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Wayne A. Mackay, Jerry M. Parsons, Greg Grant, Steve George, Tim D. Davis, and Larry Stein

# 'Texas Maroon' Bluebonnet

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The Texas state flower, the bluebonnet, encompasses all six of the *Lupinus* species native to Texas. The most widespread and popular bluebonnet, *Lupinus texensis* Hook., is a winter annual that produces violet-blue [violet-blue group 96A, Royal Horticultural Society (RHS), 1982] racemes in early to mid-spring and is predominately self-pollinating. The Texas Dept. of Transportation uses this species widely for floral displays along road-sides throughout much of the state (Andrews, 1986). Rare white and even rarer pink variants exist in native populations, and a breeding project was initiated in 1985 to develop bluebonnets with novel flower colors for use as bedding plants. 'Abbott Pink' was the first seed-propagated cultivar to be developed from this program (Parsons and Davis, 1993). The second cultivar, 'Barbara Bush' with novel lavender shade flowers, was developed more recently (Parsons et al., 1994). As with the cultivars previously developed, we used recurrent phenotypic selection to develop 'Texas Maroon'. This cultivar is intended for use as a bedding plant for maroon flower color.

## Origin

Parsons and Grant were inspecting a production field of 'Abbott Pink' bluebonnets in LaPryor, Texas, in Spring 1988. Grant discovered a plant with a variant flower color of purplish-maroon. To our knowledge, this novel flower color had never been observed previously. Seed collected from this plant was used to produce transplants that were field planted

in Fall 1989; most of the flowers were pink or purple, but ≈10% were maroon. Plants with pink or purple flowers were rogued as soon as their color was visible. Seed was collected in Spring 1990 from the remaining maroon-flowered plants and used to produce transplants that were field planted in the fall of 1990. Recurrent phenotypic selection for maroon-colored flowers was repeated for 5 more years (one cycle per year) until a pure maroon-shaded population was obtained. This line has been grown in isolation for 2 additional years, and is being currently released as 'Texas Maroon.' Seed collected from 'Texas Maroon' remains pure if plantings are isolated from other bluebonnets and off-colors are rogued immediately after flower color becomes apparent.

## Description

Plants are 30–50 cm tall and have a mounded form 50–70 cm in diameter at full bloom. Leaves are alternate, palmately compound with five leaflets. Leaflets are yellow-green (RHS 146B), oblanceolate, 3–5 cm long, and 1.2–1.6 cm wide at their widest point. Petioles are 4–6 cm long. Inflorescences are racemes 8–12 cm long, 2–4 cm in diameter, and contain 25–40 flowers. Flowers are papilionaceous, fragrant, 1–2 cm long, borne on a 6–12-mm-long pedicel. The back of the banner petal is red (RHS 53D), and the front is maroon (RHS greyed-red 179A), with a 3–6-mm-wide medial white banner spot. The keel is maroon (RHS greyed-red 179A). Fruits are pubescent legumes 30–50 mm long and 6–10 mm wide with 4–7 seeds each. Seeds are light to medium brown in color occasionally speckled with black, weighing ≈3.5 g/100 seeds.

Germination occurs in the fall, with young plants forming a dense rosette during the winter and then blooming the following March or April. The bloom period is 3 to 5 weeks with plants producing 100 to 200 racemes/m<sup>2</sup> of ground surface. The last racemes produced during the season tend to be shorter than the first ones. Flower hue can vary with temperature, with the red color having a purple hue at high temperatures. The banner spot often turns to reddish-purple (RHS red-purple group 61AB) with age, but the flowers sometimes

shrive before the color change occurs. Fruit becomes visible ≈1 month after anthesis.

## Cultivation

Seed must be scarified to obtain optimal germination (Davis et al., 1991). Concentrated sulfuric acid applied for 30–60 min generally is satisfactory for scarification. Irrigation or rainfall is needed for germination, but once plants are established, they require little additional irrigation under central Texas conditions. Also 'Texas Maroon' grows well in most soilless media. Damping off [pathogen(s) not yet identified] can be a problem during seedling production, but can be controlled effectively with Terrachlor® (pentachloronitrobenzene) and by not overwatering. The plants overwinter in U.S. Dept. of Agriculture hardiness zones 8–10 (U.S. Dept. of Agriculture, 1990) and often survive in zone 7b. Vernalization is not required for flowering.

## Performance

Plants have been grown from seed in the greenhouse and transplanted successfully outdoors at the following diverse Texas locations: San Antonio (7 years at several sites), Dallas (3 years), Fredericksburg (3 years), and El Paso (2 years). Comparative trials at these locations revealed no differences in garden performance between 'Texas Maroon,' the native violet-blue bluebonnet, and the previously released 'Abbott Pink' (Parsons and Davis, 1993) and 'Barbara Bush' (Parsons et al., 1994) bluebonnets.

## Availability

'Texas Maroon' seed can be purchased from Wildseed Farms, 425 Wildflower Hills, P.O. Box 3000, Fredericksburg, TX 78624-3000 (1-800-848-0078).

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