弧中に示す）。稈中部の芽を抱く前出葉は無毛で上縁には細かい毛が生える（上半分が黒褐色の短毛で覆われ、縁には繊毛状の毛）。稈鞘にはうすらと逆向短毛が出る（開出および逆向する長毛を密生する）。葉鞘には脱落性の開出長毛が出る（無毛）。葉鞘の上縁は強く斜上し（水平）。中位にある盤状体、すなわち葉耳は鍔形（楕円形）である。葉下面は無毛であるが、葉脚部のみ、中肋や側脈に沿って短毛がある（無毛）。葉身の長さ20 cm以上の葉を比較した結果、葉柄はインヨウチクに比べやや長く、葉身は短く幅が広い。

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