Glorious Goldenrods

Colorful mainstays of the garden from midsummer into fall, goldenrods also set the table for a diverse array of pollinators and other wildlife.

BY C. COLSTON BURRELL

The late-summer and fall blooms of showy goldenrod (Solidago speciosa) offer color for gardeners and food for pollinators such as this painted lady butterfly.

HE WANING DAYS of summer in Virginia, where I live, bring meadows awash with the effervescent yellows of goldenrods (Solidago spp.). A roadside stroll with a good wildflower identification guide in hand can easily turn up 10 species. This scene is repeated across North America as the brilliant cadmium yellow flowers of the 100 or so native species come into bloom.

Goldenrods are members of the aster family (Asteraceae), and the bulk of the world's species are native to North America, with the largest concentration east of the Rocky Mountains. The name Solidago, which translates from Latin roughly as "make whole," acknowledges the genus's long history of medicinal uses. It has been used to treat a variety of ailments ranging from snakebites to bee stings, sore throats, stomach aches, bleeding, and kidney stones. A beautiful yellow dye is also derived from the flowers.

For gardeners, goldenrods' primary allure is their late flowering season, helping bridge the color void from summer into fall. They are also long-lasting cut flowers. Numerous goldenrods are eminently gardenworthy, yet only a few species have made it into mainstream horticulture, partly because of a case of mistaken identity. Unfounded fears that the plant's pollen causes hay fever have kept American gardeners at arm's length, when the true culprit is ragweed (Ambrosia artemisiifolia), an annual that shares the wild places favored by goldenrods. The airborne pollen of ragweed is a potent allergen. Goldenrods are insect-pollinated, so pollen must be dispersed with the help of an insect.

The renewed interest in supporting pollinators has encouraged gardeners and plant breeders to take a second look at the beauty and diversity of goldenrods. "All the

The opulent fall display of rough-stemmed goldenrod (S. rugosa) flowers is presaged by a shimmering chartreuse haze of buds. This rugged plant grows one to five feet tall.

goldenrods attract a phenomenal array of pollinators," says Neil Diboll of Prairie Nursery in Westfield, Wisconsin. "The flowers are absolutely abuzz throughout the day with bees, butterflies, beneficial parasitic wasps, beetles, innocuous flies, beetles, and a multitude of other flower visitors."

Beauty, variety, and wildlife value notwithstanding, some goldenrods spread too aggressively via rhizomesunderground stems-to be good garden citizens. "American goldenrods present a definite love-hate relationship," Diboll acknowledges. "A few are thugs that should be avoided." Among these are Canada goldenrod (Solidago canadensis), tall goldenrod (S. altissima), flat-top goldentop (Euthamia graminifolia, syn. S. graminifolia), and giant goldenrod (S. gigantea).

GOOD CHOICES FOR THE GARDEN

Few perennials are as easy to grow as goldenrods. All tolerate a wide range of soil pH and moisture conditions, and once established, they withstand drought. Most species perform best in full sun or light shade, but in the following descriptions of recommended species and selections, I have included two that will thrive in a partly shaded site. Several additional choices are included in the chart on page 34.

As is the case with many plant groups, nomenclatural changes have resulted in a few species being reassigned to different genera; these are shown with both the new and former names.

■ GOLDENRODS FOR SUN Early goldenrod (S. juncea, USDA Hardiness Zones 3-8, AHS Heat Zones 8-1) is the first species to bloom-often appear-



GOLDENROD FLOWERS

Goldenrods have composite flowers called heads, which consist of a central disk and a sparse whorl of marginal



The flowers of early goldenrod (S. juncea) fall into the tree-branched category.

rays. Peterson's Field Guide to Eastern Wildflowers groups goldenrods based on the shape of the inflorescence, and I think this is a useful tool for organizing the species. The main categories are plume, tree or elm-branched, clublike, wandlike, and flat-topped. The plumed inflorescences are the most familiar. They have branched, often one-sided pyramidal clusters with flowers gathered on the upper side of the branches. The wand-flowered species have narrow, branched panicles with small leaves or leaflike bracts throughout the inflorescence along the nodes. ---C.C.B.

ing in July-long before you expect to see a goldenrod in flower. Showy tree-shaped inflorescences with drooping branches crown one- to three-foot-tall leafy red stems. Plants form tufted basal rosettes of smooth, deep green, slightly toothed leaves. One distinctive feature of this species is small tufts of leaves that form in the axils of the stem leaves. Mature plants form open leafy clumps with many stems radiating from the center. Early goldenrod's native habitat comprises meadows, savannas, open woods, and seashores from Nova Scotia and Minnesota south to Georgia and Missouri.

Gray goldenrod (S. nemoralis, Zones 2-9, 9-1) is a delicate yet sophisticated species with tufts of soft-hairy, elongated gray-green leaves in tidy clumps. The leafy flower stalks are crowned with elongated, narrow, one-sided flower plumes. Plants are quite variable in size, ranging from only six inches tall on poor dry sites, to up to two feet in rich moist soil. Mature clumps are tough as nails, tolerating winter snow and salt, summer drought, and occasional dog stops. This species is native to meadows, prairies, open woods, roadsides, and eroded slopes from Nova Scotia and Alberta, south to Florida and Texas.

Sweet goldenrod (S. odora, Zones 3-9, 9-1) is an upright, two- to five-foot-tall species with wiry black to ruddy stems sparsely clothed in smooth, lance-shaped foliage. The stems are crowned with open, one-sided, treelike flower clusters from July to September. "The foliage is anise-scented, and the plant as a whole is clump-forming and well-behaved," says Mary Ann King of Pine Ridge Gardens in London, Arkansas. Grow this goldenrod in relatively lean soil because plants are inclined to flop if the soil is too rich. It is found in dry, open woods, meadows, and dunes from Vermont and Ontario, south to Florida and Texas.

The flattened inflorescences of stiff goldenrod (Oligoneuron rigidum, syn. S. rigida, Zones 3-9, 9-1) give it a lovely, distinctive appearance. The broad and gently mounded flower clusters rise on two- to five-foot-tall stems, creating a brilliant yellow display in late summer. Mature plants form dense tufts of fuzzy basal and stem leaves. These are graygreen in summer and turn dusty rose in autumn. This striking plant is native to dry or moist prairies, meadows, clearings, and roadsides from Connecticut to Saskatchewan and south to Georgia and New Mexico.

The flower buds of rough-stemmed goldenrod (S. rugosa, Zones 4–9, 9–1) produce an attractive, chartreuse haze in advance of its spectacular bright and clear, multibranched vellow flowers, which bloom between September and November on leafy stems one to five feet tall. "This species is so tough, so hardy, it will grow in almost any type of soil," says King. A selection called 'Fireworks', notable for its eye-catching flower clusters, emerged as the top-rated selection in a trial at the Chicago Botanic Garden in 2000 (see



Stiff goldenrod (Oligoneuron rigidum, syn. S. rigida) is distinguished by flat-topped flowerheads.

"Resources," page 33). The species grows wild in open woods, meadows, and fallow fields from Newfoundland and Michigan, south to Florida and Texas.

Statuesque wands of seaside goldenrod (S. sempervirens, Zones 4–11, 10–4) are a memorable sight on coastal dunes. The showy, one-sided plumes have large flowers with straplike rays. Smooth, spatula-shaped basal leaves form decorative clumps, while lance-shaped stem leaves ascend the oneand-a-half to eight-foot-tall stems. This spe-



For perfect color harmony, it's hard to beat this combination of 'Golden Fleece' goldenrod and 'October Skies' aromatic aster (Symphyotrichum oblongifolium) at the New York Botanical Garden.



'Solar Cascade' goldenrod's arching stems pair well with 'North Wind' switch grass (Panicum virgatum) in this garden vignette that also includes obedient plant (Physostegia virginiana).

cies thrives on adversity. When robbed of its poor sandy soil and salt spray, it will gorge on nitrogen and flop over like Bacchus after an orgy. Plant them in lean, well-drained soil in full sun to keep them looking their best. Native to coastal dunes and open woods from Newfoundland to Florida and Texas, south to tropical America.

One of the newest goldenrods to make the rounds is 'Solar Cascade' (Zones 6-9, 9-1). This attractive selection of Short's goldenrod (S. shortii), a Federally Endangered species, was developed and released by the Cincinnati Zoo & Botanical Garden in an effort to conserve the species. A civilized clump-former, 'Solar Cascade' bears arching panicles of small bright

lemon-yellow flowers on one- to twofoot-tall stems from late summer into fall. Trim stems back to four inches in May to promote a more compact growth habit. In the wild, Short's goldenrod is restricted to a handful of isolated populations on rocky, limestone sites in Kentucky and Indiana. 'Golden Fleece', a selection of creeping

goldenrod (S. sphacelata, Zones 4-9, 9-1) has become a garden mainstay since its introduction by the Mount Cuba Center in Hockessin, Delaware, in 1989. Trailing stems with deep green, paddle-shaped leaves sport foot-tall inflorescences with stiff, horizontal, treelike branches. The clumps spread slowly to produce a well-mannered groundcover. The inflo-



Sources

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Resources

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rescence is nearly as attractive in bud as it is in flower. Copious brilliant yellow flowers open in August and September and last for many weeks. The species is found in open rocky woods, clearings, and roadsides in limy soils from Virginia and Indiana south to Georgia and Alabama.

The substantial wands of showy goldenrod (S. speciosa, Zones 3-8, 8-1) add dramatic bright yellow exclamation points to the garden in August and September. It gets its name from the alluring, erect, clublike inflorescences, which are gathered into dense, multistemmed clumps. The two- to three-foot-tall stems, tinged with deep red, are cloaked in stiff, bright green,

MORE GARDENWORTHY GOLDENRODS

Name	Height/ Spread	Characteristics	Origin US Al	DA Hardiness, IS Heat Zones
Solidago bicolor (silverrod)	1–3/1 ft.	Elongated spikes of short-stalked flower heads with distinctive white to yellowish-white rays surrounding a yellow central disk atop a hairy, thin, wiry, grayish stem.	Eastern North America except Florida	3–8, 8–1
<i>Solidago curtisii</i> (mountain or Curtis' goldenrod)	1–2½/3 ft.	Leafy wandlike flowerheads. Bright green leaves ascend the stem to the base of the inflorescence. Smaller leaves subtend each flower cluster.	Mid-Atlantic an Southeast U.S.	d 5–8, 8–1
Solidago 'Little Lemon'	6–12/ 12–24 in.	Compact hybrid for the front of the border and edging, with treelike heads of clear yellow, early flowers.	Hybrid	5–9, 9–1
<i>Solidago multiradiata</i> (alpine goldenrod)	6–24/ 12–24 in.	Elongated, dense wand of showy flowers and lanceolate to spatulate leaves up to 8 inches long; height varies with site conditions.	Montana west to coast, south to New Mexico	o 3–8, 8–1
<i>Solidago puberula</i> (downy goldenrod)	2–3/1–2 ft.	Flowers, among the largest in the genus, are clustered to form dense, tubular, bottlebrushlike yellow spikes.	Eastern North America	4–9, 9–1
<i>Solidago riddellii</i> (Riddell's goldenrod)	2–3½/ 1–2 ft.	Tiny, bright yellow flowers borne in dense, erect, flat-topped, terminal inflorescences atop stiff, glabrous stems.	Northern North America east of the Rockies	3–7, 7–1
<i>Solidago roanensis</i> (Roan Mountain goldenrod)	1–2½/ 1–2 ft.	Tight clumps of vertical stalks open from early July to October as branched, bottlebrushlike inflorescences of bright yellow.	Mid-Atlantic and Southeast U.S.	6–8, 8–1
<i>Solidago spathulata</i> (spoon-leaf goldenrod)	1–3/3 ft., variable by conditions	Upright stems with open, narrow branches and inflorescences of bright flowers that arch or stand erect, variable in size and form.	Oregon and California	7–10, 10–7

oval to lance-shaped leaves. Showy goldenrod is native to open woods, savannas, meadows, and dry prairies from New England to Minnesota and Wyoming, south to Georgia and Texas.

Bog goldenrod (S. uliginosa, Zones 3-8, 8-1) resembles a gargantuan yellow liatris. Thick two- to three-foot stems bear buttonlike clusters of rich lemon-yellow flowers in September and October. The quilted, spatula-shaped basal leaves lend a bold accent to the summer garden. This lovely species has a more northerly range than many other goldenrods and is intolerant of extended warm night temperatures. And, as the common name indicates, it will grow best in reasonably moist sites. It's native to bogs, wet meadows, ditches, and low woods from Newfoundland and Minnesota, south to New Jersey and Indiana, and in the mountains south to North Carolina.

Western gardeners need not feel left out, because they can grow velvety or California goldenrod (S. velutina, Zones 4–10, 10–1), a lovely plant with narrowly branched, erect inflorescences of showy flowers. The leafy stems rise one to two feet, with the wand of abundant, loosely packed florets stretching up to a foot higher to provide a burst of brilliant yellow



Native to western North America, California goldenrod can spread to form a groundcover.

from late summer through fall. Clumps gradually spread into a groundcover that can help curb erosion. Widely native to western North America from the Black Hills west to southern Canada and Mexico, it is variable in size and habit depending on provenance.

TWO FOR SHADE

Wreath or bluestemmed goldenrod (S. *caesia*, Zones 4–9, 9–1) is a spiky, wand-flowered goldenrod with blue green, linear leaves alternating up smooth, wiry, one- to three-foot stems. The leaves intergrade into the inflorescence, but droop below the arching stem while the flowers face upward. The medium yellow flowers begin opening in early fall and last for several weeks. This underutilized species adds an elegant spot of late-season color when planted in rich, moist soil in part to full shade. It is native to open woods, woodland borders and clearings from Nova Scotia and Wisconsin, south to Florida and Texas.

Zigzag goldenrod (S. flexicaulis, Zones 3-8, 8-1) is named for its distinctive, kinked stems, which bend back and forth at 45-de-



bog goldenrod mingle beautifully with the bold colors of purple coneflower (Echinacea purpurea), garden phlox (Phlox paniculata), turtlehead (Chelone lyonii), and perennial sunflowers (Helianthus spp.). Later-blooming selections such as 'Fireworks' or California goldenrod look best surrounded by a tumble of rich purple asters and backed by a screen of dusty rose Joe-pye weed (Eutrochium purpureum). Sprawling low-risers such as 'Golden Fleece' are best placed near the front of a border along with plants such as calamint (Calamintha nepeta 'White Cloud'), purple spotted toad lilies (Tri-

Unlike most goldenrods, wreath goldenrod prefers dappled woodland shade.

gree angles between the nodes. The one- to three-foot-tall stems bear rounded, toothed leaves that intermingle with the wandlike clusters of starry, medium-yellow flowers. In autumn, when color in the shade is at a premium, zigzag goldenrod brightens up darkened recesses and woodland edges. Its native habitat is deciduous woods, clearings, and roadsides from Nova Scotia and North Dakota south to Georgia and Arkansas.

GARDEN PLACEMENT AND COMPANIONS

Their variety of forms and lengthy bloom period make goldenrods integral to late summer and autumn color schemes. Observing them in their native habitat is the best guide to garden placement, though most species exhibit broad adaptability. The key is to site them where their tidy green foliage is balanced by colorful companions until they are ready to burst into bloom.

In my southern Virginia garden, visitors are often astounded by the assortment of species and the magnitude of the display. The tough species from dry sites are perfect for sunny banks and boulevard plantings where conditions are punishing. In early August, the lemon lollipops of showy goldenrod light up the street perimeter. Later in the season, golden dashes of gray goldenrod are perfect to echo the russet stalks of little bluestem (Schizachyrium scoparium). A lone clump of stiff or 'Fireworks' goldenrod can anchor a spot and serve as a striking focal point.

In sunny borders, species like early goldenrod, 'Solar Cascade', and spiky



cyrtis spp.), and a skirt of bottle gentians (Gentiana andrewsii).

In shade and woodland gardens, zigzag and wreath goldenrod match up well with the crisp erect fronds of wood ferns (Dryopteris spp.), leafy bugbanes (Actaea, syn. Cimicifuga spp.), Solomon's seals (Pohygonatum spp.), white and purple toad lilies (Tricyrtis spp.), and groundcovers such as barrenworts (Epimedium spp.).

MAINTENANCE TIPS

Cut back the stems of tall or lax-stemmed species to four inches in late spring to promote shorter, more upright growth. Clump-forming selections should be divided every three years or so to prevent central dieback and keep them from outgrowing their space. Leave at least some of the seedheads on the plants through winter, because these will provide food for birds.

The autumn glow of goldenrods warms my garden in the slanting light that signals the passing of the growing season. Soon, frost will decorate the delicate dried plumes, and silvery seeds will float on the

'Fireworks', a selection of rough-stemmed goldenrod with arcing flowerstalks, makes a dramatic show in this autumn border with black-eyed Susans and other late-flowering perennials.

wind to new destinations. With any luck, I am spreading the wealth around. Next year, gold may be discovered in my neighbors' gardens. The rush is on!

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