



## ***Pinus clausa* sand pine**

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One of the rarest of native Georgia pines is sand pine (*Pinus clausa*). Sand pine was first identified as a species in 1876. Other scientific names have been *Pinus inops* var. *clausa* (1877) and *Pinus clausa* var. *immuginata* (1963). The scientific name means “closed cone pine.” Other common names for sand pine are scrub pine, spruce pine, Ocala pine, and Choctawhatchee pine. Sand pine grows in far South Georgia, one area on the West side of the state and one area on the East side of the state. Note the Georgia range map figure.

There are two subspecies or varieties identified in sand pine. The first variety is *Pinus clausa* var. *immuginata*, Choctawhatchee sand pine. This variety has open cones and grows primarily in North-west Florida and far South Alabama. This variety releases seeds as soon as cones are ripe. It sheds pollen in February within Georgia. In some places it can be found intermixed with a second variety.

The second variety of sand pine is *Pinus clausa* var. *clausa*, Ocala sand pine. This variety has closed cones which persist on tree branches and stems for several years, sometimes becoming surrounded by bark and wood. The Ocala variety of sand pine grows primarily in Northeast and Central Florida. It releases seeds best shortly after fire, and sheds pollen very early.

The Ocala sand pine has escaped from plantations in Georgia and is reproducing in the Eastern arm of its range within Georgia. The Choctawhatchee variety may be found in the Western arm of the Georgia range. Both have been identified growing inside Georgia. Generally sand pine is considered a pine from the panhandle, North and Central parts of Florida.

Sand pine is a tall tree, and in the middle of its native range reaching 80 feet tall (maximum = 100 feet tall) and 1.5 feet in diameter (maximum = 27 inches in diameter). At the edge of its range and in naturalized populations, sand pine is usually found around 45-55 feet tall and one foot in diameter. Sand pine is considered a short-lived tree, seldom surviving more than 75 years.

Sand pine grows on sand ridges and sites with well-drained to excessively drained soils. The soils are usually droughty, infertile and acidic. Sites are usually classed as scrub land and have many evergreen shrubs and poorly growing hardwood trees present. Sometimes sand pine and scrub oaks intermix.

Sand pine grows on poor (extreme) sites where longleaf pine fails to grow well. Sand pine stands can be difficult to walk through because of its poor self pruning of lower branches. This pine grows in Hardiness Zone 8b - 10a and Heat Zone 9-11. The lowest number of Hardiness Zone tends to delineate the Northern range limit and the largest Heat Zone number tends to define the Southern edge of the range. This native Georgia pine grows in Coder Tree Grow Zone (CTGZ) D (a multiple climatic attribute based map), and in the temperature and precipitation cluster based Coder Tree Planting Zone 6. Figure 2

Needles occur in bundles of 2 and are 2 - 3.5 inches long. Needles are slightly twisted, slender, flexible, and persist 2-3 years on twigs. Needle color is dark-blue green to dark green.

Female cones are 1.5 - 3.5 inches long with a narrow egg-shape. Sand pine becomes sexually mature early, usually by age 5. Cones are yellow brown in color with scales which are slightly keeled and have a short thick prickles. Cones can persist on branches and stems, and may be overgrown.

Periderm is smooth on upper and younger twigs. Stem periderm is gray to reddish brown in color when mature.

Identification problems occur with the Choctawhatchee variety of sand pine because open cones can be confused with *Pinus virginiana* (Virginia pine) and with *Pinus glabra* (spruce pine.) There is a natural hybrid between *Pinus virginiana* and *Pinus clausa* var. *immuginata* (Choctawhatchee sand pine.)

Sand pine is used for traditional southern pine products like lumber and pulp. It has also been used occasionally for Christmas trees and holiday foliage. A rare historic use was for small ship masts. Sand pine is locally used as a low quality fuel wood.

Citation:

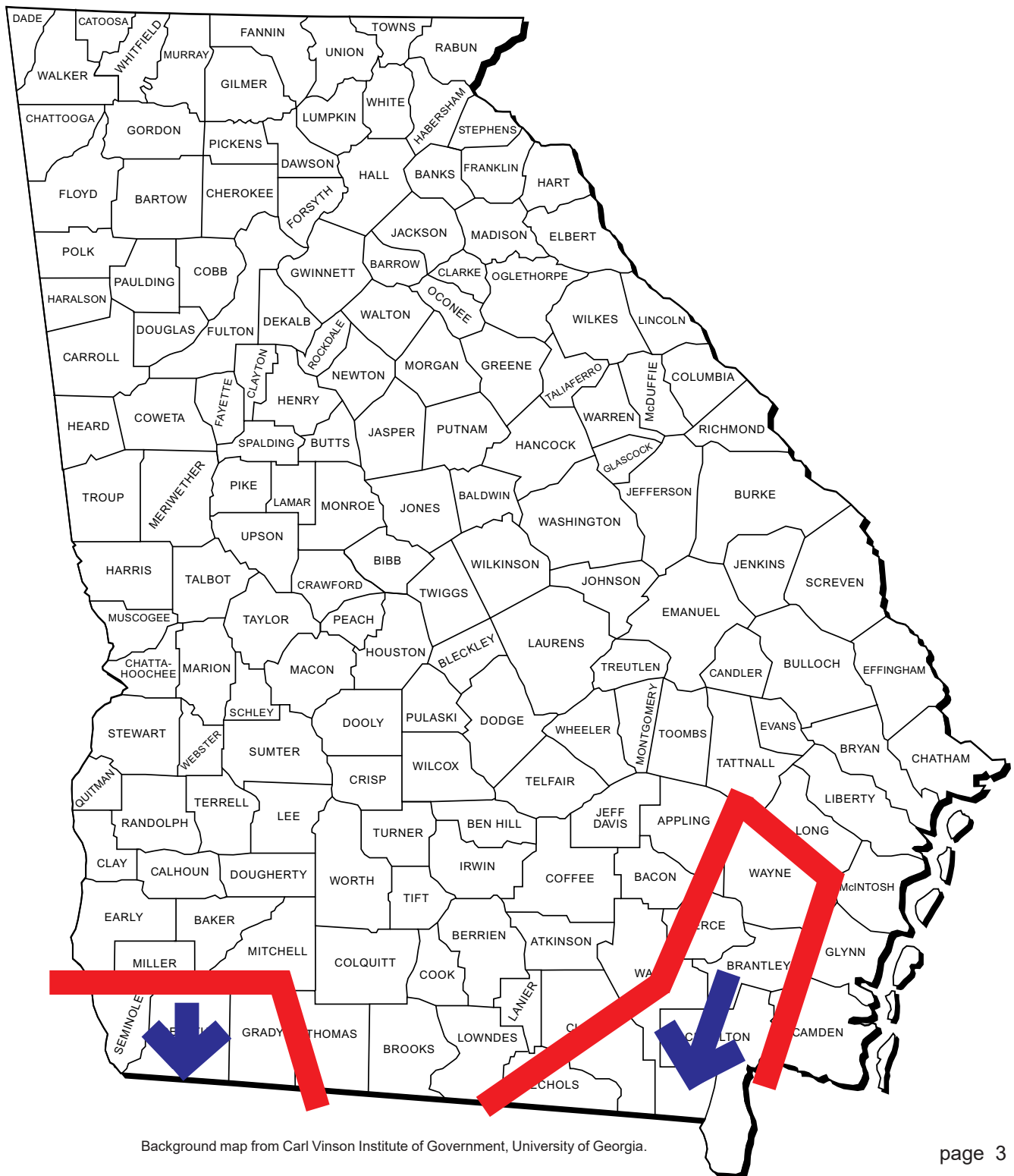
Coder, Kim D. 2021. *Pinus clausa* sand pine. University of Georgia, Warnell School of Forestry & Natural Resources Outreach Factsheet WSFNR21-21C. Pp.4.

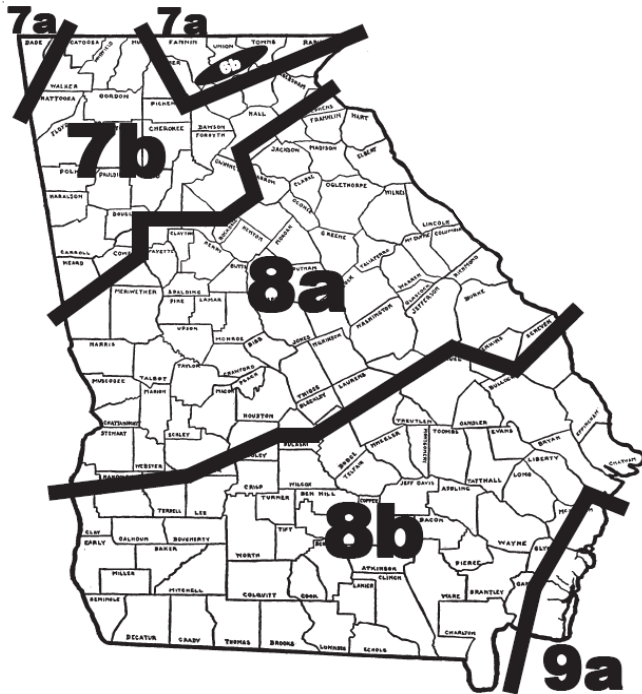
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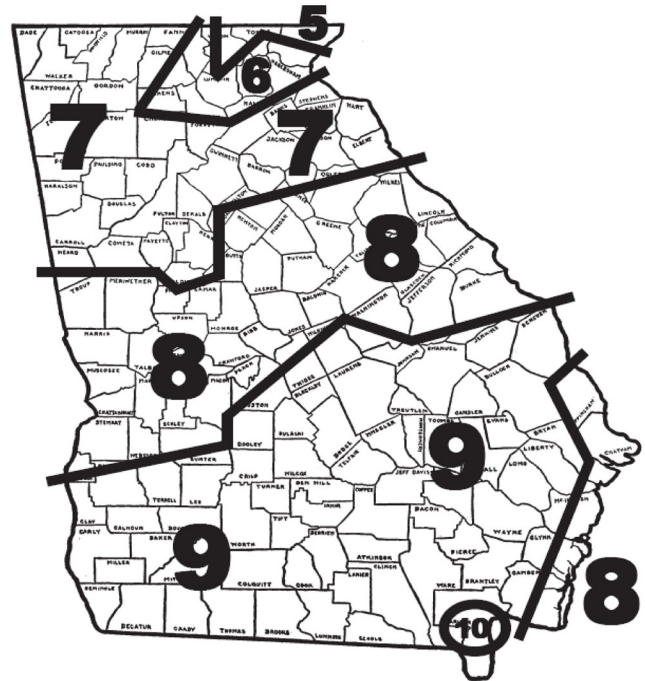
**Figure 1: Native range for *Pinus clausa* --  
sand pine in Georgia.**

Native / naturalized range from federal and state maps, herbarium samples and personal observations. Native range includes areas South of lines with arrows.

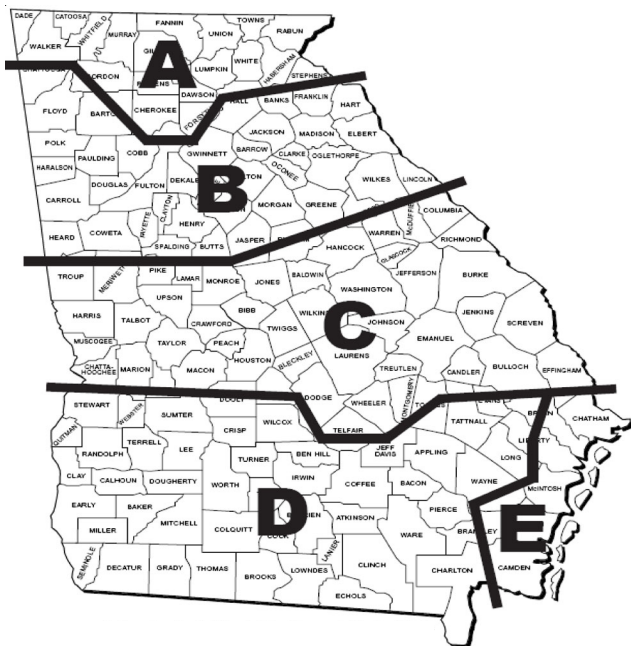




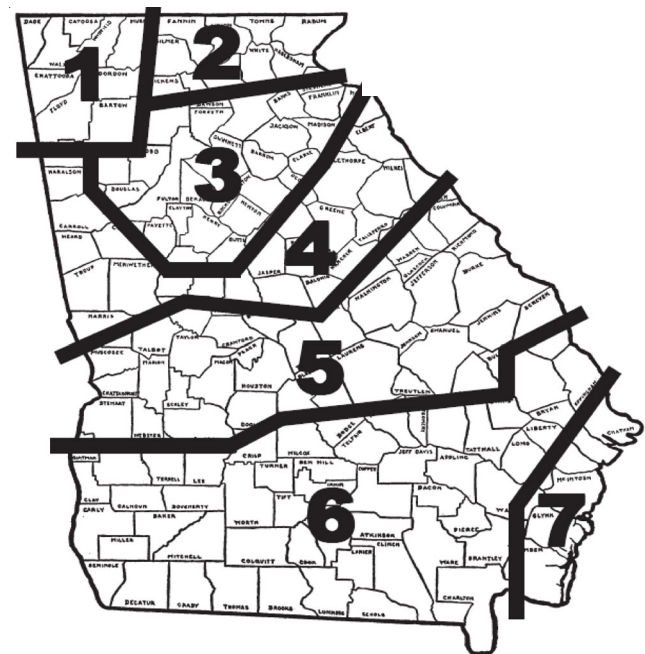
**Georgia Hardiness Zones**  
(cold temperatures)



**Georgia Heat Zones**  
(number of hot days)



**Coder Tree Grow Zones**  
(multiple climatic attributes)



**Coder Tree Planting Zones**  
(temperature & precipitation clusters)

Figure 2: Four types of tree growth zone maps for Georgia.