

Florida Betony

Florida betony (*Stachys floridana*) is native to Florida and began appearing in other states in the 1940s and 50s. It has become an aggressive weed in residential and commercial landscapes in South Carolina. It is usually not a problem in nurseries that produce container grown plants. Florida betony is also known as wild artichoke (although it is not related to artichoke) and rattlesnake weed.



Florida betony showing opposite leaves and mint type flowers. Richard Old, XID Services, Inc., www.forestryimages.org

This plant belongs to the mint family with stems that are hairy, square and upright, and grow to between one and two feet tall. The leaves are opposite and connected to the stem by a 1½-inch long petiole. Leaves are approximately 2 inches long and 1 inch wide, lance shaped, slightly toothed, and end with a blunt point. The leaf base is either blunt or heart-shaped. The trumpet-shaped flowers are white to pink and may have purple

spots. They grow in whorls of three to nine in the leaf axils, where the leaf joins the stem. Black seed are produced in the early spring, but not much is known about their germination requirements. The underground tuber is the reason for the common name "rattlesnake weed". It is segmented and white and resembles the rattle of a rattlesnake. The tuber is typically ½ inch wide and 1 to 4 inches long but can grow to 8 inches or longer. New tubers are formed in late spring as the temperatures begin to increase before the plant goes dormant in the summer. Florida betony will grow in full sun to part shade and tolerates a wide variety of soil conditions including wet or dry.



Distinctively shaped Florida betony tubers. John D. Byrd, Mississippi State University, www.forestryimages.org

Florida betony is a cool-season perennial that emerges primarily from tubers during the cool, moist months of fall. It grows vigorously in the fall and will stay green through the winter unless temperatures become very cold, in which case, it dies back temporarily. Vigorous growth resumes in early spring and flowering occurs from late spring to early summer. At the onset of high summer temperatures, growth stops, and the plant becomes nearly dormant.

Florida betony reproduces primarily from tubers. Throughout the winter months, it will grow and spread rapidly, especially in the loosened soil of landscape beds. Although not a common occurrence, Florida betony can be moved in sod and landscape plants. Closely inspect plant material that is purchased for your landscape for Florida betony tubers.

Controlling Florida Betony in Turfgrass

Maintain a healthy, dense lawn by fertilizing and liming according to soil test results, and mowing at the proper height and frequency. Healthy turfgrass mown at the appropriate height will reduce the growth of Florida betony.

There are several broadleaf herbicides available to homeowners called 3-way herbicides that contain 2,4-D, mecoprop (MCP) and dicamba, and may additionally contain carfentrazone or sulfentrazone for improved control of Florida betony. See Table 1 below for examples of home lawn weed control products and turfgrass compatibility.

These products can be used to spot treat Florida betony and can be used in tall fescue, bermudagrass and zoysiagrass. Before applying to centipedegrass or St. Augustinegrass lawns, carefully check the product label. Because of their sensitivity to 2,4-D, it's normally recommended to apply at reduced rates (see product label for safe rates and restrictions). Also, injury can occur if applied to

centipedegrass or St. Augustinegrass during green-up, the transition between the dormant state and active growth in spring. Fall and early spring applications will be needed to completely control this problem weed.

Some triclopyr products can be used for Florida betony control on tall fescue lawns only. More dilute triclopyr products and those with 2,4-D may be labeled for zoysiagrass and bermudagrass lawns also. See Table 1 below for examples of products.

Herbicides containing atrazine are labeled for use on St. Augustinegrass and centipedegrass lawns and will control Florida betony. It is recommended to apply atrazine in fall and to re-apply in mid-winter to early spring before grass green-up. See Table 1 below for examples of products.

CAUTION: Broadleaf herbicides, including those mentioned above, will harm landscape plants. Avoid spraying desirable plants and avoid spraying over the root zone. Desirable plants can be protected from herbicide drift by not spraying in windy conditions, by keeping the spray nozzle close to the ground, and by using low pressure. Lastly, do not apply to turf when temperatures are above 85 °F or during the spring transition (green-up). A newly seeded lawn should be mowed a minimum of three times before applying an herbicide. With any product, it may take 2 years to completely control Florida betony.

Table 1. Examples of Herbicides for Florida Betony Control in Turfgrass

Brands & Specific Products	Post-emergence Herbicide Active Ingredient	% Active Ingredient in Product	Labeled for Use on Listed Turfgrass Species
Bayer Advanced Weed Killer for Lawns Concentrate; & RTS ¹ Bayer Advanced Southern Weed Killer for Lawns Concentrate; & RTS ¹	2,4-D Mecoprop Dicamba	7.59 1.83 0.84	Tall Fescue Bermudagrass Zoysiagrass Use at lower label rate on: St. Augustinegrass Centipedegrass
Lilly Miller Lawn Weed Killer Concentrate	2,4-D Mecoprop Dicamba	9.41 2.27 1.04	
Ferti-lome Weed-Out Lawn Weed Killer Concentrate	2,4-D Mecoprop Dicamba	5.88 5.45 1.21	
Southern Ag Lawn Weed Killer with Trimec Concentrate	2,4-D Mecoprop Dicamba	3.05 5.30 1.29	

Spectracide Weed Stop For Lawns RTU ²	2,4-D Mecoprop Dicamba	0.593 0.144 0.066	
Ortho Weed B Gon Max for Southern Lawns Concentrate; & RTS ¹ ; & RTU ²	2,4-D Mecoprop Dicamba Carfentrazone	4.01 0.49 0.27 0.16	
Spectracide Weed Stop for Lawns - for Southern Lawns Concentrate; & RTS ¹	2,4-D Mecoprop Dicamba Sulfentrazone	7.57 2.73 0.71 0.18	
Ortho Weed B Gon Chickweed, Clover & Oxalis Killer for Lawns Concentrate	Triclopyr	8.0	Tall Fescue Use at lower label rate on Zoysiagrass
Hi-Yield Turflon Ester Specialty Herbicide Concentrate	Triclopyr	61.6	Tall Fescue
Ortho Weed B Gon Max Concentrate, Kills Weeds Not Lawns Concentrate; & RTS ¹	2,4-D Dicamba Triclopyr	13.72 1.35 1.56	Tall Fescue Zoysiagrass Bermudagrass
Spectracide Weed Stop for Lawns for St. Augustine & Centipede Lawns	Atrazine	4.00	
Hi-Yield Atrazine Weed Killer	Atrazine	4.00	Centipedegrass
Southern Ag Atrazine St. Augustine Weed Killer	Atrazine	4.00	St. Augustinegrass
Image Herbicide for St. Augustine & Centipede with Atrazine	Atrazine	4.00	
1. RTS: Ready-to-Spray (hose-end sprayer) 2. RTU: Ready-to-Use (pre-mixed spray bottle for spot spraying)			

Control in the Landscape Bed

In landscape beds, the tubers should be removed by digging them out completely to eliminate the primary source for further spread. Mulch and landscape fabrics are not usually successful in controlling this aggressive perennial.

In landscape beds, products containing glyphosate are the best choice. Examples of products containing glyphosate are Roundup Original, Eraser Systemic Weed & Grass Killer, Quick Kill Grass & Weed Killer, Bonide Kleenup Grass & Weed Killer, Hi-Yield Super Concentrate Killzall Weed & Grass, Maxide Super Concentrate 41% Weed & Grass Killer and Southern States Grass & Weed Killer Concentrate. Glyphosate is a nonselective herbicide and will kill or injure any plant it contacts. On a calm day, carefully direct spray to the Florida betony and shield nearby plants if necessary. Even though glyphosate is systemic, repeated sprays in spring and fall for two years will be necessary because of the weed's large tubers and root system.

When herbicides are applied to beds intended for future planting of ornamentals, care must be taken as various herbicides may injure the plants to be installed. For planned beds, glyphosate has far less soil activity (a few days) as compared with the 3-way herbicides (a few weeks) and triclopyr (several months). Glyphosate is the safest choice for spray application in existing flower and shrub beds, so long as care is taken to prevent drift to non-target plants. Glyphosate applications are much less apt to move through the soil, be absorbed by roots, and injure existing woody ornamental shrubs.

Preemergence herbicides that contain dichlobenil (such as Casoron or Norsac) also control Florida betony. Two important precautions should be followed. This herbicide should only be applied in the late fall or winter when temperatures are low and then watered in immediately. It should be used in woody landscape beds with species that are labeled safe for this herbicide.

Pesticide Safety

Always read the pesticide label and follow its directions exactly. Be sure to observe all precautions listed on the label. Mix pesticides at the rate recommended and never use more than the label says. Wear protective clothing or equipment as required by the label when mixing or applying pesticides. You may only use the pesticide on sites or crops listed on the label. Follow all label directions for pesticide storage and disposal. Always heed the six most important words on the label: "**Keep out of reach of children.**"

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