

# Cypress Swamps and Savannas

## Guild Description:

### Lepidoptera

*Semiothisa aequiferaria*

*Anacamptodes cypressaria?*

*Anacamptodes pergracilis*

*Isoparce cupressi*

*Cutina distincta*

*Cutina albopunctella*

*Cutina aluticolor*

*Cutina arcuata*

*Acrionicta perblanda\**

\* *Acrionicta perblanda* has not been recorded within the project area. The type locality for this species is in South Carolina (Ferguson, 1987) and its only known North Carolina location is in Craven County, NC (J.B. Sullivan, pers. comm.).

The lepidoptera composing this guild are believed to feed on cypress (*Taxodium distichum* and *T. ascendens*) as larvae. They are thus among the most characteristic species of large river swamps and bay-lake shores, but also occur in cypress savannas and in peatland habitats, particularly Nonriverine Swamp Forests. No vertebrates are associated solely with cypress swamps, although several species, such as Rafinesque's big-eared bat (*Corynorhinus rafinesquii macrotis*) and the southeastern myotis (*Myotis austroriparius*), show strong affinities for old-growth swamp forests more generally (see Forested Floodplains, General).

*Vulnerability to Habitat Fragmentation:* Nothing is known about the demographic structures or ranging abilities of this group. Given the stability and extensiveness of their habitats -- at least before southern swamp forests began to be clear-cut -- there has probably been only slight to moderate selection pressure for dispersal ability or metapopulation structure in this group.

**Habitat Description and Distribution:** The following natural communities contribute habitat for this guild: Cypress--Gum Swamp (Blackwater and Brownwater Subtypes), Maritime Swamp Forest, Tidal Cypress--Gum Swamp, Coastal Plain Small Stream Swamp (Brownwater and Blackwater Subtypes), Nonriverine Swamp Forest, Natural Lake Shoreline, and Cypress Savanna. Other types of forested wetlands, such as Peatland Atlantic White Cedar Forest, may also contain cypress, but only as an occasional or minor element; these community types were not included in the analysis for this guild.

Bald cypress is an important timber tree, and nearly all stands of swamp forest in the North Carolina Coastal Plain have been logged in the past, usually with no attempt at regeneration. Although riverine swamp forests have not been permanently converted to other uses and still occupy nearly the same spatial extent as originally, cypress is much less abundant now than before logging and in some areas has been nearly eliminated.

One of the best remaining examples of Cypress-Gum Swamp Forest, Blackwater Subtype, occurs

within the project area along the Black River; a number of trees within this floodplain have been documented to be well over 1,000 years old. Other extensive, good quality examples occur along the Northeast Cape Fear River, Waccamaw River, and Lumber River. Extensive stands of Tidal Cypress—Gum Swamp also occur along the lower Cape Fear and Northeast Cape Fear Rivers.

Nonriverine stands, unlike river swamps, have been subject to extensive ditching and draining for conversion to pine plantations or cultivated fields. Nonriverine Swamp Forests and Cypress Savannas, which occur primarily in Carolina bays, are consequently among the rarest and most threatened natural communities in the project area. No definite examples of Nonriverine Swamp Forest are now documented within the study area<sup>1</sup>, but most of the state's examples of Cypress Savanna are associated with clay-based Carolina bays found in Robeson County and a few of the adjoining counties partially included in the study area.

NCGAP cover classes representing primary habitat for this guild include 14, 30, 72, and 75. Two other classes, 45 and 70, are cover types also containing at least small amounts of cypress. Both of these two classes occupy extensive areas of floodplains, including sites where NHP community records suggest substantial amounts of cypress exist (e.g., along the Lumber River). We therefore included these classes as secondary habitat, indicated on Figure 22 by a lighter shade than the primary habitats.

The cover map does not extend into northern Robeson County and does not include the cluster of clay-based Carolina bays indicated by Cypress Savanna community EOs in the northern half of that county. Important blocks of habitat in this part of the study area were identified solely on the basis of NHP element records and inventoried natural areas.

**Guild Distribution:** Several members of this guild appear to be abundant wherever cypress occurs, including *Semiothisa aequiferaria*, *Anacamptodes pergracilis*, and all four species of *Cutina*. Collection records for the others are much more limited but do not show any obvious associations with large or even particularly high quality tracts of cypress<sup>2</sup>.

Core Areas: Since members of this group appear to be widely distributed throughout the area, without any sign of obvious concentrations within large or high quality tracts of cypress-containing habitat, no core areas stand out as particularly important. Significant concentrations of habitat can be identified, however, along several of the major river floodplains and around several of the permanently impounded Carolina bays, including Lake Waccamaw.

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<sup>1</sup>A few small stands have been identified in the Southeast Coastal Plain which may possibly belong to this community type. The Neck Savanna TNC Preserve contains one such small stand. Logging records suggest that extensive stands once occurred in the greater Green Swamp area.

<sup>2</sup>*Anacamptodes cypressaria*? appears to be associated primarily with nonriverine stands of cypress.

*Connectors:* Riverine and small-stream swamps containing at least some cypress appear to be distributed nearly continuously throughout the region's drainage basins. It is probably the ubiquity of this type of habitat — often second-growth — that accounts for the wide distribution of this guild.

**Survey Needs:** Apart from a single example of Cypress Savanna included in the insect survey of Camp Lejeune (LeBlond, et al., 1997), this habitat type has not been sampled for insects in North Carolina. The clay-based bays in the Robeson County area should be a high priority for survey.

**Protection Coverage/Needs:** Although this analysis does not indicate any special protection needs for this guild, Cypress Savannas are under severe threat and all remaining high-quality examples should be protected.