

*Arundinaria gigantea* (Walt.) Muhl.  
POACEAE

giant cane

Synonyms: *Arundinaria macrosperma* Michx.  
*Arundinaria tecta* (Walter) Muhl.  
*Arundinaria tecta* var. *decidua* Beadle  
*Arundo gigantea* Walter  
*Arundo tecta* Walter

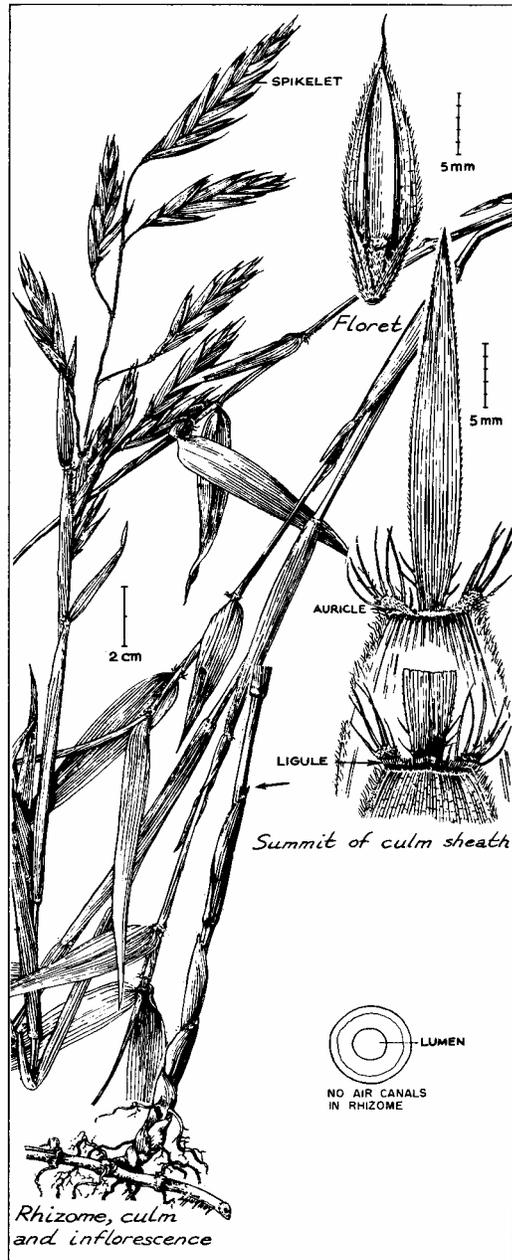


Illustration credit: Grelen and Duvall 1966

**General Description.**—Giant cane, also known as cane or switchcane, is a perennial monocot, a woody grass, and one of only two native bamboos. With its stem-like rhizomes and hard, ‘woody’ stems, giant cane can grow to a height of 8 to 9 m but is typically less. Lower sheaths are about half as long as the culm internodes, while the upper six to 10 sheaths culminate in 10 to 12 bristles that are 5 to 9 mm long (Hitchcock 1971). Leaves range from 10 to 30 cm in length and from 2 to 3 cm wide. They have rounded base, are lance shaped, and have finely toothed margins (Bailey and Bailey 1976). Leaves are typically pubescent underneath and are either pubescent or glabrous above. Leaves on stems 2 years and older grow on side branches. Branches are short, less than 30 cm, also with loose papery sheaths.

**Range.**—Giant cane is found at elevations ranging from sea level in southern floodplains to 610 m elevation in the Appalachian Mountains. It can grow in dense thickets in the Mississippi Delta and in other southern swamplands. Its range extends from southern Maryland west into Ohio, Indiana, and Illinois, south to the Gulf Coast and west to Texas, Oklahoma, and Arkansas (Bailey and Bailey 1976, Brickell and Zuk 1996, Walkup 1991). A recognized variety is *A. gigantea* subsp. *tecta* (Walter) McClure.

**Ecology.**—Giant cane formerly occupied large areas (canebrakes) in floodplains of southern rivers; now these thickets are usually found only in the Mississippi Delta where they form in low-lying, shady moist areas. Elsewhere, giant cane is usually intermixed with shrubs. It is fire dependent and resprouts from rhizomes (Walkup 1991). It has a broad tolerance for weather and can withstand temperatures ranging from -23 to 41 °C. It grows in a variety of soil types (muck lands to mountain slopes and rich alluvial soils) and is rugged, cold-hardy and adaptable.

**Reproduction.**—Giant cane primarily spreads by rapid vegetative reproduction from large rhizomes. It flowers infrequently, and at irregular intervals, in early spring, forming simple panicles on the branches. The panicles consist of a few racemes of five to 15 large, stalked

spikelets, which may be purple (Bailey and Bailey 1976, Brickell and Zuk 1996). The inflorescence may be a single axis or have branches. Seed production from these flowers is sparse and unpredictable.

**Growth and Management.**—Giant cane is a short-lived, evergreen monocot. Individual stems survive less than 10 years, but the species sprouts prolifically from its rhizomes. In the presence of fire and on the best-suited sites, it forms dense thickets called canebrakes. While it can withstand flooding, drought, and intense surface fires, giant cane is sensitive to overgrazing (Grelen and Duvall 1966, Hitchcock 1971). One source reports rapid growth (Brickell and Zuk 1996), especially after a fire. Fuel accumulates rapidly in a canebrake, and, to eliminate the hazard, a short burning cycle is advised (Hughes 1966, Walkup 1991).

**Benefits.**—The dense thickets of giant cane provide cover for nesting birds and small mammals. In addition, the young shoots are edible, sometimes used as a potherb (Hitchcock 1971), and of good nutritional quality. The leaves are a preferred food for southern pearly eye butterfly caterpillars (University of Florida 2001). The leaves extend well above the ground, plants can be completely defoliated by cattle and are also uprooted by swine (Hitchcock 1971, Walkup 1991). Thus, while grazing capacity of cane is high, careful management is required to prevent deterioration of the plants (Grelen and Duvall 1966).

## References

- Bailey, L.H. and E.Z. Bailey. 1976. Hortus Third: A Concise Dictionary of Plants Cultivated in the United States and Canada. McMillan Publishing Co., Inc. New York. 1,290 p.
- Brickell, C. and J.D. Zuk. 1996. The American Horticultural Society A-Z Encyclopedia of Garden Plants. DK Publishing, Inc., New York. 1,092 p.
- Grelen, H.E. and V.L. Duvall. 1966. Common plants of longleaf pine-bluestem range. Res. Pap. S0-23, U.S. Department of Agriculture Forest Service, Southern Forest Experiment Station, New Orleans, LA. 96 p.
- Hitchcock, A.S. 1971. Manual of Grasses of the United States. Vol. 1, 2nd Ed. Revised by A. Chase. Dover Publications Inc., New York. 569 p.

Hughes, R.H. 1966. Fire ecology of canebrakes. In: Proceedings 5<sup>th</sup> Annual Tall Timbers Fire Ecology Conference, Tallahassee, FL. Tall Timbers Research Station. p. 148-158.

University of Florida. 2001. Website, Center for Aquatic and Invasive Plants. <http://aquat1.ifas.ufl.edu/arugig.html>. 1 p.

USDA, NRCS. 2001. The PLANTS database, National Plant Data Center, Baton Rouge, LA. <http://plants.usda.gov>. [not paged].

Walkup, C. 1991. *Arundinaria gigantea*. In: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station Fire Sciences Laboratory. Fire Effects Information System. <http://www.fs.fed.us/database/feis>. 9 p.

---

Kristina Connor, Plant Physiologist, U.S. Department of Agriculture, Forest Service, Center for Bottomland Hardwoods Research, Box 9681, Mississippi State, MS 39762