

# Cane Grasses *of Florida*

An Identification Guide



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Robert H. Mohlenbrock, hosted by the USDA-NRCS PLANTS Database / USDA SCS. 1989. Midwest wetland flora: Field office illustrated guide to plant species. Midwest National Technical Center, Lincoln.

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# PURPOSE OF THIS GUIDE

Non-native grasses pose threats to a variety of habitats in Florida, but correct identification can be challenging due to the unique features of this family. This is particularly true for the large-statured cane species (those tall grasses with cane-like stems), which have very similar physical characteristics. To facilitate identification of these species, we have created a guide to twelve of the most common cane grasses found in Florida.

In this guide, we refer to Florida Exotic Pest Plant Council (FLEPPC) Category I and II invasive species. Category I species are those which alter native plant communities by “displacing native species, changing community structures or ecological functions, or hybridizing with natives.” Category II species are those which “have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species.” We also reference the UF/IFAS Assessment of Non-Native Plants in Florida’s Natural Areas. This resource evaluates the invasion risk of non-native species found in the state or proposed for introduction. Some of the species in this guide are also listed as Florida State Noxious Weeds through the Florida Division of Agriculture and Consumer Services (FDACS). It should be noted that only those plants listed on the FDACS noxious weed list are prohibited by law.

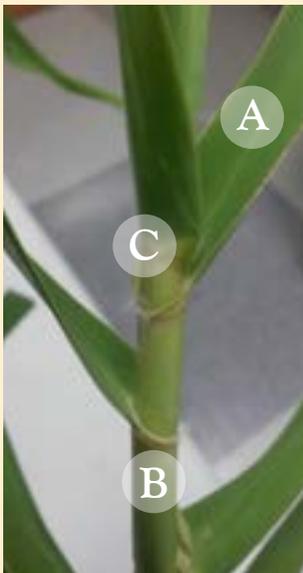
For the complete list of FLEPPC Category I and II species, visit:

<http://www.fleppc.org/list/list.htm>

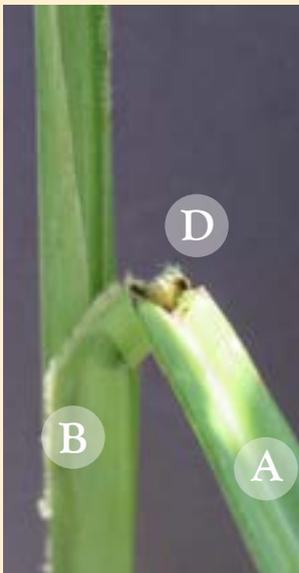
For the complete database of the UF/IFAS Assessment of Non-Native Plants in Florida’s Natural Areas, visit: <http://assessment.ifas.ufl.edu/>

For the complete list of the Florida State Noxious Weeds, visit: (<http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Bureaus-and-Services/Bureau-of-Entomology-Nematology-Plant-Pathology/Botany/Noxious-Weeds>)

## Physical Leaf Characteristics of Grasses



Candice Prince



Jose V. Fernandez

- A. Blade (lamina)** – the part of the leaf that extends from the sheath
- B. Sheath** – the part of the leaf base that surrounds the stem
- C. Collar** – the region where the blade joins the sheath
- D. Ligule** – a thin outgrowth near the collar on the inner surface of the leaf, often a membrane or fringe of hairs

# BURMA REED

(*Neyraudia reynaudiana*)



Dan Clark, Bugwood.org



Mark A. Garland



Dan Clark, Bugwood.org

Burma reed is native to south Asia. It is listed as a FLEPPC Category I species, and as a Florida Noxious Weed by the Florida Department of Agricultural and Consumer Services (FDACS).

Perennial clumping grass reaching a height of 10 feet; occurs in a variety of habitats in south Florida, although commonly found in pine rocklands.

Linear blades are greater than 3 feet in length. The collar, ligule, and top of the blades are hairy, while the bottom of the blades are smooth. Stems are filled with pith.

Burma reed spreads via seeds and rhizomes. Flowering occurs in late spring through early fall. Inflorescences are large (up to 3 feet in length), feathery panicles with silver hairs. Spikelets can be up to 8 mm long.

Florida Invasive Plants (FLIP) Mobile Field Guide. 2011.

<http://www.plantatlas.usf.edu/flip/plant.aspx?id=39>

Florida Natural Areas Inventory (FNAI). 2014.

[http://fnai.org/Invasives/Neyraudia\\_reynaudiana\\_FNAI.pdf](http://fnai.org/Invasives/Neyraudia_reynaudiana_FNAI.pdf)

UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas. 2016.

<http://assessment.ifas.ufl.edu/assessments/neyraudia-reynaudiana/>

# COMMON REED

(*Phragmites australis*)



Candice Prince

Both native and exotic lineages of common reed have been identified in Florida.

This perennial species reaches up to 15 feet in height, and can be found in freshwater and salt marshes throughout the state. Blades are linear and up to 20 inches long. Blades and sheaths are smooth, with a fringe of long hairs on the ligule.



Candice Prince

The exotic Eurasian lineage has a ribbed stem and more compact and upright panicles. This lineage was recently identified in Pinellas County, FL, and is aggressive in salt marshes throughout the United States.

The native lineage has a smooth stem and more open and drooping panicles. This lineage can become aggressive in disturbed marshes throughout the state.



Candice Prince

Common reed primarily spreads via rhizomes. Flowering occurs in the late summer through fall. Inflorescences are a light brown to purple in color. Spikelets are up to 15 mm long.

Overholt, W.A., R. Diaz, M. Hanson, and D. Williams. 2011. *Phragmites* in Florida. UF/IFAS EDIS publication ENY 860. <http://edis.ifas.ufl.edu/in898>

University of Florida Center for Aquatic and Invasive Plants. 2015. <http://plants.ifas.ufl.edu/plant-directory/phragmites-australis/>

# GIANT BRISTLEGRASS

(*Setaria magna*)



Jose V. Fernandez



Jose V. Fernandez



Jose V. Fernandez

Giant bristlegrass is an annual species that reaches over 12 feet in height. It is commonly found in freshwater and brackish marshes throughout the state.

Although native to Florida, it can form monocultures that exclude other vegetation.

Blades are linear and over 2 feet in length. Blades are rough to the touch, but the sheaths are smooth. The ligule has a fringe of short hairs.

Giant bristlegrass spreads via seeds. Flowering occurs in summer through fall, and the inflorescence is a dense, spike-like panicle. Spikelets are up to 2 mm in length.

Noxious and Nuisance Plant Management Information System (PMIS). 2011.

<http://el.erdc.usace.army.mil/pmis/PlantInfo/plantinfo.aspx?plantid=59>

University of Florida Everglades Research and Education Center (EREC).

<http://erec.ifas.ufl.edu/weeds/giant%20bristlegrass.html>

# GIANT REED

(*Arundo donax*)



Leslie J. Mehrhoff, Bugwood.org



Amy Ferriter, Bugwood.org



David J. Moorhead, Bugwood.org

Giant reed is an exotic species native to Asia that has been proposed for biofuel production in the United States. It is listed as invasive by the UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas.

This perennial species can reach up to 20 feet in height, and is commonly found in wetlands and riparian areas throughout the state.

The general appearance of the species is similar to common reed, but the collar of giant reed has a brown wedge and rounded outgrowths that clasp the stem.

Blades are linear, up to 3 feet in length, and have rough edges. The ligule has a fringe of small hairs.

Giant reed primarily spreads via rhizomes. Flowering occurs in late summer through early fall, and inflorescences are large (up to 2 feet in length), compact panicles that are a light brown color. Spikelets are up to 12 mm long.

Odero, D.C., K. Vollmer, C. Rainbold, and J. Ferrell. 2014. Giant reed (*Arundo donax*): Biology, Identification, and Management. UF/IFAS EDIS publication SS AGR 301. <https://edis.ifas.ufl.edu/ag307>

Washington State Noxious Weed Control Board. 2010. <http://www.nwcb.wa.gov/detail.asp?weed=156>

UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas. 2016. <http://assessment.ifas.ufl.edu/assessments/arundo-donax/>

# GOLDEN BAMBOO

(*Phyllostachys aurea*)



Amy Richard, © UF/IFAS CAIP

Golden bamboo is an exotic species native to southeast China. It is listed as a FLEPPC Category II species.

The UF/IFAS Assessment recommends that it be used with caution in north and south Florida, but concludes that it is not a problem species in central Florida.



Chuck Barger, Bugwood.org

This perennial species reaches up to 30 feet tall, and is commonly found in pine flatwoods and hardwood forests of north Florida.

Blades are up to 6 inches in length, can be hairy or smooth, and have rough edges. Sheaths and ligules have hairs.



Nancy Loewenstein, Bugwood.org

The internodes at the base of the stem are clustered together and slanted. Stems are hollow, and are grooved or flattened above each node.

Golden bamboo primarily spreads via rhizomes, and flowering is very rare in Florida.

Florida Natural Areas Inventory (FNAI). 2014.

[http://fnai.org/Invasives/Phyllostachys\\_aurea\\_FNAI.pdf](http://fnai.org/Invasives/Phyllostachys_aurea_FNAI.pdf)

Queensland Government – Weeds of Australia. 2011.

[http://keyserver.lucidcentral.org/weeds/data/03030800-0b07-490a-8d04-0605030c0f01/media/Html/Phyllostachys\\_aurea.htm](http://keyserver.lucidcentral.org/weeds/data/03030800-0b07-490a-8d04-0605030c0f01/media/Html/Phyllostachys_aurea.htm)

UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas. 2016.

<http://assessment.ifas.ufl.edu/assessments/phyllostachys-aurea/>

# MISSION GRASS

(*Pennisetum polystachion*)



Forest and Kim Starr, Bugwood.org



Forest and Kim Starr, Bugwood.org



Forest and Kim Starr, Bugwood.org

Mission grass is native to Africa. It is listed as a Florida Noxious Weed by the Florida Department of Agricultural and Consumer Services (FDACS), and as a FLEPPC Category II species.

Mission grass is an annual or short-lived perennial grass that reaches up to 6 feet in height. It is found in disturbed sites in south Florida.

Blades are linear and up to 22 inches in length. Blades can be either hairless or pubescent near the base. Sheath margins and ligules have hairs.

Mission grass spreads primarily via seeds, although it can also spread through stem segments. Flowering occurs from summer to fall, and the inflorescences are upright, spike-like panicles up to 14 inches in length and yellow, brown, or purple in color. Spikelets are up to 5 mm long.

Florida Department of Agricultural and Consumer Services.

<http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Bureaus-and-Services/Bureau-of-Entomology-Nematology-Plant-Pathology/Botany/Noxious-Weeds/Pennisetum-polystachion-missiongrass>

UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas. 2016.

<http://assessment.ifas.ufl.edu/assessments/pennisetum-polystachion/>

# NAPIER GRASS, ELEPHANT GRASS

(*Pennisetum purpureum*)



Dan Clark, Bugwood.org



Rebekah D. Wallace, Bugwood.org



Forest and Kim Starr, Bugwood.org

Napier grass is native to Africa, and is classified as a FLEPPC Category I species. It is also listed as invasive in north, central, and south Florida by the UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas.

This perennial species reaches up to 15 feet in height; it is commonly found in pastures, roadsides, and in wetland habitats throughout Florida.

The blades are linear and up to 3 feet in length, with hairs and rough margins. The ligule has long hairs, while the sheath is smooth.

Napier grass spreads via seeds and rhizomes. Flowering occurs from September through first freeze, and the inflorescences are dense, spike-like panicles up to 12 inches in length and yellow or brown in color. Spikelets are up to 6 mm long.

Invasive Species Compendium. 2014. <http://www.cabi.org/isc/datasheet/39771>

UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas. 2016.

<http://assessment.ifas.ufl.edu/assessments/pennisetum-purpureum/>

University of Florida Center for Aquatic and Invasive Plants. 2015.

<http://plants.ifas.ufl.edu/plant-directory/pennisetum-purpureum/>

# PAMPAS GRASS

(*Cortaderia selloana*)



Greg MacDonald



Greg MacDonald



The Nature Conservancy, Bugwood.org

Pampas grass is native to South America, and is listed as invasive in north, central, and south Florida by the UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas.

This perennial species grows in clumps, and reaches up to 10 feet in height. Pampas grass is a common ornamental species, but can be found outside of cultivation in wet, disturbed areas.

The blades are linear, and can reach greater than 3 feet in length. Margins of the blades have sharp serrations, and the ligule has hairs. The leaf blades often twist, exposing the prominent midvein.

Pampas grass spreads primarily via seed. Inflorescences are large silver-white panicles up to 50 inches long, with spikelets up to 1.5 cm long. Flowering occurs in summer through fall.

# SUGARCANE (*Saccharum officinarum*)



Forest and Kim Starr, Bugwood.org



Forest and Kim Starr, Bugwood.org



Scott Bauer, Bugwood.org

Sugarcane is a perennial grass native to Southeast Asia. It is grown extensively in Florida for agricultural purposes, and can be found in ditches and abandoned agricultural lands in south Florida. It was determined to not be a problem species by the UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas.

Sugarcane reaches up to 20 feet in height. Blades are up to 60 inches in length with a thick midrib and rough edges. The ligule is a fringe of short hairs, and the sheath has long hairs along the upper edges.

This species spreads via seeds and rhizomes. Inflorescences are large, pinkish panicles up to 24 inches in length. Spikelets are up to 3 mm in length.

Wild sugarcane (*Saccharum spontaneum*), which is on the Federal Noxious Weed List, has recently been identified in south Florida. It can be distinguished from sugarcane by its smaller leaves, stalk, and inflorescence.

Bodle, M. 2009. It's official – wild sugarcane (*Saccharum spontaneum* (L.)), another new invasive plant for Florida. *Wildland Weeds*, Summer 2009.

Royal Botanic Gardens, Kew. *Saccharum officinarum* (sugar cane). <http://www.kew.org/science-conservation/plants-fungi/saccharum-officinarum-sugar-cane>

Food and Agriculture Organization of the United Nations (FAO). *Saccharum officinarum* (L.). <http://www.fao.org/ag/AGP/AGPC/doc/GBASE/data/Pf000310.HTM>

# SUGARCANE PLUMEGRASS

(*Saccharum giganteum*)



James H. Miller, Bugwood.org

Sugarcane plume grass is a native perennial species.

This species reaches up to 10 feet in height, and is commonly found in wetland habitats throughout Florida.



James H. Miller & Ted Bodner, Bugwood.org

The blades of sugarcane plume grass are up to 20 inches in length, and may be smooth or have stiff hairs.

The ligule has a fringe of hairs, and the sheath may be smooth or with a few hairs.



Robert H. Mohlenbrock

Sugarcane plume grass spreads via seeds. Flowering occurs in mid-fall, and the inflorescence is a large white, feathery panicle.

Clayton, W.D., M. Vorontsova, K.T. Harman, and H. Williamson. 2014. Kew Royal Botanic Gardens. <http://www.kew.org/data/grasses-db/www/imp09044.htm>

Webster, R.D. Utah State University Grass Manual on the Web. [http://herbarium.usu.edu/webmanual/info2.asp?name=Saccharum\\_giganteum+&type=treatment](http://herbarium.usu.edu/webmanual/info2.asp?name=Saccharum_giganteum+&type=treatment)

# SWITCH CANE, GIANT CANE

(*Arundinaria gigantea*)



Ann Murray, © UF/IFAS CAIP

Switch cane is a native perennial species that reaches up to 10 feet in height.

This species is commonly found in low-lying, moist areas and wetlands in central and northern Florida.



Ann Murray, © UF/IFAS CAIP

Blades of switch cane are lance-shaped and up to 6 inches in length, and usually have hairs. Sheaths overlap and have long hairs on the upper edges. Ligules usually have hairs, but are sometimes smooth.



Robert H. Mohlenbrock

Switch cane spreads primarily via rhizomes. The inflorescence is a panicle, although flowering is irregular and seed production is rare. Spikelets are up to 7 cm long, with 6-12 florets.

Taylor, J.E. 2006. U.S. Department of Agriculture Forest Service, Fire Effects Information System. <http://www.fs.fed.us/database/feis/plants/graminoid/arugig/all.html>

University of Florida Center for Aquatic and Invasive Plants, 2015.

<http://plants.ifas.ufl.edu/plant-directory/arundinaria-gigantea/>

# ZEBRAGRASS, CHINESE SILVERGRASS

(*Miscanthus sinensis*)



Lauren Quinn, Bugwood.org



James H. Miller, Bugwood.org



Chris Evans, Bugwood.org

Zebra grass, native to Asia, is a species of interest for biofuel production in the United States.

While it can be aggressive in disturbed areas such as roadsides and old fields, zebra grass was determined to be not a problem species by the UF/IFAS Assessment of Non-Native Plants in Florida's Natural Areas. It occurs mainly in central and north Florida.

Zebra grass is a clumping perennial grass species, and reaches up to 12 feet in height.

Blades are linear, up to 18 inches in length, and have rough edges with a silver-white midrib. The ligule is a membrane with a fringe of hairs, while the sheath may or may not have hairs.

Zebra grass spreads via both rhizomes and seeds. Flowering occurs in late summer through early fall, and the inflorescences are fan-shaped panicles. Spikelets are in pairs and up to 7 mm in length, with two florets.

