

Part 4D

Hosta Species: Scape and Raceme

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Scape size (height and diameter), foliage, and aspect:

Scape and Raceme. All members of the genus carry flowers on a more or less elongated flower scape terminating in a more or less populated raceme. Some species, as for example *H. tibae*, *H. longipes* and *H. jonesii* produce branched scapes.

Scape Foliation:

The racemes bear fertile bracts from which single flowers emerge with the lower fertilized flowers already turning into seed pods on the same raceme (Fig. 1) as in *H. montana*. Along the scape, below the raceme, a varying number of sterile (flowerless), subtending bracts develop (Fig. 2 and 3). The latter can scarcely be seen in some species, as they are tightly wrapped around the scape and do not open as is typical of many cultivars in the *H. sieboldii* group (Fig. 3). In other groups the bracts open and extend away from the stem, presenting a leafy appearance as in many hybrids of *H. sieboldiana*, *H. montana*, *H. fluctuans* and *H. kikutii* (Fig. 4). In some taxa, fertile and



H. tibae Maekawa 1984

W.G.Schmid Photo • Hosta Hill, September 1986

sterile bracts develop to give the appearance of actual leaves of varying sizes along the scape. They are usually larger close to the ground and diminish in size towards the top of the raceme and the upper bracts may be fertile, i.e. subtend a flower. Conversely and occasionally, the bracts at the top of the raceme develop into large leafy shapes initially enveloping the bud, as for example in taxa belonging to the *H. kikutii* complex (Fig. 5). There is considerable variation in the development of bracts in all species and this is detailed in the species sheets.



Fig. 1 *H. montana* (cultivated)
Fertile Bracts, Open Flowers and Seed Pods

Scape Posture. Scapes grow from the rootstock in all directions, from vertical or near vertical (*H. nigrescens*), to obliquely bent (*H. kikutii*), and when taxa have long, flexible scapes, they become arching and even sub-horizontal. Some scapes grow almost flat along the ground, as in *H. 'Unazuki Soules'*, from *H. kikutii* var. *caput-avis*. It is important to note that these scape postures are to be judged shortly before full bloom (*anthesis*) on a dry scape. After seeds develop, the weight of seed or rain or irrigation water adhering to flowers distorts the scape angle abnormally. Types of scape posture used in this classification all based on the angle of degrees from the horizontal:

- Straight* = 80–90°, erect.
- Oblique* = 20–80°, inclined, bending.
- Prostrate* = 0–20°.



Fig. 2 Large Sterile Bract



Fig. 4 Large Fertile Bracts



**Fig. 3 Stem-clasping
Sterile Bract**



***H. nigrescens* With Tall,
Upright Scapes**



***H. 'Unazuki Soules'*
Prostrate Scapes**

Number of flowers per raceme:
The number of flowers produced by each individual of a natural populations varies considerably. Environmental factors play a considerable role and even within a given population the degree of competition with its own as well as other competing plants determines fertility. Many other factors are involved. Suffice to say, that in cultivated examples of species, the number of flowers produced usually exceeds that of like species growing in the wild. Just as individual plant sizes vary considerably within a population, so the number of flowers per raceme does likewise. In some species it is

normal to produce a small number of flowers, as in *H. longipes* var. *sparsa* as shown in a H. Sugita photo, which produces 4 to 6 flowers on a raceme, while *H. montana*

will have 30 to 60 flowers per raceme. *H. tibae* (see photo on Page 1) can have as many as 110 flowers on branching scapes. Environmental conditions will affect the flowering to a considerable degree. Cultivated species exposed to prolonged drought in summer will abort flowering altogether.

Scape dimensions: The total height of the scape including the raceme is indicated in the individual species sheets. Due to variability in the orientation of the scape, scape height (when measured vertically from ground to raceme tip) is obviously not the same as scape length, when measured along the scape. In this classification scape height is disregarded in favor of the actual length of the scape measured along the scape from the crown at ground level to the tip of the raceme. Scape length (including the raceme) varies from 2–3 inches to 8 feet (5–7 cm to 2.4 m). Scape thickness also varies considerably. Some taxa like *H. pachyscapa* have been measured to have a diameter at ground level of 14 mm (a little over 0.5 inches). Not all scapes are that robust and the diameter appears to have some correlation to height, as expected. Small species with short scapes have scape diameters of 3 to 6 mm (0.125 to 0.50 inches).



***H. longipes* f. *sparsa* (T.Nakai) W.G.Schmid 1991 stat. nov.**
Difficult Growing Conditions Reduce Flowering in the Native Habitat
Hab.: Tenryu River, Shizuoka-ken