

USGS-NPS Vegetation Mapping Program
Congaree Swamp National Monument

**Liquidambar styraciflua - Quercus nigra - Quercus laurifolia / Arundinaria gigantea /
Carex abscondita Forest**

COMMON NAME Sweetgum - Water Oak - Diamondleaf Oak / Giant Cane / Concealed Sedge Forest

SYNONYM

PHYSIOGNOMIC CLASS Forest (I.)

PHYSIOGNOMIC SUBCLASS Deciduous forest (I.B.)

PHYSIOGNOMIC GROUP Cold-deciduous forest (I.B.2.)

PHYSIOGNOMIC SUBGROUP Natural/Semi-natural (I.B.2.N.)

FORMATION Temporarily flooded cold-deciduous forest (I.B.2.N.d.)

ALLIANCE *Quercus (phellos, nigra, laurifolia)* Temporarily Flooded Forest Alliance

CLASSIFICATION CONFIDENCE LEVEL 1

USFWS WETLAND SYSTEM Palustrine

RANGE

Globally

Liquidambar styraciflua - Quercus nigra - Quercus laurifolia / Arundinaria gigantea / Carex abscondita Forest has been newly described based on data from the Congaree Swamp National Monument. Global distribution needs assessment but likely includes the Atlantic Coastal Plain from Virginia to Georgia.

Congaree Swamp National Monument

This forest type occurs throughout the park.

ENVIRONMENTAL DESCRIPTION

Globally

Liquidambar styraciflua - Quercus nigra - Quercus laurifolia / Arundinaria gigantea / Carex abscondita Forest has been newly described based on data from the Congaree Swamp National Monument. Global environmental conditions await description but are similar to those described below.

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Liquidambar styraciflua - Quercus nigra - Quercus laurifolia / Arundinaria gigantea / Carex abscondita Forest occurs on somewhat poorly drained to moderately well-drained silt loam soils of ridges of the Congaree River floodplain. These are temporarily flooded sites with an annual probability of flooding of 100 percent but with the watertable well below the soil surface throughout the growing season in most years.

MOST ABUNDANT SPECIES

Globally

The globally abundant species are currently the same as the park-specific species listed below.

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Stratum

Species

Tree canopy *Pinus taeda, Liquidambar styraciflua, Ulmus alata, Quercus nigra, Quercus laurifolia, Acer rubrum, Ulmus americana, Quercus phellos*

Tree subcanopy *Carpinus caroliniana, Ilex opaca*

Shrub *Arundinaria gigantea, Asimina triloba*

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Herbaceous *Carex abscondita, Boehmeria cylindrica, Mitchella repens, Botrychium dissectum*
Vine / liana *Toxicodendron radicans, Vitis rotundifolia, Parthenocissus quinquefolia, Bignonia capreolata*

DIAGNOSTIC SPECIES

Globally

The globally diagnostic species are currently the same as the park-specific diagnostic species listed below.

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Pinus taeda, Liquidambar styraciflua, Ulmus alata, Quercus nigra, Quercus laurifolia, Acer rubrum, Ulmus americana, Quercus phellos, Carpinus caroliniana, Ilex opaca, Arundinaria gigantea, Asimina triloba, Carex abscondita, Boehmeria cylindrica, Mitchella repens

VEGETATION DESCRIPTION

Globally

The global description currently is the same as the park-specific description below.

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This community type occurs on the Congaree Swamp National Monument in two phases: one with an emergent canopy of large *Pinus taeda* trees, and the other without the emergent canopy. Coverage by *Pinus taeda* in the *Pinus taeda* phase ranges from ten to greater than sixty percent.

The closed canopy is codominated by *Liquidambar styraciflua* with *Quercus* spp., especially *Quercus nigra* and *Quercus laurifolia*, and in one example by *Quercus phellos*. Other species typical in this stratum include *Ulmus alata, Ulmus americana, Fraxinus americana, Quercus pagoda, Quercus michauxii, Quercus shumardii*, and *Acer rubrum*. The well-developed subcanopy is dominated by *Carpinus caroliniana* and *Ilex opaca*. Canopy species are present in this stratum as well, as are *Nyssa biflora, Ilex decidua, Diospyros virginiana, Celtis laevigata, Carya ovata, Morus rubra*, and likely other species. *Arundinaria gigantea* and *Asimina triloba* dominate the shrub stratum. The herbaceous layer ranges from moderate to fairly dense. Typical species include *Carex abscondita, Boehmeria cylindrica, Mitchella repens, Botrychium dissectum, Carex intumescens, Carex lupulina, Carex retroflexa, Asplenium platyneuron, Carex alata, Carex debilis, Ruellia carolinensis, Elephantopus tomentosus, Leersia virginica, Panicum boscii, Lobelia cardinalis, Sabatia angularis*, and others.

OTHER NOTEWORTHY SPECIES

CONSERVATION RANK G3G4
RANK JUSTIFICATION This community type
DATABASE CODE CEGL007732

COMMENTS

Congaree Swamp National Monument

Occurrences of this community type were among those of which the structure and species composition were most affected by Hurricane Hugo which hit the Monument in September 1989. All of the plots placed within this classification unit had many snapped off trees and tip-up mounds.

REFERENCES