

H. rohdeifolia Maekawa 1937

J. of Japanese Botany, 13:897 ic. f. 3 1937 (pro parte)

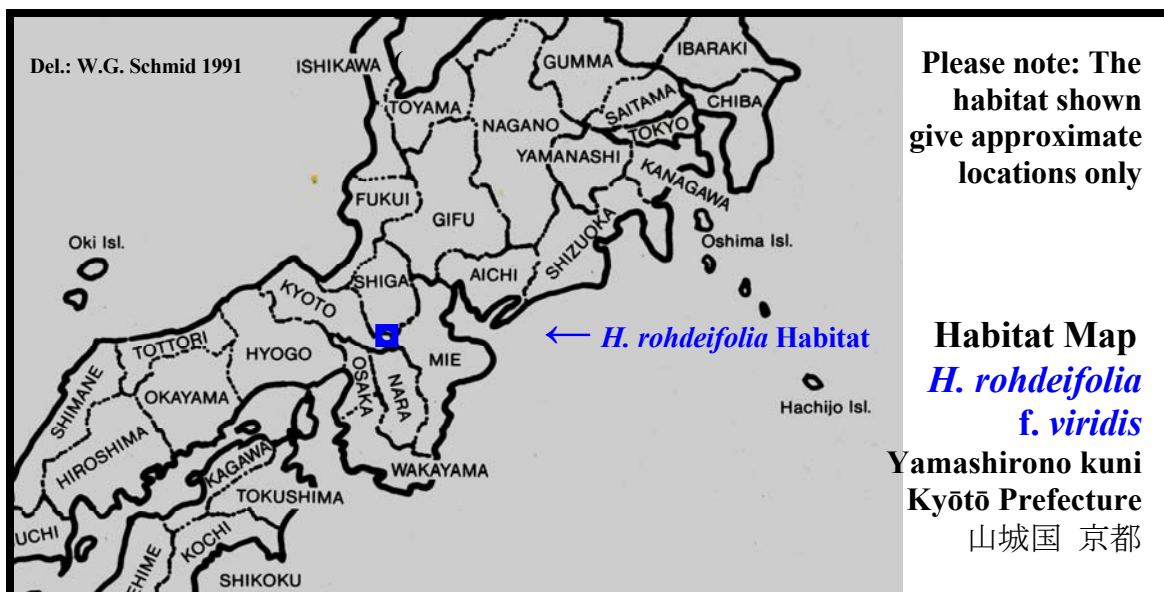
H. rohdeifolia f. *viridis* Maekawa 1940

J. of the Faculty of Science, Sect. 3 Botany, Vol. 5:406-407 1940

オモトギボウシ = 万年青擬宝珠 = Omoto Gibōshi (Maekawa)

アオバオモトギボウシ = 青葉万年青擬宝珠 = Aoba Omoto Gibōshi (Maekawa)

History and Nomenclature: *Hosta rohdeifolia* was first described by Maekawa (1937) from a yellow-margined plant cultivated in western Japan. Although Maekawa (1940) described this yellow-margined taxon as a species, it has not been found in the wild but was found as a mutation among cultivated populations. The Japanese name given by Maekawa (1937) is Omoto Gibōshi derived from a nominal resemblance of the leaf shape to that of the leaves of the Japanese Sacred Lily in the genus *Rohdea* (= Omoto = オモト = 万年青 = *Rohdea japonica*). Schmid (1987, 1991) pointed out that Maekawa's spelling of the species epithet as "*rhodeifolia*" is an orthographic error. To indicate its correct formulation, the epithet must follow the genus name *Rohdea*, which was named after the German physician and botanist Michael Rohde (1782-1812). Maekawa (1940) described the all-green taxon as a forma based on a plant he observed in A. Kikuchi's garden. The designated type is No. 643/39519 in MAK ex KYO. It was collected in the southern part of Kyōtō Prefecture (京都府), listed on the specimen as Yamashiro province (Yamashiro-no kuni; 山城国) on Mount Hiei (Hiei-zan; 比叡山: 848 m/2783 ft.), near the town of Sakamoto (坂本) at Lake Biwa. Taxonomically, this taxon stands between *Hosta sieboldii* and *H. rectifolia*. It occupies wet bottom lands so may have evolved as *H. alismifolia* did. The species epithet comes from Latin *rohdeifolia* =



with leaves like *Rohdea*. Maekawa (1969) maintained it as a species. Fujita (1976) lumped it together with 10 other taxa under *H. albomarginata* (now *H. sieboldii*). Schmid (1991) considered the all-green form found in the wild to be a species but reduced the variegated form (on which this taxon was based) to cultivar rank as *H. 'Rohdeifolia'*. The latter name should be replaced by the Japanese name for the variegated morph, which was established earlier, namely *H. 'Kifukurin Omoto'*. DNA content (2C) in pg (10^{-12} gram) was determined by Zonneveld, B.J.M. and F. Van Iren (2001) and was found to be very close to *H. rectifolia*. It is not known if the tested specimen was *H. 'Kifukurin Omoto'* or *H. rhodeifolia* f. *viridis* (the plant found in the wild) so the application of the result is not known. Regardless of the name, none has been included in morpho-metric and palynological analysis, so there is little further evidence in the scientific literature. For the time being, the variegated cultivar is 'Kifukurin Omoto' (replacing the name *H. 'Rohdeifolia'* in Schmid; 1991). *H. rhodeifolia* f. *viridis* is here considered a species, since it has representation in the wild and a designated type. The likelihood of natural, interspecific hybridization has been confirmed for other taxa in this genus and should be considered here also.



***H. 'Kifukurin Omoto'* typical leaf mound**
Hosta Hill R.G. © W.G. Schmid • 1986.06.08 (Cult. [from Japan] HH 0961/1984)



***H. 'Kifukurin Omoto'* (Culti.)**
 emerging shoots 1987.03.28
 (from Japan HH 0961/1984)
 © W.G. Schmid 1987.03.28



***H. rhodeifolia* f. *viridis* (Culti.)**
 (Hiei-zan; 比叡山 ▪ Kyōtō-fu; 京都府)
 (HH 1307/2004) Hosta Hill R.G.
 © W.G. Schmid 2007.04.21



***H. 'Kifukurin Omoto'* (Cult.)**
 (From Japan HH 0961/1984)
 Hosta Hill R.G. © W.G. Schmid
 1968.08.09

Habitat and Biology:

In the mid-1930s Maekawa investigated native *Hosta* populations in central Kansai region (Kansai-chihō; 関西地方 - also known as the Kinki region). It lies in the South-Central area of Honshu. He found an outstanding, variegated hosta cultivar in a Kyōtō garden. Its very tall scapes and variegated leaves with a yellowish white margins stood out among other hostas. He named it Omoto Gibōshi (= 万年青擬宝珠). To find out more about its origin, he studied the cultivated hostas made available to him by his professor Akio Kikuchi in growing in the Hortus Kikuti trial garden. There he discovered among wild collected plants one that was morphologically identical, lacking only the variegation. The specimen data showed that it was collected in Yama-shiro province (山城国) on Mount Hiei (比叡山). Further studies showed that this taxon occupies wet bottom lands and seepage areas on mountain slopes. Similar

morphs are reported to exist in prefectures further north, but no scientific population studies are available for confirmation. Larger than *H. sieboldii*, its morphology matched up better with *H. rectifolia*, but its flowers were not quite as dark. The leaves were also very different from the normal types in the *H. sieboldii* complex. Maekawa saw a nominal resemblance of the leaves to those of the Japanese sacred lily, genus *Rohdea* (万年青), leading to the name “Omoto.” Most recent researchers have ignored this taxon and excluded it from their biosystematic and palynological studies, but genome weight analysis is available, as discussed on page 5.

Plant Morphology: Plant size 30–40 cm dia. by 35–40 cm high (12–16 by 14–16 in.). Petiole 12.5–25 cm long 0.5 cm wide (5–10 by 0.20 in.), medium green, first erect, then leaning. Leaf 12.5–15 cm by 5 cm wide (5–6 by 2 in.), erect and in line with petiole, lanceolate to oblong-lanceolate, some leaves broadened in the upper part (like the leaf of *Rohdea japonica*), petiole transition discernable, angled, subobtuse tip, ±arching midrib, flat margins, some convolute, medium green with sheen above, shiny below. Venation 4–6, impressed above, projected, and smooth below. Scape 75–120 cm long (30–48 in.), straight and erect, not bending, light green, no purple marks. Sterile bracts 3–6, convolutedly clasping stem, green, persistent; fertile bracts, short, navicular, thin, membranous, green, withering at anthesis, but not falling away. Raceme 6–15 flowers, widely spaced. Flowers abruptly bending, 5 cm long and 3.5 cm broad (2 by 1.50 in.), Type C Tepal color ► (Schmid 1991); purple-striped inside, thin, narrow tube, perianth expanding, lily-shaped, tepals spreading, recurving, very short pedicels, stamens shorter than the perianth, style projecting. Anther color on posterior and sides white to purple; anterior purple Blooms August-September. Fertile.



H. rhodeifolia f. *viridis* (Cult.)
 (Loc. cit.: Hiei-zan; 比叡山)
 (HH 1307/2004) Hosta Hill R.G.
 © W.G. Schmid 2007.04.21





Pollen: Pollen shape was not included by M.G. Chung and S.B. Jones in 1989.

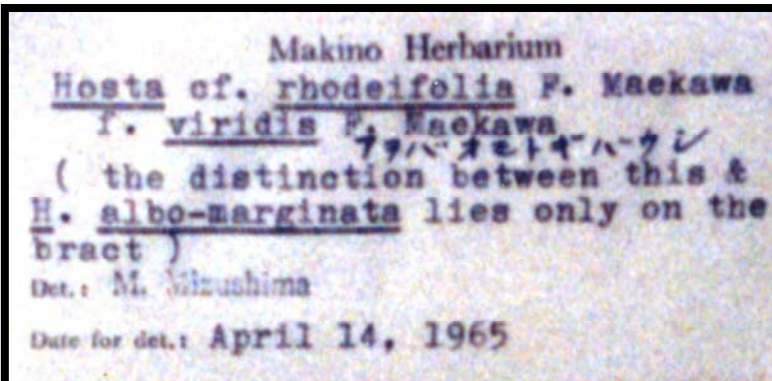
Karyotype-Chromosomes: Sporophytic Count = 60; 12 large, 48 small; (2n).

Genome Size: DNA content (2C) in pg (10^{-12} gram) was determined to be 20.7 with a ratio of PI/DAPI of 1.11 (Zonneveld, B.J.M. and F. Van Iren. 2001). This result is very close to *H. rectifolia*, a taxon that is in general distribution in central and northern Honshū (本州). It is not known if the tested specimen was *H.* 'Kifukurin Omoto' (the variegated form in cultivation) or *H. rhodeifolia* f. *viridis* (the plant found in the wild) so the application of the result is not determinable. Fujita (1976) considered this taxon to be synon-



ymous to the taxon *H. sieboldii* (as *H. albomarginata*). Schmid (1991) found the variegated phenotype to be a cultivar. The all-green taxon found on some small populations have been found in the wild in Kansai (関西地方) to which the name *H. rhodeifolia* f. *viridis* now applies.

DNA Banding: Recent RAPD analysis (Y. Yu, 2002; Sauve, R.J., S. Zhou, Y. Yu, and W.G. Schmid. 2005), did not include *H. rhodeifolia* f. *viridis*.



◀◀◀ Det. Label by M. Mizushima aff. to Herb. Spec. page 6: Det. not accepted here: Dist. from *H. sieboldii* much more than just the bracts as detailed on page 4.



***H. rhodeifolia* f. *viridis* Lectotype**

Loc. cit. coll.: Hiei-zan; 比叡山; Kosodani; 小曾谷; Yamashiro-no kuni; 山城国

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

I.D.: 643/39519 KYO; **Leg.:** H. Tagawa; 1931.08.18 (# 652)

Taxonomic Type and Synonymy:

H. rohdeifolia f. *viridis* Maekawa.

J. of Japanese Botany, 13:897 ic. f. 3 1937 (pro parte); *J. of the Faculty of Science*, Imperial University Tokyo, Section 3 Botany, Vol. 5:406-407 1940. W.G. Schmid, *The genus Hosta: Gibōshi Zoku* (ギボウシ属); pp. 90, 328, ic. 3-60, (1991).

Type: In KYO, No. 643/39519; coll. M. Tagawa, Tagawa No. 652; 1931.08.18; Mount Hiei (Hiei-zan; 比叡山), Yamashiro province (Yamashiro-no kuni; 山城国), near the town of Sakamoto (坂本) at Lake Biwa.

Hab.: In west-central Honshu, Kyōto-fu (京都府), Japan.

Botanical Synonyms:

H. albomarginata Fujita: *Acta Phytotaxonomica et Geobotanica*, Vol. 27, 3/4:84–85 1976 (placement partially accepted in sensu lato)

Japanese Synonyms:

オモトギボウシ = 万年青擬宝珠 = Omoto Gibōshi (Maekawa) [for the variegated morph *H.* ‘Kifukurin Omoto’ (= 黄覆輪 万年青擬宝珠 or sometimes 白覆輪 万年青擬宝珠 as *H.* ‘Shirofukurin Omoto’].

アオバオモトギボウシ = 青葉万年青擬宝珠 = Aoba Omoto Gibōshi (Maekawa) [= green-leaved Omoto Gibōshi].

Horticultural Synonyms:

H. rohdeifolia ‘Rohdeifolia’ (incorrect per ICNCP)

H. rhodeifolia (incorrect - orthographic error; base = *Rohdea*).

H. rhodeifolia ‘Albomarginata’ hort. (incorrect = *H.* ‘Fortunei Gloriosa’ sold as *H. rohdeifolia*).

H. rhodeifolia ‘Aureomarginata’ hort. (incorrect = *H.* ‘Fortunei Aureomarginata’ sold as *H. rohdeifolia*).

H. rhodeifolia ‘Aureus’ hort. incorrect.

H. rhodieifolia aureo marginata hort. incorrect.

***H. rhodeifolia* f. *viridis* in Cultivation:** The all-green taxon occurring in the wild, *H. rhodeifolia* f. *viridis* is rarely seen in cultivation. The variegated form now called by its long established Japanese name *H.* ‘Kifukurin Omoto’ has a confusing history. First, the cultivar has been sold under the incorrect names *H. rhodeifolia* ‘Aureomarginata’ and *H. rhodeifolia* ‘Albomarginata’, which are incorrect names, per the ICNCP. Some of the plants carrying these names were not related to *H. rhodeifolia*, but belong to the *H.* ‘Fortunei’ complex. In addition, the misspelling of the species epithet as *rhodeifolia* also caused some confusion (see page 1). Ruh et al. (1989) reported that some of the plants in the United States under the name *H.* ‘Helonioides Albopicta’ are the yellow-margined *H. rohdeifolia* and this can be verified by the venation count which is 5–6 for the latter and 3–4 pairs of veins for *H.* ‘Helonioides Albopicta’. Cultivated specimens may have escaped back into the wild where it occurs sympatrically with *H. sieboldii*. It should be pointed out that all

of these taxa have all-green, non-variegated leaves. The yellow-margined form described here is a sport, which does not perpetuate in the wild and was brought into cultivation where it is maintained as a cultivar. Summers (1972) does not give any information as to the import dates of the variegated form. It is possible that it may have come from Japan as *H. 'Helonioides Albopicta'*, which see. The first import of *H. 'Helonioides Albopicta'* is listed in Summers (1972) as No. 39, with A. Viette given as the source. It is possible that the plants were misidentified and mixed up, but *H. rhodeifolia* f. *viridis* can be differentiated from *H. 'Helonioides'* rather easily by leaf comparison (compare the photographs on page 10 with that on pages 3 and 4):

Morphological Comparison of *H. 'Helonioides'* with *H. rhodeifolia*
(Data based on Maekawa 1937 and 1940 and Schmid 1991)

	LEAF SIZE/SHAPE	VEINS	LEAF COLOR	SCAPE/FLOWER ANTHERS
<i>H. 'Helonioides'</i> [also <i>H. 'Helonioides Albopicta'</i> (variegated form)]	17-18 cm 6.6-7.0 in long 2-3 cm/0.7-1.2 in wide Petiole attenuate to leaf Linear-lanceolate Tip acute-pointed	3-4	Sea green (dark) Opaque dull surface	Scape 40-70 cm 16-28 in Tepals pale violet Nerves purple Anthers purple
<i>H. rhodeifolia</i> f. <i>viridis</i> [also <i>H. 'Rhodeifolia'</i> (variegated form)]	14-16 cm 4.5-5.5 in long 6-7 cm/2.3-2.7 in wide Petiole distinct, attenuate to leaf Oblong/lanceolate Tip sub-obtuse to acute	5-6	Medium green Shiny surface	Scape 75-120 cm/30-48 in Tepals pale mauve Nerves light purple Anthers white on bottom, purple sides and top

P. Ruh and M. Zilis (1989) and Zilis (2001) have suggested that the plant imported from Japan under the name *H. helonioides* f. *albopicta* (now considered a cultivar = '*Helonioides Albopicta*' Schmid 1991) was incorrectly identified and this plant is actually one described by Maekawa (1937; 1940) as *H. rhodeifolia*. This placement is accepted in this treatment. Comparative morphology identifies the imports named as *H. helonioides* f. *albopicta* are *H. rhodeifolia*. This misidentification is easy to understand since both are cultivated sports of the respective species, which were reduced to cultivar rank by Schmid (1991). *H. rhodeifolia* f. *viridis* is maintained as a taxon and described here. A cultivar of long standing, *H. 'Ginko Craig'*, turns out to be very close to the all-green form of *H. helonioides* (= Hakama Gibōshi (Maekawa) ex A. Kikuchi No. 192). This white-margined cultivar having the same dark, sea green color in the leaf center and an opaque, dull leaf surface, led Zilis (2001) to propose that *H. 'Ginko Craig'* is the same as *H. 'Helonioides Albopicta'*. This is not

accepted since there are other features that indicate it is not, including the number of principal veins given as 8-9 pairs (Zilis 2001), while wild-collected *H. helonioides* has a maximum of 4 vein pairs. Maximum number of vein pairs for *H. rhodeifolia* f. *viridis* is 6. Some variation in vein count is expected. This exceeds the variation to a high degree and the synonymy *H. 'Ginko Craig'* = *H. 'Helonioides Albopicta'* is not excepted here. For further discussion see *H. helonioides*.



H. 'Ginko Craig'
 J. Craig & A. Summers & AHS 1986
 © Homestead Farms

Horticultural

Progeny: *H. rhodeifolia* f. *viridis* is rarely seen in gardens. The variegated form *H. 'Kifukurin Omoto'* has been misidentified and mixed up with all kinds of similar cultivars (see under horticultural synonyms and page 6, Cultivation). A remotely related sport (*H. 'Sugar Pie'* R. Snyder 1998) is registered but no direct progeny is listed in the Hosta Registry of The American Hosta Society, Kevin P. Walek, International Registrar for the Genus *Hosta*. A number of variegated cultivars are for sale in Japan. Known are a bright yellow margined form (*H. 'Koriyama'*), which is often confused with the standard variegated form which is a pale yellow in spring. Other than being variegated, this form has leaf morphology like *H. rhodeifolia* f. *viridis*.



***H. 'Kōriyama'* (= 郡山市擬宝珠) ▶▶▶**
 (Cultivated/from Japan HH 1170/1984)
 Hosta Hill R.G. ©W.G. Schmid
 Mutsu-no kuni (陸奥国) Kōriyama (郡山市)



For comparison:

◀◀◀ *H. helonioides*
 Maekawa
 Ugo-no kuni (羽後国) now
 Yamagata-ken (山形県)
 shown here to show the
 differentiation in leaf shape
 and color with *H.*
helonioides (see Page 3);
 also mentioned in
 connection with
H. 'Ginko Craig'
 Court.:
 ©癒しと安らぎの庭
 (Holy Garden)

H. 'White Border' ▶▶▶

Source M. Soules
 HH 0585/1984

Reportedly, this cultivar was imported
 by M. Soules and has all of the features
 of a white-margined It may have been
H. 'Shirofukurin Omoto' (but with with
 a different name).

Hosta Hill R.G.
 © W.G. Schmid 1986.05.17



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W. George Schmid, HostaLibrary.org/species/.



H. rohdeifolia
(variegated morph)

▲▲▲ Above
Typical tepal coloration and
whitish anther posterior

◀◀◀ to the left
Note straight scapes
with bud initials
Note tightly clasp-
ing sterile bracts

Orthographic Correction

Taxa cultivated in North America under the incorrect names *H. rhodeifolia* 'Aureo-marginata' and *H. rhodeifolia* 'Albomarginata' are named incorrectly and not related to this hosta, but belong to the *H.* 'Fortunei' complex. As reported by Schmid (1987, 1991, 2010), the species epithet spelling "rhodeifolia" (Gr. *rhodon* = rose, leaves like a rose) as used by Maekawa and repeated in many of the botanical and horticultural literature is an **orthographic error** and should be "rohdeifolia." The latter means "with leaves like the *Rohdea*," which in Japan is known as Omoto (= オモト = 万年青 = *Rohdea japonica*). Since "Omoto" is the Japanese name for the genus *Rohdea*, and the plant genus is named for Michael Rohde of Bremen, a German botanist (b.: 25 July 1782 – d.: 28 May 1812), the correct spelling is *Rohdea japonica* ergo *H. rohdeifolia*.