

Low-Maintenance NATIVE PERENNIALS

Find out which native perennials are best for you to retail.

By Andrew Thomas
and Denny Schrock



Within the last 10 years, the interest in using native plants for landscape purposes has increased tremendously, and nurseries are struggling to keep up with the demand. Both urban and rural gardeners are gradually discovering the ornamental potential and benefits of their indigenous flora. Much more

information is needed, as this developing trend in landscape horticulture gains momentum and interest.

For herbaceous perennials, the progression of plant characteristics through the seasons can be important considerations. Seasonal bloom, foliage color variations and plant architecture through winter months may all contribute to the effectiveness of the species in the garden. The

objectives of this study were to determine the year-round landscape potential of 60 selected perennials native to the Midwestern United States and to document their survival and performance under low-maintenance landscape conditions in southwest Missouri.

THE EXPERIMENT

A variety of horticultural data, including size, shape, bloom peri-

od, season-long appearance, flower and fruit characteristics, fall color and survival was collected over six growing seasons from 1995-2001 at the University of Missouri-Columbia's Southwest Research Center near Mt. Vernon, Mo.

The site is flat and exposed to full sun and strong southwesterly summer winds. The soil is moderately well-drained. During the study, annual rainfall ranged from 37½ inches in 2000 to



Top: *Eupatorium coelestinum*. Bottom left to right: *Amorpha canescens*; *Eryngium yuccifolium*; *Phlox maculata*; *Baptisia australis*. (Photos courtesy of USDA)

approximately 46½ inches in 1998, but the growing seasons of 1995, 1998, 1999, 2000 and 2001 were all considered drought years because of below-normal rainfall during the growing season.

Maximum summer temperatures ranged from 95° F in 1997 to 106° F in 2000, while minimum winter temperatures ranged from -13° F in 1997 to 1° F in 1998.

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fabric was anchored on top of the ground over the assigned beds to suppress weed growth. The young plants were transplanted through small holes cut into the weed barrier fabric, which was then covered

with a thin layer of wood chips. Once the plants were well established, no supplemental irrigation was provided. Plants were never fertilized. Top growth of all plants remained in place until late winter, at which time it was cut back and removed. Otherwise, no pruning, shearing or staking of plants occurred. Insect and disease problems were allowed to develop without intervention in order to evaluate each taxon's attractiveness and resistance to pests.

No data were recorded during the establishment year. In subsequent years, the following data were collected: at full bloom — plant height, plant width, plant growth habit, primary and secondary flower color, flower effectiveness and flower coverage; at full fruit stage — fruit color, fruit effectiveness, foliage color and foliage texture/type. Length of bloom, fruiting stages and fall foliage color were also documented. Additional positive and negative attributes were documented, such as fragrance, lodging, aggressiveness, attractiveness to desirable or beneficial fauna, insect pests and diseases. A plant quality rating documenting the species' general attractiveness throughout the season was recorded every two weeks from April through October each year. See Figure 1, right.

RESULTS AND SUGGESTIONS

Many of the native plant taxa in this study exhibited good to excellent potential performance in a low-maintenance landscape ▶



Callirhoe involucrata.

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Figure 1. Characteristics of 60 native perennials in response to a low-maintenance setting at the University of Missouri's Southwest Center, Mt. Vernon, Mo.

Taxon name	Flower effectiveness	Season-long quality
<i>Allium cernuum</i>	3.3	3.4
<i>Amorpha canescens</i>	3.7	3.6
<i>Amorpha nana</i>	4.0	3.4
<i>Amsonia ciliata</i>	4.0	3.6
<i>Amsonia illustris</i>	3.7	3.9
<i>Aruncus dioicus</i>	3.0	3.1
<i>Aster laevis</i>	2.8	3.1
<i>Aster linariifolius</i>	3.0	3.1
<i>Aster oblongifolius</i>	4.0	3.6
<i>Baptisia australis</i>	4.0	3.1
<i>Callirhoe bushii</i>	3.8	2.6
<i>Callirhoe digitata</i>	3.6	2.5
<i>Callirhoe involucrate</i>	3.8	3.2
<i>Calylophus lavandulifolius</i>	3.7	3.3
<i>Calylophus serrulatus</i>	3.0	3.6
<i>Ceanothus americanus</i>	3.0	3.7
<i>Coreopsis palmata</i>	3.7	3.3
<i>Dalea purpurea</i>	3.5	3.7
<i>Echinacea pallida</i>	4.0	3.6
<i>Echinacea paradoxa</i>	4.0	3.7
<i>Echinacea tenesseeensis</i>	3.8	3.7
<i>Eryngium yuccifolium</i>	3.0	3.5
<i>Eupatorium coelestinum</i>	3.7	3.7
<i>Filipendula rubra</i>	2.5	2.5
<i>Gaura lindheimeri</i>	3.3	3.7
<i>Genista tinctoria</i>	4.0	3.4
<i>Geranium maculatum</i>	2.5	1.8
<i>Geum triflorum</i>	3.7	3.4
<i>Gillenia stipulata</i>	2.6	2.6
<i>Heuchera richardsonii</i>	1.3	2.8
<i>Lespedeza capitata</i>	1.6	2.9
<i>Liatris aspera</i>	4.0	2.9
<i>Liatris microcephala</i>	2.3	3.6
<i>Liatris pycnostachya</i>	4.0	3.8
<i>Melica nitens</i>	3.0	3.0
<i>Monarda bradburiana</i>	3.7	3.4
<i>Monarda punctata</i>	3.7	3.0
<i>Penstemon campanulatus</i>	3.5	2.9
<i>Penstemon cobaea</i>	4.0	2.5
<i>Penstemon grandiflorus</i>	3.0	2.1
<i>Penstemon pinifolius</i>	2.7	3.0
<i>Penstemon tubaeflorus</i>	4.0	3.1
<i>Phlox maculata</i>	4.0	3.4
<i>Potentilla arguta</i>	4.0	2.9
<i>Potentilla recta</i> 'Warrenii'	4.0	3.1
<i>Pycnanthemum virginianum</i>	3.7	3.4



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situation, while some were consistently less attractive or possessed challenging characteristics that may require appropriate management if they are to be successfully used.

The following taxon had high season-long quality ratings, indicating an outstanding and overall potentially useful plant.

***Amorpha canescens*, lead plant.** Excellent, tough, small woody shrub; attractive small grayish leaves and fruits with showy purple flowers; brief bloom period; drought tolerant.

***Amorpha nana*, dwarf false indigo.** Excellent, very small woody plant; compact form and shape; showy but small purple flowers; attractive fruits; drought tolerant.

***Amsonia ciliata*, fringed blues-tar.** Beautiful, small plant; short-lived pale blue flowers in early spring; excellent shiny foliage retained nicely all summer; attractive golden yellow fall color; drought-tolerant.

***Amsonia illustris*, Ozarks blue star.** Excellent, beautiful, tough plant; brief pale blue flowers in early spring; superb glossy foliage remains attractive all season; forms large sturdy non-woody "bush" with nice form; long thin seed pods add interest; attractive to aphids and stink bugs but unharmed by them; excellent yellow fall color; drought tolerant.

***Echinacea paradoxa*, yellow coneflower.** Attractive, large, erect plant with tall, stately form; bold yellow flowers leaving behind large purplish-brown fruits (cones); drought tolerant, but leaves may become brown late in season.

***Echinacea tennesseensis*, Tennessee coneflower.** Tough, long-lived plant; much shorter than other echinacea, with ray flowers not recurved; beautiful soft pink-purple flowers with long bloom and continued sporadic bloom time; drought tolerant, but ray flowers and leaves may turn brown.

***Eryngium yuccifolium*, rattlesnake master.** Tall, coarse and unique plant that appears spiny but is nevertheless handsome; individual flowers are white but rather indistinguishable within inflorescence; attractive to butterflies and other colorful insects;

interesting fruits dry and turn brown, remaining intact and upright through winter; leaves occasionally turn brownish in later summer.

***Eupatorium coelestinum*, blue mist flower.** Beautiful plant with nice short form; unique delicate true blue flowers in late summer/early fall when little else is blooming; tends to seed around but not aggressively;



Top: Penstemon cobaea; Middle: Potentilla recta;
Bottom: Solidago Canadensis.

re-seeds and may not be a long-lived perennial; emerges very late in spring; wilts in drought but survives and recovers nicely when rain returns.

***Phlox maculata*, meadow phlox.** Excellent, beautiful plant with nice, formal, erect form; spectacular pink purple flowers with long bloom period and sporadic re-bloom; occasionally turns brown and unattractive in drought, although apparently drought tolerant as long-term survival has been excellent.

***Ratibida columnifera* 'Red', Mexican hat.** Superb, tough plant that blooms nearly all summer; spreads around but not weedy; interesting multi-colored red to orange to yellow cone-type composite flowers produced profusely; grayish fruits attractive; may lodge but does not usually detract from appearance because plants grow together into masses; drought tolerant.

***Ruellia humilis*, fringleaf wild petunia.** Nice, tough, short, resilient plant; small blue-lavender flowers and dark fruits are individually attractive but not particularly effective overall; long bloom period; tends to seed around but is not weedy; drought tolerant but may brown in late summer.

***Salvia azurea*, azure blue sage.** Large, sometimes disorderly plant; spectacular, profuse deep blue flowers persist over long period in fall when little else is blooming; nice gray-green foliage; attractive to migrating monarch butterflies and other insects; few fruits are produced or are insignificant; drought tolerant but may wilt in extreme heat; excellent long-term survival.

The following taxon had some distracting characteristic such as sporadic dormancy, disorderliness or unappealing infructescences but were nonetheless garden worthy. These plants would still have a place in a low-maintenance garden but should have careful attention paid to placement and use.

***Baptisia australis*, blue wild indigo.** Plant habit is open and unique; stunning in bloom with profuse racemes of deep blue flowers; interesting large seed pods turn from green to black

and persist; drought tolerant but are often dry and turn black in late summer, going dormant or snapping off, but survive.

***Callirhoe involucrate*, purple poppy mallow.** Stunning, vigorous, tough plant that is highly recom-

mended; ground cover often spreading 3-5 feet; excellent bright foliage through mid-summer; profuse numbers of bright magenta-purple flowers with long bloom period and sporadic re-bloom throughout much of summer; new

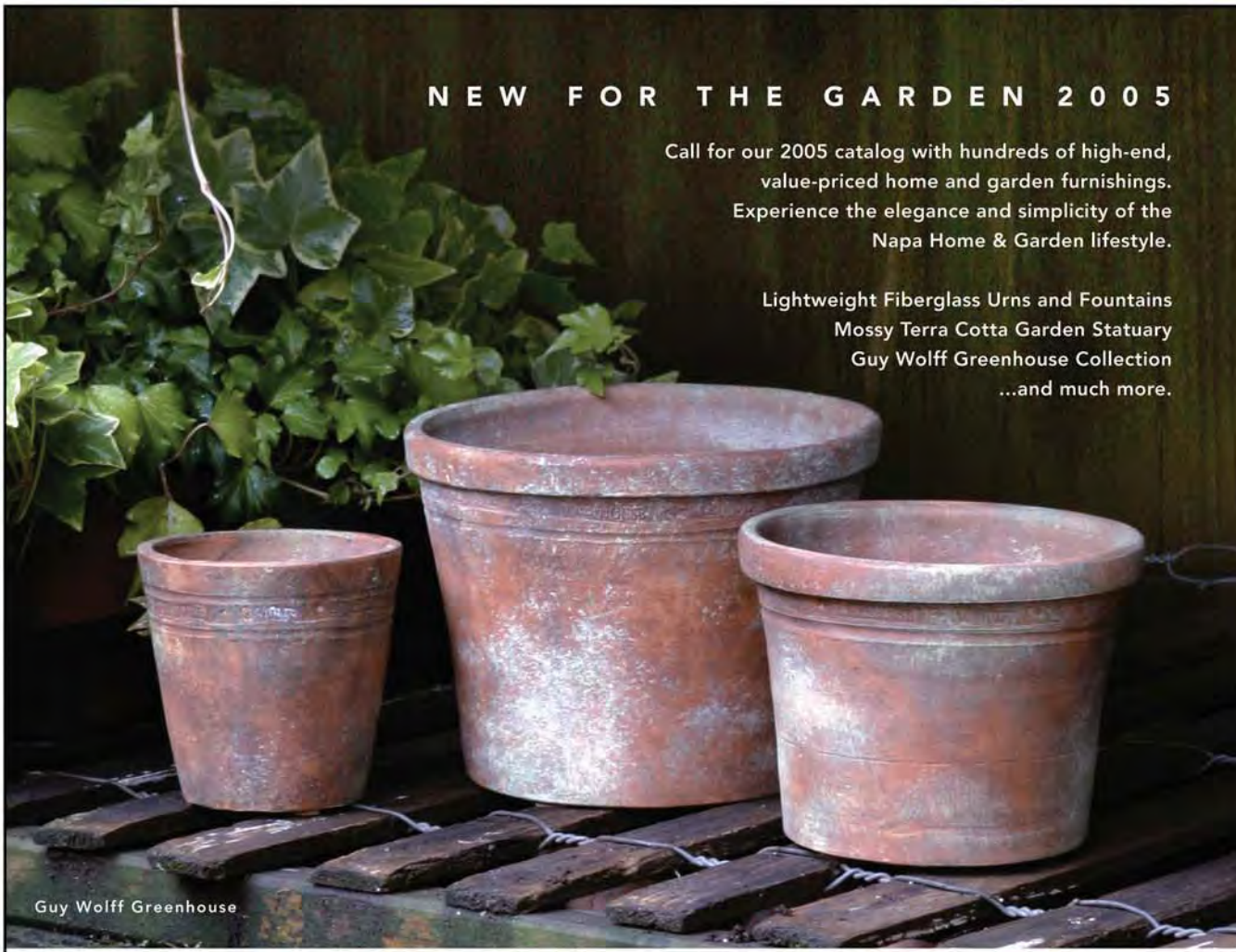
plants appear sporadically but not aggressively; often becomes leggy and brownish in late summer when it could be cut back; attractive new foliage growth in fall.

***Geum triflorum*, prairie smoke.** Unique, very short, generally

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evergreen plant; tends to form a non-spreading groundcover; very early, spectacular, delicate, feathery, pinkish flowers with showy red bracts; fruits not evident but flowers persist, and remain showy

long after bloom; foliage deep green with a touch of red or purple throughout fall and winter; drought tolerant but may wilt or brown if severe; very persistent and long-lived in the study.

Penstemon cobaea, **cobaea beard-tongue**. Short multi-stemmed plant with glossy foliage; spectacular early spring bloom with masses of large bluish-purple flowers that attract bumblebees; drought toler-

ant but stems lodge and foliage generally turns brown and unattractive in late summer; fall regrowth of foliage is attractive; very persistent.

Potentilla recta 'Warrenii', **sulphur cinquefoil**. Showy small plant with excellent form; masses of bright yellow flowers that persist and re-bloom over several weeks, often blooming again in late September; seed pods abundant and interesting; some new green foliage growth in fall; apparently drought tolerant but foliage often turns brownish in late summer while remaining attractive with dried seed pods. Native to Europe but naturalized and common throughout the Midwestern United States.

Pycnanthemum virginianum, **Virginia mountain mint**. Nice, sturdy, long-lived plant with excellent gray-green foliage; creamy-white flowers attractive to bumblebees and butterflies; foliage and fruits slightly fragrant; dried gray infructescences attractive and persist through winter; drought tolerant but may brown in late summer.

Sisyrinchiu idahoense, **Idaho blue-eyedgrass**. Small, attractive, useful plant with deep green grass-like foliage; spectacular dark purple flowers with deep yellow centers are small but effective up close; could be used effectively as groundcover or in masses; very persistent.

Solidago canadensis 'Golden Baby', **golden baby Canada golden-rod**. Tough, reliable, short, multi-stemmed plant; large pale yellow inflorescences topping every branch; flowers unevenly in mid-summer; gray infructescences attractive and persistent; leaves remain green well into winter; drought tolerant and long-lived; nicest of our three solidagos. 🌸

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