

***H. ibukiensis* Y. Araki 1942 = *H.* ‘*Ibukiensis*’**

*Acta Phytotaxonomica et Geobotanica*, Vol. 11, 325 1942

イブキギボウシ = 伊吹宝珠 = *Ibuki Gibōshi* (Araki 1942)

コバギボウシ = 小葉擬宝珠 = *Koba Gibōshi* (Fujita 1976)

*H. sieboldii* ‘*Ibukiensis*’ (alternate placement ex Fujita 1976/Schmid 2007/2010)

**History and Nomenclature:** *Hosta ibukiensis* is one of the species validly published by the Japanese botanist Yeichii Araki in 1942. Araki, a botanist at Kyoto University (京都大学) assembled a collection of local morphs from the mountainous habitat of the Kansai region (Kansai-chihō; 関西地方 - also known as Kinki) comprising the central part of Honshu. *H. ibukiensis* is one the many local morphs growing in Ōmi-no kuni (近江国), an old province of Japan, which is now in Shiga prefecture (滋賀県; Shiga-ken). The holotype No. 14823 (KYO) was collected by Araki on the flanks of Mount Ibuki (伊吹山), which is one of the highest peaks in

this area [1,377 m = 4,518 feet]. The mountain straddles the border between the prefectures of Gifu (岐阜; Gifu-ken) and Shiga (滋賀県; Shiga-ken). He found a number of local morphs and interspecific hybrids that are represented by isolated, allopatric populations. *H. takahashii* (*H.* ‘*Takahashii*’ – which see) was also discovered in the same general area. Araki named the new taxon 伊吹宝珠 = *Ibuki Gibōshi* and the specific epithet *ibukiensis* also alludes to its habitat on Mount Ibuki. As with some of the other taxa named by Araki, its rank as a species has been disputed. Ohwi (1965) and Maekawa (1969) were the first to disregard this taxon. Fujita (1976) considered it a synonym of *H. sieboldii* (as *H. albomarginata*) and the flower morphology of *H. ibukiensis* is very

similar to *H. sieboldii* f. *spathulata*, the green form of *H. sieboldii*. Although Fujita’s classification is quite inclusive and broad, it has merit in this case, because morphological differentiation is minor. H. Hara (1984), who was the first Japanese botanist to recognize the priority of the binomial *H. sieboldii* over *H. albomarginata*, also ignored this taxon. In the late 1980s, I was able to obtain a herbarium specimen



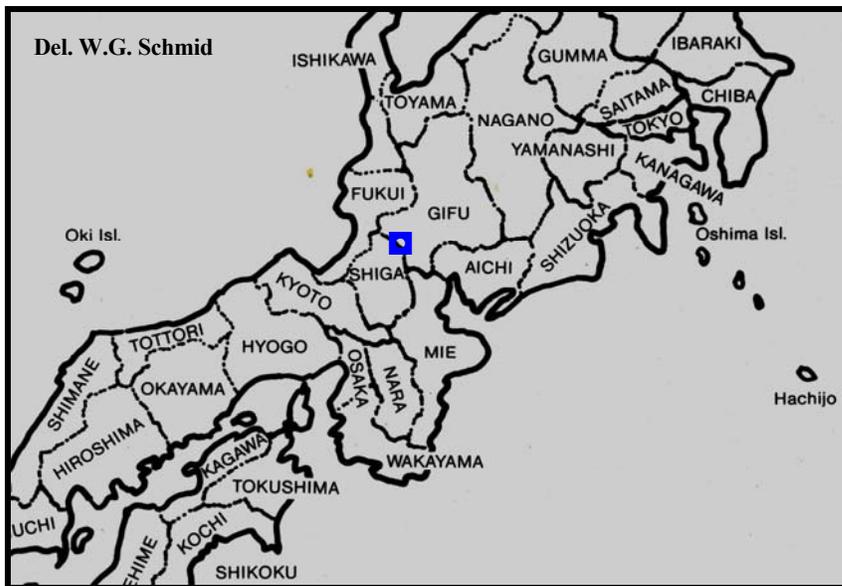
***H. ibukiensis* (*H.* ‘*Ibukiensis*’) (in situ)**

Ōmi-no kuni (近江国; *Ibuki-yama*; 伊吹山)

Notice Large Keeled Fertile Bracts

Court.: © Miyamura 2003 *ibuki*

for the holotype but I was not successful in determining an exact in situ location of this taxon and did not observe this taxon in situ. In Schmid (1991), I retained the species placement on a provisional-historical basis and also include its synonym in this species update. This is done to retain all the historical and scientific information gathered about it. This taxon has not been included in palynological, RAPD/DNA, nor genome weight analysis, so there are few data in the scientific literature as to whether this taxon should be considered a valid species. Notwithstanding and following Fujita (1976), it is here considered a morph (phenotype) of *H. sieboldii* (Paxton) J.W. Ingram var. *sieboldii* f. *spathulata* (Miq.) W.G. Schmid (in *Gen. Hosta - Giboshi Zoku* (ギボウシ属): 104 & 326, f. 2-13 & 3-70, t. 190 & 202 (1991) [Basion.: *Funkia ovata* f. *spathulata* Miq. in *Versl. Meded. Akad. Wet. Amsterd.* 2 (3): 299 (1869)]. If considered a culton, the name *H. sieboldii* 'Ibukiensis' or, alternatively, the *H.* 'Ibukiensis' are accepted.



■ = Populations (?)  
*H. ibukiensis*

Habitat Map  
Reported Place of  
Collection

### *Habitat and Biology:*

The purported habitat of *H. ibukiensis* is in the general area straddling the border between the Gifu (岐阜; Gifu-ken) and Shiga (滋賀県; Shiga-ken) prefectures. Araki reported this taxon on the flanks of Mount Ibuki (伊吹山). Originally, Araki reported this taxon to be related to *H. lancifolia* (= *H. sieboldii*). He described that it differs by the dark green leaf blades, nearly obtuse at the tip, by the narrow parts of the perianth tube very slightly grooved, much larger, keeled and lasting fertile bracts, and scarcely fertile flowers. Field investigations in the area reported provided no confirmation of in situ populations but the holotype indicates the location of endemic populations. However, similar phenotypes exist among populations of *H. sieboldii* (小葉擬宝珠 = コバギボウシ = Koba Gibōshi), which is widespread throughout the area. As noted, the taxon is nearly sterile, which points to interspecific hybridity (Note: The in situ photographs featured in this article were taken by the author and Japanese collaborators on or near Mount Ibuki. They have been examined for conformity to published morphological data.

**Plant Morphology:**

Plant size 30 cm dia., 25 cm high (12 by 10 in.). Rhizome thick, rhizomatateous; sending out elongated new shoots. Leaves elliptical to oblong, entire, 7.5–12.5 by 2.5–4 cm (4–6 by 1–1.5 in.), erect and in line with petiole, spreading, lanceolate to oblong-lanceolate, petiole transition gradual, narrowing, decurrent, vernal leaves sub-cordate, acuminate tip, slightly undulate, wavy in the margin, smooth, shiny light, dull dark green above, glossy lighter green below. Venation 4-5 (6), impressed above, smooth below. Scape 50–75 cm (20–30 in.), ±3-5mm (0.12-0.2 in.) thick, straight and erect, not bending, light green, no purple marks. Sterile bracts 2–3, green, first tunicated and clasping stem initially, then unfolding, boat-shaped, persistent; fertile bracts large, navicular, thick-coriaceous, green, not withering at anthesis. Raceme long, secund, 7-25 flowers, spaced evenly, pedicels short ±5mm (0.2in.). Flowers in bud very clavate-club-shaped, blunt, 4 cm long, 3 cm broad (1.5 by 1.25 in.), tepals purple suffused with distinct dark purple stripes, gradually expanding, often recurved and lily-shaped, outer tepals oblong, pointed, inner tepals shorter and less pointed, blunt, inside tepal coloration purple on white, 3 distinct, darker stripes, color type B ◀◀◀ (Schmid 1991), expanding. Anthers are yellow, white-backed. July. Produces seed pods that are obtuse, triangular, truncated tip, with mostly aborted ova; low pollen viability, *barely* fertile.



*H. ibukiensis* (in situ)  
(*H.* 'Ibukiensis')  
(note keeled fertile bracts)  
Suzuka Ibukiyama (伊吹山)



**Karyotype-Chromosomes:**

Sporophytic Count = 60; 12 large, 48 small; (2n).

**Pollen:** Pollen type was not determined by M.G. Chung and S.B. Jones, 1989. However, *H. sieboldii* var. *sieboldii* has a Pollen Subtype RG (II-B) (= rugulate granulate; subtype II-B) with shape OS (oblate-spheroidal) (Pollen shape after Erdtman, 1966). *H. sieboldii* var. *sieboldii* is in the range of P 77.3 to 77.6 ± 3.3 × E 65.4 ± 3.2.

**Genome Size:** DNA content (2C) in pg (one (10<sup>-12</sup>) gram) not determined. (Zonneveld, B.J.M. and F. Van Iren (2001).

**DNA Banding:** In 2005 RAPD analysis did not include *Hosta ibukiensis*. (Y. Yu, 2002; Sauve, R.J., S. Zhou, Y. Yu, and W.G. Schmid. 2005).

***Taxonomic Type and Synonymy:***

*H. ibukiensis* Araki.

*Acta Phytotaxonomica et Geobotanica*, Vol. 11, 325 1942.

Type: In KYO, No. 14823, 26 July 1938; coll. Y. Araki, Mount Ibuki (Ibukiyama; 伊吹山), Shiga Prefecture (Shiga-ken; 滋賀県) and Gifu Prefecture (Gifu-ken; 岐阜). Hab.: Kansai region (Kansai-chihō; 関西地方) central Honshu, Japan.

***Botanical Synonyms:***

Now considered to be synonymous with *H. sieboldii* var. *sieboldii* f. *spathulata* (Miq.) W.G. Schmid or, alternatively, a named phenotypical variant of *H. sieboldii* as *H. sieboldii* 'Ibukiensis'; in horticulture as the culton/cultivar *H.* 'Ibukiensis'. Its sterility points to interspecific hybridization.

*H. albomarginata* Fujita: *Acta Phytotaxonomica et Geobot.*, Vol. 27, 3/4:84–85 1976.

***Japanese Language Synonyms:***

イブキギボウシ = 伊吹宝珠 = Ibuki Gibōshi (Araki 1942)

コバギボウシ = 小葉擬宝珠 = Koba Gibōshi (Fujita 1976)

***Horticultural Synonyms:***

*H.* 'Ibukiensis' (a culton) Schmid 2007



*H. ibukiensis* (*H.* 'Ibukiensis')  
(= *H. sieboldii* f. *spathulata*) ▶▶▶  
Tsukuba Bot. Garden (筑波実験植物園)  
© 佐藤絹枝 (Sato Kinue) 2006.08.14



See page 7 for text of holotype pane

***H. ibukiensis* Holotype (See data pane – page 7)**

**KYO No. 14823, 1938.07.26; coll. Y. Araki,**

**Mt. Ibuki (Ibukiyama; 伊吹山); Shiga-ken (滋賀県) and Gifu-ken (岐阜).**

**Kyoto University Herbarium (京都大学総合博物館)**

***H. ibukiensis* (*H.*  
'Ibukiensis') in  
Cultivation:**

This taxon/culton is rarely seen in cultivation. Upon analysis of cultivated specimens of *H. sieboldii*, it appears that some of these represent relevant features of *H. sieboldii* 'Ibukiensis' and may in fact be samples collected on or near Mount Ibuki (Ibukiyama; 伊吹山) and thus represent the phenotype found in this habitat. The wild members of the *H. sieboldii* complex (formerly called *H. albomarginata* and now classified as the all green form *H. sieboldii* f. *spathulata* Schmid 1991; in Japan called 小葉擬宝珠 = Koba Gibōshi) are polymorphic and show significant local variations depending upon the ecology of the habitat. Pictures taken by Japanese enthusiasts of alpine plants reveal this polymorphism. From a horticultural standpoint, *H. sieboldii* 'Ibukiensis' is very similar to the species *H. sieboldii* and is differentiated by only minor horticultural features, but its infertility is not welcome by gardeners and hybridizers. No registered cultivars of *H. sieboldii* 'Ibukiensis' progeny are listed in the *Hosta* Registry of The American Hosta Society, Kevin P. Walek, International Registrar for the Genus *Hosta* (HostaRegistrar.org).

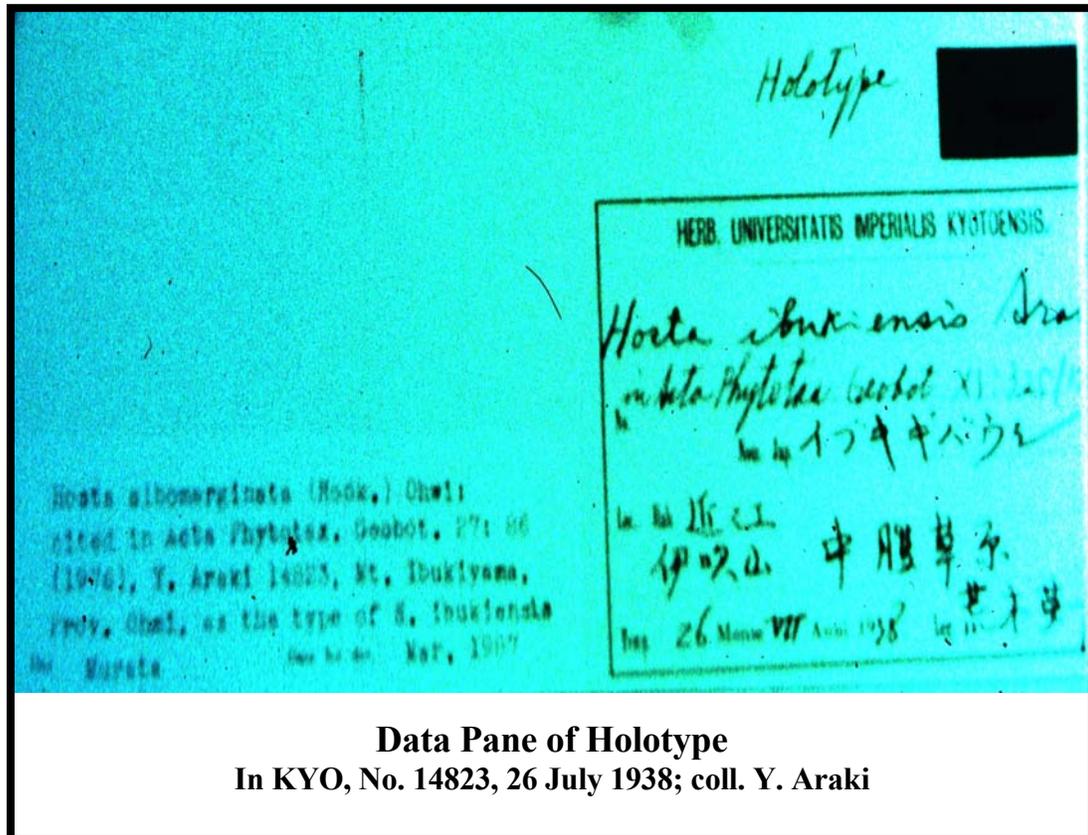


***H. ibukiensis* (in situ)  
(*H.* 'Ibukiensis')  
(Note Keeled Fertile Bracts)  
Court.: © Shun-hp/i-s/ibuki/**

***References:***

- Chung, M.G. and S.B. Jones. 1989. Pollen morphology of *Hosta* Tratt. (Funkiaceae) and related genera. *Bulletin of the Torrey Botanical Club*, Vol. 116, 1:31–44.
- Fujita, N., 1976. The genus *Hosta* (Liliaceae) in Japan. *Acta Phytotaxonomica et Geobotanica*, Vol. 27, 3/4:84–85 1976 (sensu lato)
- Maekawa, F., 1940. *J. of the Faculty of Science*, Sect. 3 Botany, Vol. 5:407, 408, ic. 87
- Maekawa, F., 1969. *Hosta* Trattinnick. In *New Encyclopedia of Horticulture*, Seibundoshinkosha, Tokyo, Vol. 3:1105–1109.
- Ohwi, J., 1965. *The Flora of Japan*, Edited by F. G. Meyer and E. H. Walker, Smithsonian Institution, Fam. 52, 11:287–291
- Sauve, R.J., S. Zhou, Y. Yu, and W.G. Schmid. 2005. Random amplified polymorphic DNA (RAPD) analysis in the genus *Hosta*. *HortScience* 40(4).

- Schmid, W.G. 1991. *The genus Hosta: Gibōshi Zoku* (ギボウシ属). London and Portland: Timber Press.
- Schmid, W.G. 2004. *Hosta* species and DNA fingerprinting. *Bull. Brit. Hosta Hemerocallis Soc.* 2004: 50, 59-66.
- Yu, Y. 2002. Classification of hosta species and cultivars based on RAPD analysis. TSU Graduate School (with W.G. Schmid); published in summary in Sauve, R.J., S. Zhou, Y. Yu, and W.G. Schmid. 2005 (which see).



**Data Pane of Holotype**  
In KYO, No. 14823, 26 July 1938; coll. Y. Araki

© W.George Schmid 2010: The text and illustrations are copyrighted and are available for personal reference only. Other contributors retain their copyright of featured photographs as noted in captions. The content may not be published in printed form without the author's written permission.

Web quote reference: W. George Schmid  
[HostaLibrary.org/species/](http://HostaLibrary.org/species/).