Baptisia (False or Wild Indigo)

Baptisias, also known as false or wild indigos \((Baptisia\ spp.)\), are a group of large, long-lived perennials. They provide an extended season of interest from flowers and foliage. The botanical name \(Baptisia\) originates from the Greek word \(bapto\), to dip or to dye. Blue false indigo \((Baptisia\ australis)\) and yellow wild indigo \((Baptisia\ tinctoria)\) were used to produce a blue dye by both Native Americans and settlers before the introduction of the better quality true indigo \((Indigofera\ tinctoria)\).

There are around 20 species of \(Baptisia\), all native to eastern or midwestern North America. Several are native to South Carolina, and all baptisias can be grown throughout the state. Baptisias have a very wide, natural range to which they seem well adapted. As a group, these perennials are deer resistant, heat and humidity tolerant, and drought tolerant once established. They are excellent, attractive, low-maintenance plants.

**Mature Height/Spread**

Height and width vary by species. The most common species, \(B.\ alba\) and \(B.\ australis\), grow 3 to 4 feet tall by 3 to 4 feet wide in cultivation. A few species grow no more than 1 to 2 feet tall.

**Growth Rate**

Baptisias will grow to their full height each year after the first or second season from planting, and thereafter will grow steadily in width and bulk. They may not bloom until their second or third season from seedlings. Baptisias are unusually long-lived perennials and can continue to grow and bloom in the same location for decades.

**Ornamental Features**

Most \(Baptisia\) bloom in March, April or early May, but it varies depending on species, region and weather. Bloom typically lasts between 3 and 6 weeks.

Flowers are held in impressive upright racemes (flower spikes with a short stem attaching each flower to the main stalk) of blue, white or yellow flowers. Flower spikes can be 12 to 24 inches tall, composed of typical pea-shaped flowers.
Large, mature plants may hold as many as a hundred spikes in full bloom. *Baptisia* flowers strongly resemble ornamental lupines, perennials that do not tolerate heat and humidity.

*Baptisia* leaves are trifoliate (composed of three leaflets) and are arranged alternately along the stems. Leaflet shapes vary from slender oblong to almost rounded oval. *Baptisia* leaves vary in color from blue-green to bright yellow-green to soft, felted gray-green. Leaves turn black rapidly in fall. Some find this attractive and let the stems remain for winter interest, while others prefer to cut them back in fall.

Although the leaves die back to the ground completely each winter, *Baptisia* foliage is dense and attractive, giving the plant a shrub-like appearance that provides a strong backdrop to the garden.

Landscape Use

*Baptisia* can be used as seasonal, herbaceous shrubs in borders. They work well as individual specimens in small gardens or as masses in larger areas. *Baptisia* are appropriate in traditional cottage gardens, native plant gardens, and contemporary gardens. Their shape and foliage color contrasts well with upright ornamental grasses. They combine attractively with most blue-, white- or yellow-flowering perennials.

*Baptisia* are host plants for the larvae of several butterfly species, including orange sulphur, clouded sulphur, frosted elfin, eastern tailed blue, hoary edge, and wild indigo duskywing.

Most baptisias prefer and grow best in deep, rich, moist but well-drained soil. Once established, however, they are quite drought tolerant, due to their very deep root system. Full sun is preferred, but baptisias will tolerate light shade. However, in shade they may grow leggy and bloom less profusely. *Baptisia* grow wild in partly shaded locations, but are never as showy as those grown in sun.

No pruning or training is necessary. If you do not enjoy the seed pod appearance, trim the old bloom spikes back after flowering. Wait to cut back old foliage in late winter or early spring to enjoy fall and winter effects, or cut in fall after frost if old foliage appearance is undesirable.

*Baptisia* are very difficult to transplant due to their deep, brittle root systems. It is best to allow space for the ultimate size of these plants when planting and then leave them in place.

Propagation

Seed is the usual method of starting new *Baptisia* plants. Collect seed when the pods darken and begin to split. Inspect seed for small holes made by weevils and discard damaged seeds. Seed that is sown fresh will germinate most reliably and can be sown directly into flats or an outside nursery bed. Plant seed ¼” deep. Fresh seed usually germinates within 2 weeks.

If seed is saved for later sowing, stratify (chill) the seeds in the refrigerator for 6 to 12 weeks. After chilling time is met, scarify (wear down part of the
hard seed coat) with sandpaper, or nick seed coat with a sharp knife. Soak seeds in water for 24 hours before planting. Sow seeds ¼” deep in a very well-drained seed mix of 3 parts perlite to 1 part peat. Provide bottom heat at 75 °F until plants emerge. New seedlings can be planted outside after last frost date in spring, but will require extra care during the first year of establishment. Seedling Baptisia plants grow slowly and will not bloom for at least 2 to 3 years.

Baptisia can also be rooted from stem cuttings. Cuttings are genetically identical to the plant that provided them, which ensures the preservation of desirable characteristics such as unusual stem or flower color. Be aware that many new Baptisia cultivars are patented and cannot be legally grown from cuttings or other clonal propagation methods.

Most baptisias root easily in spring when the growth is still relatively soft, but the success rate drops as the stems harden. Good cutting material can generally be found in late April to early May. Cuttings should be taken so that at least one set of leaf buds can be inserted below the potting mix surface. Dip cutting in a rooting hormone and insert into a mix of 3 parts composted bark to 1 part peat. Keep humidity around cuttings high with a supported plastic tent. Cuttings should root in about 8 weeks.

Division or transplanting of Baptisia is difficult because of their deep woody root system and should be avoided unless absolutely necessary. Divide in spring, being careful to avoid breaking new shoots. Dig deeply to get as much root system as possible. As soon as plants are removed, trim any broken roots with sharp pruners. Cut apart divisions with a sharp hand saw or sturdy serrated knife. Replant as soon as possible, never letting roots dry, and water in well to settle air pockets.

Problems
Insects are generally not a serious problem on baptisias. A weevil commonly damages seed, but does not affect the appearance of the plant. Alkaloids in Baptisia are toxic to many insects, although Baptisia is a host plant for several butterfly larvae.

Diseases are also infrequent problems. Some fungal problems may occur in crowded, moist conditions.

Species & Cultivars
Baptisias have acquired many names over the years as botanists have named and renamed them, attempting to properly identify relationships. As a result, some baptisias actually have more botanical names (accepted and synonyms) than they do common names. It is possible to order baptisias under four or five different names, and the plants received will all be identical. The accepted botanical name (according to the USDA PLANTS database at the time of writing) along with commonly used synonyms, are listed below.

Baptisia alba: This species is known as white false indigo or wild white indigo. Commonly used synonyms are B. albescens and B. albiflora. Baptisia pendula, B. lactea and B. leucantha are synonyms for some of its varieties (subdivisions of a species with some hereditary variations distinctive from other members of the species.) It is native throughout South Carolina, but more common in the Piedmont, growing in open, dry woods and
clearings. It grows 2 to 4 feet tall and 2 to $2\frac{1}{2}$ feet wide. White flowers on 12- to-18-inch-tall upright racemes bloom in early to mid spring. Flowers last for 4 to 6 weeks. The stems, including the stalks of the flower clusters, are charcoal gray and contrast well with the flowers and blue-green foliage. It grows best in full sun or very light shade and in dry to moderately moist, well-drained soil.

**Varieties:**
- var. *alba* is native to the Southeast. Seed pods hang downwards when ripe. This variety is sometimes known by the synonym *B. pendula*.
- var. *macrophylla* is native to Midwestern states. Seed pods are more upright on this variety. Synonyms for this variety are *B. lactea* and *B. leucantha*.

*Baptisia australis*: The species is sometimes called by the synonym *B. caerulea*. Blue false indigo is the common name. *B. minor* is a synonym for a short western variety. It is the best known *Baptisia* and was named the 2010 Perennial Plant of the Year by the Perennial Plant Association. It is not native to South Carolina, but common in much of the Southeast and Midwestern states. It grows well throughout the state. This common species grows 3 to 4 feet in height and the same or slightly more in width. It has a broad, dense, shrub-like appearance. The flowers are bright indigo blue, held in upright racemes above the foliage. Bloom time is typically mid to late April in the Piedmont and lasts for up to 6 weeks. Foliage is attractive, blue-green with a waxy texture. This species prefers well-drained but moderately moist soil and full sun or light shade. It will tolerate drought once established.

**Varieties:**
- var. *aberrans* is native to Georgia, North Carolina and Tennessee. It grows in dry, rocky, limestone soil.
- var. *australis* is native to states east of Mississippi and the variety most often found for sale.
- var. *minor* is native west of the Mississippi and is significantly different in appearance from *B. australis*, enough that it has sometimes been classed as a species, *B. minor*, in its own right. It attains only about half the height and leaf size of *B. australis*, growing only 18 to 24 inches tall, with small lacy-textured foliage. Flowers, however, are the same size and height and born in great abundance. This natural variety is also more drought tolerant once established, as suits its drier native climate.

*Baptisia bracteata*: Long-bract wild indigo or cream false indigo is the first *Baptisia* species to bloom, beginning in early March to early April depending on location. Compact plants grow 18 to 24 inches tall with low arching stems forming a wide mound. Stems end in long sprays of pale yellow flowers. This species grows best in full sun and well-drained to dry soil.

**Varieties:**
- var. *bracteata* is native to the Southeast, including South Carolina, in the sandhills and open woods in the Piedmont.
- var. *laevicaulis* is native to Louisiana and Texas.
- var. *leucophaea* is native throughout the Midwest. *B. leucophaea* and *B. bracteata* var. *glabrescens* are synonyms for this
variety. Flowers are pale yellow to cream, and leaves are softly-felted gray-green. This variety is more commonly found for sale than the species.

*Baptisia bracteata* var. *leucophaea* with felted gray-green leaves.
gmayfield10, Flickr, Creative Commons License 2.0

*Baptisia sphaerocarpa*: Yellow false indigo is native to the lower Midwest and Gulf states. It grows up to 2 to 3 feet tall and 2 to 4 feet wide with upright stems. Flowers spikes are 12 to 15 inches long with large, bright yellow flowers held above bright-green foliage. Plants prefer rich, deep and well-drained soil, but tolerate poor, sandy soil once established.

Bright yellow flowers of *Baptisia sphaerocarpa*.
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**Hybrid Cultivars**

In recent years some excellent hybrid baptisias have appeared, primarily from breeding programs in North Carolina and Illinois. All prefer full sun and well-drained soil.

Prairieblues™ is a hybrid series that was developed by Dr. Jim Ault at the Chicago Botanic Garden in Glencoe, IL. All the Prairieblue™ cultivars are patented.

- Starlite Prairieblues™ is the offspring of a cross between *B. australis* and *B. bracteata*. Violet buds open to light periwinkle blue flowers with creamy yellow keels. Tall flower racemes last up to 5 weeks in bloom above somewhat arching branches. Plants grow 3 feet tall and 3 feet wide.
- Twilite Prairieblues™ is a vigorous bicolor cross between *B. australis* and *B. sphaerocarpa*. Deep violet-purple flowers are highlighted by lemon-yellow keels. Extremely tall flower spikes up to 32 inches tall rise above blue-green foliage. Plants grow 3 to 5 feet tall and 4 to 5 feet wide.

*Cultivar*:

- ‘Screaming Yellow’ is a compact selection that flowers heavily. The leaves on this Arkansas selection are slightly larger and more yellow-green.

*Baptisia tinctoria*: This species, also commonly called yellow false indigo or yellow wild indigo, is native throughout the East coast and Midwest. It is native throughout South Carolina. Flowers are bright yellow to cream, flowering later than other baptisias, in late spring to early summer. Plants grow 2 to 3 feet tall with a wide arching habit. Flower clusters are short, usually only 4 to 5 inches long. It grows best in well-drained, moderately moist to dry soil in full sun, and is quite drought tolerant once established. This species was used historically for a blue dye.

*Baptisia tinctoria* was once used extensively for dyeing.
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This species, also commonly called yellow false indigo or yellow wild indigo, is
• Midnight Prairieblues™ is a complex hybrid of *B. tinctoria*, *B. alba* and probably *B. australis*. It has an upright, vase-shaped habit with flower spikes up to 24 inches long bearing deep blue-violet flowers. Side branches also bear shorter bloom clusters for a very heavy and long bloom period. Mature plants grow 4 to 5 feet tall by 3 1/2 to 4 feet wide.

• Solar Flare Prairieblues™ is another complex hybrid, also probably between *B. alba*, *B. tinctoria* and *B. australis*. The flower color is unique, as it changes as the flowers age. Buttercup-yellow fades to warm apricot, then to plum. Flower stems are 12 to 18 inches tall, held high above the foliage. Plants grow 3 to 4 feet tall and 4 feet wide with an upright, vase-shaped habit.

Two exceptional hybrid baptisias originated at North Carolina Botanical Garden, selected by Curator of Native Plants, Rob Gardner.

• 'Purple Smoke' is a hybrid of *B. australis* var. *aberrans* and *B. alba*. Flowers are dusty purple with charcoal gray flower stems inherited from *B. alba*. This vigorous *Baptisia* blooms for as long as 5 weeks.

• 'Carolina Moonlight' is a vigorous cross between *B. sphaeroarpa* and *B. alba*. Soft, butter yellow flowers are abundant, held on 18-inch-long spikes above the gray-green foliage, and bloom for up to 6 weeks. Plants grow 3 feet tall by 3 feet wide.

**Sources for Baptisias**

Quality garden centers carry a variety of baptisias, generally in larger sizes than can be obtained through mail order. The mail order sources listed below stock several hard-to-find baptisias.

Meadowbrook Nursery, We-Du Natives
http://www.we-du.com/
(828) 738-8300

Niche Gardens
http://www.nichegardens.com/
1111 Dawson Road, Chapel Hill, NC 27516
(919) 967-0078

Plant Delights Nursery, Inc.
http://www.plantdelights.com
9241 Sauls Road
Raleigh, NC 27603
(919) 772-4794

Woodlanders
http://www.woodlanders.net
1128 Colleton Avenue
Aiken, SC 29801
(803) 648-7522

Prepared by Karen Russ, HGIC Horticulture Specialist, Clemson University. (New 6/10.)

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