**H. pachyscapa F. Maekawa 1940**

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The genus Hosta: Gibōshi Zoku (ギボウシ属); pp.: 83-84; i.c. 3-54, 3-55; pl. 51.

**History and Nomenclature:** In Japan this species is called Benkei Giboshi, the “Strong Man Hosta.” The Japanese name Benkei Giboshi (ベンケイギボウシ) alludes to the very thick scapes, which carry a heavy load of seed like a “strong man.” Maekawa did not provide a kanji for this, but べんけい with the corresponding kanji (=弁慶) means exactly that, i.e., strong man, alluding to the strong (stout) scapes. The species epithet *pachyscapa* is derived from the Greek *pachy*, meaning thick.
which is equivalent to thick (i.e., being strong or stout) combined with the Latin *scapa*, relating to the scape, the combination meaning “thick scape.” Maekawa established *H. pachyscapa* in 1940 as a *species novum*. The type was collected by M. Toyama in the old province of Ōmi (近江国; Ōmi-no kuni), which today comprises Shiga Prefecture (滋賀県 Shiga-ken) and is part of the Kinki region of Honshu. The type is based on this plant cultivated in Kikuchi’s Garden (Hortus Kikuti). M. Toyama also collected another specimen in Totomi province (遠江国; Tōtōmi-no kuni) today western Shizuoka Prefecture (静岡県; Shizuoka-ken), also cultivated in HK. The collector K. Hisauti obtained a specimen in Suruga province (駿河国; Suruga-no kuni) in the eastern Suruga-no kuni) in the eastern part of Shizuoka prefecture, which was cultivated in Maekawa’s garden. In 1969, Maekawa no longer listed *H. pachyscapa*. Fujita (1976) classified *H. pachyscapa* together with *H. densa* as being synonymous with *H. kiyosumiensis*, but did so without detailed comment. Schmid (1991) retained both as species, because reports indicate they were found in the wild (Maekawa; 1940). Zonneveld (2001) determined that both have very low fertility and that the genome size for *H. pachyscapa* (± 22.0 pg) is less than *H. kiyosumiensis* (± 24.3.0 pg) and Fujita’s synonymy is not accepted. Recent RAPD/DNA analysis (Y. Yu, 2002; Sauve, R.J., S. Zhou, Y. Yu, and W.G. Schmid. 2005) differentiated *H. kiyosumiensis* from *H. pachyscapa* and thus confirmed Zonneveld’s findings. Schmid (2006) considers *H. pachyscapa* to be an interspecific hybrid population, which grows in limited areas of the Kinki region. Maekawa did not list a holotype but typified this taxon with a wild-collected cultivated specimen grown in a botanic garden. The wild populations have not been confirmed by Fujita, other than being mentioned as synonyms and no further information on them has been published since 1940. For this reason some authors consider this to be a cultivar and relegate it to cultivar status, writing the name as *H. ‘Pachyscapa’*. In any case, the synonymy with *H. kiyosumiensis* proposed by Fujita (1976) is not supported by Zonneveld (2001), who determined that this taxon has very low fertility and that the genome size for *H. pachyscapa* (± 22.0 pg) is less than *H. kiyosumiensis* (± 24.3.0 pg), i.e., they are differentiated by DNA content (2C) in pg (one (10^{-12}) gram).

**Habitat and Biology:** In 1940 Maekawa listed the habitat of this taxon as Shiga Prefecture (滋賀県 Shiga-ken) and western Shizuoka Prefecture (静岡県; Shizuoka-ken), both part of the Kinki region of Honshu. Since the first accessions, no further field studies have been undertaken. A distribution study was carried out by Fujita (1976) and he classified *H. pachyscapa* (together with *H. densa*) as synonymous with *H. kiyosumiensis* and for this reason only markers for the latter are shown on his distribution maps. Since then no further habitat studies have been undertaken and the type is pictured in Maekawa 1940 as a cultivated specimen. Reported to be inhabiting open valleys, river banks and forest margins.
H. pachyscapa Maekawa
Hosta Hill R.G. ©W.G. Schmid 1989.05.27

H. pachyscapa Bud initial and sterile bracts
© 1988 W.G. Schmid
NOTE: The following morphology is identical to Maekawa’s diagnosis. It is based on wild collected vouchers cultivated in Hortus Kikuti. It was collected by Toyama in the province of Ōmi and is the type specimen for this species vouchers cultivated at H.H. R.G. are identical and conform to this type.

**H. pachyscapa Maekawa**  
(ベンケイギボウシ)  
Ōmi-no kuni (近江国) Shiga-ken (滋賀県)  
Summers No. 184 1969 (Japan; Craig/Miyazawa)  
Cult. Hosta Hill R.G. ©W.G. Schmid 1988.06.25

**Plant Morphology:**  
Plant size 65–90 cm dia. by 50 cm high (26–36 by 20 in.). Petiole 20–30 cm by 1.2 cm wide (8–12 by 0.5 in. wide), erect, green, lightly purple-dotted at base. Leaf 12.5–20 cm by 7.5–15 cm wide (5–8 by 3–6 in.), spreading horizontally, en-ire, ovate-elliptical to ovate, truncate and contracted at base, generally flat surface, but slightly undulate in the margin, shiny medium green, lighter green below, tip acuminate. Venation 7–8, slightly sunken above, smooth below. Scape 70–125 cm long (28–50 in.), to 1.2 cm (0.5 in.) diameter, rising upwards, but leaning, purple-dotted at base and at tip, later bending under weight of wet flowers and seed. Sterile bracts, several large, leaf-like; fertile bracts, navicular, imbricate, green with purple margins, persistent. Raceme 30–50 flowers, evenly spaced, but densely arranged.
along the raceme. Flowers 4.5 cm long and 3.5 cm broad (2 by 1.50 in.), tepal Type B (Schmid 1991), but very pale purple-violet, gradually expanding, angled to axis of perianth, stamens exceeding the perianth. June/July. Anthers purple-dotted. Fertile.

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

Pollen: (Pollen shape after Erdtman, 1966): H. pachyscapa (H. ‘Pachyscapa’) and H. densa were held to be synonymous with H. kiyosumiensis, which has Subtype RG(VIII) (rugulate granulate): OS (oblate-spheroidal); size P 71.0 ± 4.7 x E 67.1 ± 6.8 (Sizes given in µm ±2–10% polar axis (P) x equatorial axis (E)) as typified by M.G. Chung and S.B. Jones, 1989). Chung and Jones did not include H. pachyscapa (H. ‘Pachyscapa’ and H. densa) in their research so Hosta pollen morphology does not offer classification data.

Genome Size: DNA content (2C) in pg (one (10^-12) gram) = 22.0 ± 1.09. (Zonneveld, B.J.M. and F. Van Iren (2001). Zonneveld (2001) determined that this taxon has very low fertility and that the genome size for H. pachyscapa (± 22.0 pg) is less than H. kiyosumiensis (± 24.3.0 pg), i.e., they are differentiated and not the same species.

DNA Banding: (Y. Yu, 2002; Sauve, R.J., S. Zhou, Y. Yu, and W.G. Schmid. 2005). In additions to other taxa, the banding patterns of H. pachyscapa and H. densa were compared in the 2002/2005 study. The 2 species shown in the banding pattern (18 = H. densa; 19 = H. pachyscapa) were compared using primer OPB-12(5'- CCTTGACGCA-3'). The single primer generated three bands (as shown in Fig. A to the left). One marker band was produced for H. densa (850bp) and two marker bands were produced for H. pachyscapa (981bp and 644bp, allowing for the differentiation of these taxa. The 850bp band is a polymorphic band common also to H. tardiva, H. takahashii, and H. tibae.
Taxonomic Type and Synonymy:

**H. pachyscapa** Maekawa.


Typus: Based on the cultivated plant; coll. M. Toyama, Inae (稲枝), (近江国; Ōmi-no kuni), Shiga-ken (滋賀県); in hortus TI. Hab. in Shiga-ken (滋賀県) and Shizuoka-ken (静岡県), southern Chūbu-chihō (中部地方) and Kansai-chihō (関西地方), central Honshu, Japan.

**Japanese Synonyms:**
ベンケイギボウシ = 弁慶擬宝珠 = Benkei Giboshi = “Strong Man” Hosta (meaning “with stout scapes”).

**Horticultural Synonyms:**

H. “Craig No. C-1” Craig/Summers No. 184.
H. ‘Pachyscapa’ sometimes in horticultural use.
Color Note:
Some photographs were taken in bright sunshine and the green is much brighter and lighter in color than some others taken under overcast sky. The leaf color is a medium green that appears brighter in sunshine as the illustrations show.

H. pachyscapa (elongating bud initial)

H. pachyscapa ►►►
Summers No. 184 1969
(Japan; Craig/Miyazawa)
(Cultivated Specimen)
Scapes reaching 1m (40 in.)
Hosta Hill R.G.
Photo © W.G. Schmid 1988.07.17
H. pachyscapa (cultivated specimen in garden setting)
Hosta Hill R.G. ● © W.G. Schmid ● 1990.05.16

H. pachyscapa (Cultivated Specimen)
Close-up of Flowers
Hosta Hill R.G.
Photo © W.G. Schmid
1989.07.19
Leaf mound in the landscape (1989.05.27) ▲
Closeup of sterile bracts (1989.07.22) ►

_H. pachyscapa_
(Cultivated Specimen)
Hosta Hill R.G.
Photo © W.G. Schmid 1989

_H. pachyscapa_ (Cultivated) scape bending past horizontal with seed pods
Hosta Hill R.G. ● Photo © W.G. Schmid ● 1990.08.16
**Hosta pachyscapa in Cultivation:** This cultivar is infrequently seen in gardens. This is unfortunate because it is a large specimen hosta with impressive, tall scapes, many attractive flowers and shiny, bright green leaves. The North American specimens came from Jack E. Craig, who resided in Japan for a period of time and reported on a number of field trips where he examined wild populations and collected some specimens (Craig; personal communication). He and another collector (Leroy B. Davidson) were assisted in their explorations by Japanese botanists, among them Dr. Moria and Dr. Miyazawa, and several private Japanese collectors, including Hirano and Hamada. The cultivated type originated with Roy Davidson, who spent several years in Japan in the late 1960s. He was guided by Dr. A. Moriya of the Biology Department of Utsunomiya University (宇都宮大学) in Utsunomiya-shi (宇都宮市), who arranged several *Hosta* field explorations. Craig sent his collections to Alex J. Summers who numbered and identified them. In 1969, *H. pachyscapa* was identified as *H. “Craig No. C-1” Craig/Summers No. 184*. It seems that most specimens now cultivated were derived from this original clone.

**Horticultural Progeny:**

Note: *H. pachyscapa* is in cultivation but some of the plants are misidentified. Not all plants offered under this name are true. It has seen little use in hybridizing and only one cultivar has been registered, as follows:

*H. ‘Passionate Purple’ = ♀ *H. pachyscapa* × ♂ *H. ‘Sea Octopus’* by B. Kuk 2005

*H. ‘Passionate Purple’* (B. Kuk 2005)

Photo © by J. Altman (Hosta Library)
H. pachyscapa (Cultivated specimen)
Hosta Hill R.G.
Photo © W.G. Schmid
Dehiscing seed pods
1987.09.25

H. pachyscapa (Cultivated)
Scape bending past horizontal heavy with seed pods
Hosta Hill R.G. • Photo © W.G. Schmid • 1990.08.21
References:


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