

THE  
UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

AND

OREGON STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATION

AND

WASHINGTON STATE UNIVERSITY AGRICULTURAL RESEARCH CENTER

NOTICE OF THE RELEASE OF 'BASHAW'  
DOUGLAS SPIREA (Spiraea douglasii Hook.)

Notification of the naming and release of 'Bashaw' Douglas spirea.

'Bashaw' Douglas spirea, Spiraea douglasii Hook., or hardhack is a vegetatively propagated cultivar recommended for use in streambank stabilization, rehabilitation of riparian areas, and restoration of freshwater wetlands. In low maintenance plantings on poorly drained, heavy textured soils, it has performed better than many willows and redosier dogwood. Attractive, fragrant, pink flowered panicles increase its value for highway beautification, natural area landscaping, and recreation areas plantings. It can be utilized on acid, moist, wet, or boggy sites in full sunlight where shrubby thickets are desired. Disadvantages for ornamental use include a propensity to sucker, persistent brown seed heads, and late season chlorosis on certain sites. While the suckers help 'Bashaw' spread, they can be easily controlled. The most vigorous and attractive spring regrowth and flowering occurs in conjunction with new, single stemmed, basal branches, especially after winter pruning.

'Bashaw' Douglas spirea is a small, native, suckering shrub 1-2 meters (m) [3-6 feet] tall with spreading, cane-like branches or short stemmed twigs on older growth. Its oblong leaves are toothed above the middle and covered with tangled, wooly hairs beneath. The small flowers are born at the end of stems in dense, pyramidal panicles from late June through early August. The name 'Bashaw' is indicative of the kind of fine textured, ponded soils on which Douglas spirea often thrives.

'Bashaw' Douglas spirea was first assigned the accession numbers CO-292 and 9019297 by the Soil Conservation Service. In January, 1990, it was officially designated PI-540383 under the name Spiraea douglasii Hook. by the USDA Agricultural Research Service.

Origin: 'Bashaw' Douglas spirea originates from several specimens growing near South Lake Stevens Road in Snohomish County, Washington. Vegetative cuttings were first obtained from the site in February 1980 by David Noble of the Soil Conservation Service (SCS). After testing, six cuttings were used by the SCS Corvallis Plant Materials Center to provide source material for the foundation cutting block established in 1984. Visually, 'Bashaw' appears to be derived from a single clone.

Description: 'Bashaw' Douglas spirea is a dense, multistemmed, freely branching, small shrub, 1-2 m high, 1-2 m wide, with an upright to spreading form. While the older bark is brown and glabrous, young growth is reddish-brown and semi-wooly with fine, soft, crisped hairs. The appearance of 'Bashaw' is typical of var. douglasii which can be distinguished from other phases by its leaves which are characteristically grayish-tomentose on the lower surface and its inflorescences and calyces which are finely tomentose (Hitchcock et. al. 1969). Leaf blades are deciduous, oblong-elliptic or more nearly ovate-oblong in shape, remotely serrate above the middle, 3-10 centimeters (cm) in length, medium green above (sometimes becoming yellow by mid-season), and paler (grayish) and tomentose beneath. Panicked inflorescences are 7-25 cm long, conic, several times longer than wide and tomentose. Petals are rose-pink, 1.5-2 millimeters (mm) long, and orbicular-elliptic to obovate. The flowers are perfect and appear powdery from minute, anther-tipped, projecting stamens. Seeds are light brown, linear, tapering at both ends, cellular-reticulate, and about 2 mm long. The leaf buds break by mid-April. Leaf fall usually occurs by the first of December in western Oregon.

Adaptation: 'Bashaw' Douglas spirea is best adapted to moist, acid, well drained to poorly drained, medium to fine textured soils. On upland sites, annual precipitation should exceed 1525 mm (60 inches). Adequate growth on coarser soils requires temporary ponding, additional precipitation, surface runoff, or irrigation. Known area of adaptation includes low elevation wetlands and streambanks west of Cascade Mountain ridge in western Oregon, western Washington, and northwestern California where the average annual minimum temperature exceeds -17.7 C (0 F) [USDA Plant Hardiness Zones 7a-9b as defined by H.M. Cathey, 1990]. Potential area of adaptation includes the natural range of the species and other regions of similar climate and soils.

S. douglasii inhabits bogs, marshes, damp meadows, lake margins, and stream borders below 1800 m (6000 feet). Its native range extends from Alaska to northern California and east to Idaho, although var. douglasii is restricted to an area west of the Cascades (Hitchcock, et. al. 1969). The species appears to prefer full sunlight.

Performance: 'Bashaw' Douglas spirea or 9019297 was evaluated in a common garden nursery against 30 accessions (individual clones or ecotypes) from 1980 through 1985. Accession 9019297 was selected as one of the two best plants or sources in the study. It was chosen for its higher vigor, denser branching, good suckering characteristics, large attractive flowers, and stem size. On an upland site without irrigation at the Corvallis Plant Materials Center (40 inch ppt.), 'Bashaw' attained a height of 1.15 m (3.8 feet) after three years and 1.38 m (4.6 feet) after five years. In another study (1984-1990), it survived and performed better than redosier dogwood and all seven willows tested. The site was a poorly drained clay and competition from meadow foxtail grass was severe following the year of establishment..

In other tests, 'Bashaw' demonstrated rapid establishment and initial growth. Data from 32 low maintenance streambank or wetland plantings in western Oregon and Washington indicates an overall survival rate of 50 percent after one to six years. However, where proper site selection and planting methods are used, survival is up to 90 percent. On heavy textured soils with abundant spring moisture, good vigor probably adds to the species inherent ability to compete with weedy grasses and forbs.

Propagation: 'Bashaw' Douglas spirea is a vegetatively propagated cultivar. Fifteen to 20 cm (6-8 inches) cuttings, 6-10 mm in diameter will root in moist potting medium under greenhouse conditions without the addition of hormones. However, in one rooting trial with 20 cm cuttings, root development was substantially hastened by the use of 5000 ppm IBA compared to several commercial powders, dips, captan fungicide, and the control. A bottom heat of 24 C (75 F) was applied to all treatments.

Direct field planting of unrooted dormant cuttings, 30 to 50 cm (12-20 inch) in length, has yielded mixed results. Materials should be obtained from healthy, nursery grown mother plants that are properly hardened off. When cuttings are inserted, at least two-thirds of the stem is below ground and in contact with moist soil. The soil should be tamped around each cutting to secure the plant and eliminate air pockets. March or early April is usually the best time of year to plant. One meter (3 foot) cuttings, 1-0 containerized plants, or bare-root stock may survive better, especially in late spring or on drier sites where water tables are low or receding.

Minimum spacing for most rehabilitation plantings along streams of low velocity is 60 cm by 60 cm (2 feet by 2 feet). Weed control is important for maximum growth and survival. Planting a mixture of species, including willows, dogwood, and other riparian shrubs, may achieve the most desired results in terms of long term stabilization and fish and wildlife habitat improvement. Bundles of large branches and canes may find application in soil bioengineering.

Material Distribution: Foundation stock will be available January, 1990 in limited quantities to commercial nurseries, agricultural experiment stations, researchers, and arboretums through the Oregon State University Seed and Plant Certification Program, Corvallis, Oregon 97331. The USDA, Soil Conservation Service, Plant Materials Center, 3420 NE Granger, Corvallis, Oregon 97330 will maintain original mother plants for supplying certified stock. Material should be available commercially by January, 1991.

#### References:

- Cathey, H. M. 1990. USDA Plant Hardiness Zone Map. Miscellaneous publication number 1475. US Department of Agriculture, Agricultural Research Service. US-GPO, Washington D.C.
- Hitchcock, C. L., et. al. 1969. Vascular Plants of the Pacific Northwest. University of Washington Press, Seattle and London.

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