Common Name: DWARF WITCH-ALDER

Scientific Name: *Fothergilla gardenii* Linnaeus

Other Commonly Used Names: none

Previously Used Scientific Names: *Fothergilla parvifolia* Kearney

Family: Hamamelidaceae (witch hazel)

Rarity Ranks: G3G4/S1

State Legal Status: Threatened

Federal Legal Status: none

Federal Wetland Status: FACW

Description: Much branched, colonial **shrub** up 6½ feet (2 meters) tall but usually about 3 feet (1 meter) tall, with hairy **twigs**. **Leaves** ¾ - 2⅜ inches (2 - 6 cm) long and ½ - 1¾ inch (1.3 - 4.5 cm) wide, deciduous, alternate, with conspicuous parallel veins and clusters of star-shaped hairs on the lower surface (magnification of 10x is recommended to see hairs); **leaf margins** are wavy,

with rounded teeth only on the upper half. White **flowers** with many, showy, white stamens and no petals are held in dense "bottlebrush" spikes at the tips of twigs; the flowers are fragrant, smelling somewhat like honey. **Fruit** an oval, hairy capsule ¼ - ½ inch (0.6 - 1.2 cm) long, with a long, pointed beak and containing one, shiny, brownish-black seed.

Similar Species: Witch hazel (*Hamamelis virginiana*) is a large shrub of moist, upland hardwood forests. It has similarly shaped, though much larger and more fully toothed, leaves; it produces flowers with yellow petals in late fall.

Related Rare Species: See mountain witch alder (*Fothergilla major*) on this web site.

Habitat: Sunny, wet edges of shrub swamps, Atlantic white cedar forests, Carolina bays, pitcherplant bogs, and shrubby edges of wet flatwoods.

Life History: Dwarf witch-alder reproduces sexually as well as vegetatively by the spread of stolons (horizontal stems spreading at or just below the soil surface and sending up new shoots). Its flowers usually emerge before the leaves, in early spring, and are held in showy spikes. The numerous, white stamens and sweet fragrance attract bees and other insect pollinators (there are no petals). The fruits of dwarf witch alder are capsules that shrink as they dry, placing the seeds under pressure. When the seeds are mature, the capsule snaps open and flings the seed several feet away, out of the reach of competition with the parent plant. The seeds are doubly dormant, with a combination of seed coat (external dormancy) and internal dormancy. The seed coat must first be scarified to break the external dormancy – this is accomplished by mechanical injury during seed dispersal, by freezing temperatures, or by passing through the digestive system of animals. Then the seeds must undergo a period of warm, fluctuating temperatures followed by a period of cool temperatures to overcome internal dormancy before germination takes place.

Survey Recommendations: Surveys are best conducted during flowering (March–April) although leaves are distinctive throughout the growing season and into the fall when they turn bright yellow and red.

Range: Coastal Plain of Georgia, Florida, Alabama, South Carolina, and North Carolina.

Threats: Fire suppression; disruption of seepage from uplands by placing firebreaks, ditches, and roads in wetland ecotones; clearing and draining wetlands.

Georgia Conservation Status: Fewer than 20 sites are known, none are protected on conservation land. One population occurs on a military base.

Conservation and Management Recommendations: Allow prescribed fire to burn into wetlands; avoid placing firebreaks or roads in wetland ecotones. Avoid changes in hydrology and upland land use that affect seepage flow into bogs and swamps.

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