bservations

The 26 taxa of *Artemisia* were observed for winter hardiness, cultural adaptability to the soils and conditions of the evaluation site, disease and pest problems, and ornamental attributes including foliage and habit quality, plant size, floral display and spreading potential. Eighteen of the 26 taxa survived all four years of the study. Plant traits and evaluation information for the taxa that completed the study are shown in Table 1. A summary rating was assigned to each plant

were *Artemisia* 'Silverado', *A. absinthium* 'Silver Frost', *A. frigida*, *A. ludoviciana* 'Silver Bouquet' and *A. purshiana*. Excessive soil moisture, rather than flowering stress, affected the habits of *A. sericea* and *A. stelleriana* in late summer, causing open crowns and some stem loss. The health and habits of *A. lactiflora* and *A. lactiflora* 'Guizhou' were not adversely affected by flowering.

The artemisias that had some degree of winter injury in one or more years are noted in Table 1. Winter injury ranged from partial crown loss to death of plants. All plants of *Artemisia* 'Huntington', *A.* 'Mrs. G. Reed', *A.* 'Powis Castle' and *A. arborescens* 'Porquerolles' died during the first winter of 1993-94. 'Powis Castle' and 'Porquerolles' were replanted in 1994 and 1995, but died in each subsequent winter. *Artemisia* 'Mrs. G. Reed' and *A.* 'Huntington' were not retested, so lack of winter hardiness was not confirmed. Excessive soil moisture during winter months, rather than cold temperatures, was the cause of the decline and death of plants of *A.* 'Silverado', *A. frigida*, *A. pontica*, *A. stelleriana* and *A. stelleriana* 'Silver Brocade'.

While artemisias are not known for dramatic floral displays, flowers can be ornamental in some species, and the taxa with flower buds and/or flowers that added ornamental or textural interest are noted in Table 1. However, with the exception of *Artemisia lactiflora* and *A. lactiflora* 'Guizhou', the flowers of all taxa ultimately detracted from the ornamental display or caused a decline in plant health. Browning lower leaves, a decrease in the intensity of leaf color, stem laxity and off-color flower parts marked this deterioration. The decrease in the ornamental aspect of the flowers and a decline in general plant health usually began shortly after flowers opened or as flowers faded.

Artemisia absinthium 'Lambrook Silver' was one of the best artemisias overall. The dissected, silver-gray leaves were complemented by attractive, airy panicles of yellow flowers in midsummer. The graceful, arching habit was akin to that of *A.* 'Powis Castle', except that the leaves were not as fine-textured. Open crowns were observed beginning with flower production in early July; however, when plants were cut back to basal shoots in late August, vigorous stem regeneration resulted. Although minor crown injury occurred in the winters of 1994-95 and 1995-96 and melt-out was observed following heavy rainfall in August 1995, 'Lambrook Silver' performed much better than *A. absinthium* and *dissectedvah minor croand wheace TD .ved*

Michael P. Harvey

were severely injured in one or more winters, ultimately diminishing the health of the remaining plants in subsequent years. Wet winter soils were the cause of crown damage or plant loss for these taxa. Cold hardiness was the primary cause of death for *A.* 'Powis Castle' and *A. arborescens* 'Porquerolles'; however, each year the new plants grew quickly and robustly, and remained ornamental until dying back in the fall. Plants of *A. absinthium* and *A. absinthium* 'Silver Frost' both declined to very poor condition by the end of 1994 due to melt-out and flowering stress. Severe crown damage occurred on *A. absinthium* and *A. absinthium* 'Silver Frost' over the winters of 1994-95 and 1995-96; plants remained weak and did not recover during the subsequent growing seasons.

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Not all artemisias can be recommended for growing under general garden conditions. Cultural issues related to soil moisture and humidity caused some artemisias to decline during the growing season or be killed over the winter. In addition, the rhizomatous nature of many artemisias makes them weedy or potentially aggressive. Six of the 26 taxa of *Artemisia* received high ratings based on good plant habit and health, cultural adaptability and winter hardiness. The top-rated plants, which express the diversity of the genus, include *Artemisia absinthium* 'Lambrook Silver', *A. alba*, *A. lactiflora*, *A. lactiflora* 'Guizhou', *A. ludoviciana* 'Valerie Finnis' and *A. schmidtiana* 'Silver Mound'.

The artemisias tested were relatively pest- and disease-free plants, but certain cultural conditions caused problems for plant health and longevity. The most prevalent problem for the silver-leaved artemisias was crown melt-out caused by excessive soil moisture and humidity. Other health and habit issues affecting the artemisias included open crowns, floppy to lodged stems and winter injury caused by wet soil conditions and/or cold temperatures. Open crowns due to floppy or lodged stems were observed on most of the taxa in late summer to early fall. In all cases, new growth began after flowering was completed, and many taxa rebounded to improved health by the end of the season. Although the artemisias were not routinely cut back in the trial, stems can be pruned hard in mid- to late summer to rejuvenate the plant's health and habit.

Artemisia flowers are not significantly ornamental although the buds or flowers can add textural interest to the plants. Unfortunately, the health of the silver-leaved taxa generally declined during or following the flowering period. Removing flower buds or deadheading is recommended to keep plants healthy throughout the summer months. *Artemisia lactiflora* and *A. lactiflora* 'Guizhou' were the only artemisias in the trial grown specifically for their ornamental floral display.

Approximately one-half of the test group had some level of winter damage, ranging from crown injury to complete plant loss. A lack of cold hardiness was noted for *Artemisia* 'Mrs. G. Reed', *A.* 'Powis Castle', *A.* 'Huntington' and *A. arborescens* 'Porquerolles'. 'Powis Castle' and 'Porquerolles' were retested and determined to be tender perennials that are not reliably hardy in Zone 5. *Artemisia absinthium* 'Lambrook Silver' is a good hardy replacement for 'Powis Castle' because of the similarity of the habits and foliage. Excessive soil moisture, rather than cold temperatures, occasionally affected plant habits or caused winter injury of some artemisias. *Artemisia* 'Silverado', *A. frigida*, *A. pontica*, *A. stelleriana* and *A. stelleriana* 'Silver Brocade' were particularly affected by too much soil moisture, resulting in a general decline in health followed by loss of plants during winter. Consequently, planting artemisias in lighter soils with sharp drainage may reduce the potential for winter injury or loss of these taxa.

Foliage plants are increasingly gaining attention in the perennial garden, and the silver-leaved artemisias are handsome additions wherever they are grown well. Their lacy, silver leaves provide perfect foils for the colors and textures of adjacent flowering plants. In addition, foliage color and texture are ornamental qualities that make artemisias first-rate perennials in their own right. Perhaps not all artemisias are suitable to all gardens or climates, but providing an appropriate environment will ensure healthy plants and a beautiful display. Artemisias are versatile perennials for containers, perennial borders and rock gardens.

Refe e ce

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