

Swamp Forest

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Swamp Forest is one of the wetland habitats into which most people rarely venture. It is a forest that tends to be wet underfoot, sometimes the water can be knee-deep. There often is considerable undergrowth which makes it hard to move and the ground tends to be distinctly uneven, due to a mosaic of pools and elevated hummocks, as well as many exposed roots.

How to Recognize It

Red Maple occurs in almost every Swamp Forest we have investigated and often it is the most common tree. It can be accompanied by a few or several of the other characteristic tree species (see table). In many swamp forests, the trees are not very big. They may be widely spaced, perched on hummocks, with deep pools of open water or dried mud between them. Often the trees are hugged by shrubs rooted in the same hummock. Sometimes, the ground between the trees is covered by an uneven, knee- to hip-high growth of sedges or wetland ferns. Around the elevated bases of the tree trunks and on sedge hummocks, Peatmoss and other wetland mosses may be found, sometimes in dense carpets. Many other herbaceous plants, typical of wetlands or uplands, thrive on these elevated hummocks. The vegetation in Swamp Forest is mostly composed of native plant species, although a few invasive shrubs may occur.

Location

Swamp Forests occur throughout Columbia County and might well be our most common type of wetland. They can be found around the edges of a larger wetland complex, such as Drowned Lands Swamp or Shaker Swamp. They may also occupy small or large depressions within an upland forest.

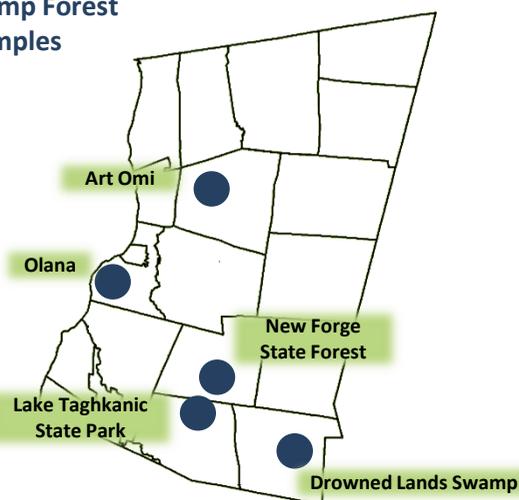


Cinnamon Fern is filling the space between the trees in this Swamp Forest. Note also the large Poison Ivy vine growing on the tree.



Swamp Forests often exhibit a hummock-pool topography. The pools can have standing water for much of the year or dry up seasonally.

Swamp Forest Examples



Visiting

The most convenient time to visit a Swamp Forest is in winter when the ground and water are frozen solid and there are no mosquitoes, or after a good dry spell at the height of the summer. However, at those times it doesn't feel much different than an upland forest. In order to really experience a Swamp Forest, put on your Wellingtons and "dive" right in! Or find one of the places where a Swamp Forest habitat has been made accessible by a boardwalk (there is a very short one at Lake Taghkanic State Park) or where an established trail goes right alongside a Swamp Forest.

What to Look For

Plants: Explore the difference in plants growing on the hummocks vs. in the pools, where you can expect Skunk Cabbage and Marsh Marigold, and might even get lucky and discover a Wild Calla. Look for Peatmoss (*Sphagnum* spp.) and other mosses on the hummocks and keep your eyes open for the delicate Pale Green Orchid, which sometimes emerges from Peatmoss in mid summer. Amongst the shrubs, look for White Swamp Azalea with its fragrant flowers in June, for Buttonbush which is a favorite nectar plant for many pollinators in mid summer, and keep your eyes open for Poison Sumac, which likes to hide out in Swamp Forest and can give you as bad a rash as Poison Ivy (which itself can be quite common in this habitat, as well).

Birds and Mammals: As part of our matrix of forest habitats, Swamp Forest likely hosts visits from many of our woodland animals. In wetter situations, the more aquatic mammals, such as Mink, Otter and Muskrat may spend time in such habitats, and Wood Ducks may nest here, together with a range of other woodland- and thicket-nesting birds. Among the more regionally uncommon birds, we have seen Rusty Blackbird, Canada Warbler, and American Woodcock in this habitat, the latter two during the nesting season.

Amphibians and Reptiles: Amphibians seem relatively abundant. The species we generally associate with moist upland forests, Red-backed Salamander and Red Eft went unseen in our inventories of Swamp Forest, but Pickerel, Wood and Green Frogs were frequently encountered, together with Two-lined, Spotted and Jefferson Salamanders. One of the regionally rarer amphibians occasionally sighted in this habitat is the trim Four-toed Salamander. Water and Garter Snakes use these forests, probably together with other snake species. We saw no turtles during our Swamp Forest outings, but Painted, Wood and Spotted Turtles may forage here.

Canada Lily, a deer-beleaguered lily of our Swamp Forests.



Characteristic Plants

The following species are common in this habitat, but not necessarily unique to it. Those with an asterisk () are good indicator species; purple, bold print highlights a common non-native invasive species in this habitat.*

Canopy Trees

Red Maple
American and Slippery* Elm
Swamp White Oak*
Green* and Black Ash*
White Pine
Yellow Birch*
Black Gum*

Shrubs/Understory Trees

Winterberry*
Highbush Blueberry
Musclewood
Spicebush*
Common Buckthorn

Ground Flora

Sensitive Fern*
Spotted Jewelweed
Poison Ivy
Tussock Sedge*
Wrinkle-leaved Goldenrod
False Nettle*
Marsh Fern*
Jack-in-the-Pulpit
Skunk Cabbage*
Canada Mayflower
Royal Fern*
Virginia Creeper
Cinnamon Fern*

More 'What to Look For'

Dragonflies and Damselflies: Swamp Forests are enticing but practically challenging grounds for dragonfly explorers. Together with the more common species such as the Eastern Pondhawk, the meadowhawks, and forktails is a relative abundance of spreadwings, with the Slender Spreadwing being most prevalent. We have also occasionally seen the unusual Harlequin Darner and Spangled Skimmer in these habitats.

Ants: Terrestrial insect life seems to be focused around the hummocks frequently encountered in these forests. The so-called Fen Ant (*Lasius minutus*) sometimes creates its mounds of black soil in these forests; it is reportedly a tender of root aphids and some-time parasite of other ants. Carpenter ants and the ripple-skinned Myrmecine ants also are fairly common. The ground beetle contingent are wetland species with *Pterostichus corvinus*, some species in the genus *Agonum*, the oddly asymmetric *Badister ocellaris*, and *Oodes fluvialis*. We know little about the ecology of these beetles, but consider the last two species regionally rare.

Butterflies and Moths: Amongst the butterflies, aside from the nearly ubiquitous Pearl Crescent and Cabbage White, the sedge-eating Browns are notably abundant, being seen at nearly half the Swamp Forest sites we surveyed. The woodland Little Wood Satyr also made a strong showing. The Spicebush Swallowtail likely ventures into this habitat to find larval food, although adults may confine much of their foraging to sunnier, more nectar-rich open lands. Although we did no detailed moth surveys, we did observe the Yellow-spotted Webworm moth – a documented orchid pollinator.

Pterostichus corvinus, one of the ground beetles of Swamp Forest.



Rare Species

Plants

Shrubby St. Johnswort (*NYS Rare*)
Pale Green Orchid (*Regionally Rare*)
American Fly-honeysuckle (*Regionally Rare*)
Wild Calla (*Regionally Rare*)
Rigid Sedge (*Regionally Rare*)
Canada Lily (*Regionally Scarce*)
Woodland Horsetail (*Regionally Scarce*)
Gray's Sedge (*Regionally Scarce*)

Animals

Canada Warbler (*Regionally Scarce*)
Rusty Blackbird (*Imperiled in NYS*)
Four-toed Salamander (*Regionally Rare*)
Appalachian Brown (*Regionally Rare*)
Eyed Brown (*Regionally Rare*)
Harlequin Darner (*Regionally Rare*)
Badister ocellaris (*Regionally Rare ground beetle*)
Oodes fluvialis (*Regionally Rare ground beetle*)

Similar Habitats

Swamp Forest sometimes grades gradually into Shrub Swamp which is another wetland habitat dominated by woody plants. The key feature is the density of trees; if you project the canopy cover of trees above 10 feet height onto the ground and get more than 30% cover, you are looking at a Swamp Forest. If the tree density is lower, and there is a significant shrub component it's a Shrub Swamp.

The line between Swamp Forest and adjacent upland forest can be blurry, but surprisingly often there is an obvious change in the herbaceous plant community, with wetland indicators quickly dropping out as one moves into the upland forest.



Appalachian Brown, a Swamp Forest species whose caterpillars eat sedges.