

Additional descriptive information used to characterize the old-growth cypress stand is presented in Table 1. In this study woody plants are treated either as trees or shrubs based on their potential to attain upper canopy status. Gordonia is the most frequently encountered tree individual as reflected in its high frequency and density. However, its dominance relative to structure is overshadowed by Taxodium with a basal area of 35.18 m²/ha, almost triple that of Gordonia (13.46 m²/ha). Persea, Magnolia, and Nyssa combined contribute less than 15% to the total basal area of trees in the site. The relative contribution to the community by individuals in the tree stratum as expressed by importance value (sums of relative frequency, density, and dominance converted to a basis of 100%) is dominated by Gordonia followed by Taxodium >> Persea ~ Magnolia > Nyssa.

Total stem density for woody plants greater than 1 m high is 27,339 stems/ha, quite similar in density to the 28,386 stems/ha reported by Schlesinger (1978) for a relatively unique deep-water cypress community in the western portion of Okefenokee Swamp. However, in Schlesinger's site Taxodium comprises 8% of all woody plants, whereas only 0.5% of the woody plants are Taxodium in the old-growth community. In both sites composition of the remaining individuals is dominated by several commonly shared shrub species. A cypress community in the Great Dismal Swamp, Virginia, has a density of 1560 stems/ha for individuals with a breast height diameter greater than 2.54 cm (Dabel and Day, 1977). That compares to 1739 stems/ha for the same size distribution (excluding shrubs) in the old-growth community.

The apportionment of individual species contribution to basal area is often used to assess community dominance since it is a measurement of the utilization of resources by a species (Whittaker, 1970). Total basal area for the site (Table 1) is 60.06 m²/ha with 94% (56.25 m²/ha) in tree species and 6% (3.91 m²/ha) in shrubs. Schlesinger's (1978) deep-water cypress community has a community basal area of 80.35 m²/ha with 8.6 m²/ha in standing dead yielding a comparable live plant basal area of 71.75 m²/ha. Dabel and Day's (1977) cypress community has a basal area of 59.3 m²/ha. These basal areas are remarkably similar considering that the basic similarity between the communities is that they are occasionally or regularly flooded swamps with Taxodium as the dominant canopy species. Dissimilarities in community structure is apparent when one realizes that Taxodium comprises 86% of the basal area in the Okefenokee deep-water cypress community (Schlesinger, 1978), 47% in the cypress community in the Great Dismal Swamp (Dabel and Day, 1977), and 59% in the old-growth Okefenokee cypress community (Table 1). Based on these data, it is apparent that the old-growth cypress community is more similar to the more distal and younger (~130 years; personal communication: F. P. Day) cypress community in the Great Dismal Swamp, probably because of a similarity in flooding regime, than to the more proximal deep-water cypress community in Okefenokee Swamp.

The understory consists of a dense layer of woody vegetation. The denseness of the shrub layer is more apparent when one realizes there are, on the average, almost 2.5 stems/m². Most species of this layer are broad-leaved, mostly evergreen shrubs. Ilex, treated as a shrub though intermediate in stature between shrubs and trees, dominates the shrub component primarily because of its moderately high density and high basal area relative