

II. ENVIRONMENTAL SETTING

The Beech Ridge Site is situated within the Atlantic Coastal Plain of the Coastal Plain physiographic province (Fenneman 1939; Matthews and Ireland 1971). Principal drainages in the immediate site area are the Leipsic River to the north and the St. Jones River to the south. The site itself is located on a small peninsula of land that extends to the southwest, overlooking the low-lying swampy ground associated with Fork Branch. The mouth of a small right-bank tributary of Fork Branch is almost directly west of the landform the site sits on. Fork Branch flows in a southeasterly direction, entering Silver Lake and then forming the upper part of the St. Jones River. In a general sense, Fork Branch parallels the direction or alignment of Route 13, which sits on the higher ground found to the east of the stream valley and its associated lowlands. The St. Jones River flows southeast to eventually enter Delaware Bay. The Beech Ridge Site is just below the limits of tidal influence. The intensively investigated Hickory Bluff Site (Petraglia et al. 2002) is situated downstream from Beech Ridge and is more or less just above the limit of tidal influence, located at Silver Lake. Beech Ridge is approximately 19 kilometers upstream from where the St. Jones River enters Delaware Bay.

The underlying geological formations are dominated by sands and gravel that date to the Pleistocene Columbia Formation (Pickett and Benson 1983). This formation caps earlier Miocene marine deposits belonging to the Calvert Formation. The sands of the Columbia Formation have been extensively reworked and transported by eolian means, part of which led to the burial of the earlier components found at the Beech Ridge Site.

The soils mapped for the site area fall within the Sassafras-Fallsington association, defined as soils occurring on moderately level to gently sloping terrain. It includes soils developed on sandy substrates ranging from well to poorly drained. More specifically, most of the site area falls within the Sassafras sandy loam (SaB), with two- to five-percent slopes. Back from the site area are large expanses of Sassafras sandy loams with little noticeable slope (mapped as SaA units). A small mapping unit of Woodstown sandy loam (Wo) is located more or less in the center of the landform on which the site is situated. Most of the site is, however, on the Sassafras soils. These are soils that developed on sandy substrates and have well-developed sandy loam to sandy clay loam B horizons. The paleosol B horizon identified at Beech Ridge falls within the typical B horizon identified for Sassafras soils. However, the variably thick C horizon identified at Beech Ridge is not present in the standardized description for either the Sassafras soils or the Woodstown sandy loam; it is probable that this would have been subdivided into the B1 to B2 sequence defined in the county soil manual (description in Matthews and Ireland 1971:21–22).

The site area is well named. Current vegetation includes mature beech trees and other hardwood species, such as oak and hickory. Large tulip poplar trees and an understory of dogwood trees are found across the site area, as well. The site has apparently not been subjected to cultivation since the nineteenth or early twentieth centuries, judging from the size of the trees present within the site area. Indeed, the thin A1-A2 soil horizon that forms the upper part of the soil column may be representative of an unplowed region. If it has been plowed in the past, agricultural

disturbance was shallow, and weathering has resulted in differentiation of a shallow plowzone into an A1-A2-horizon sequence.

Currently, the site area is open woodland with mature beech, tulip poplar, and oak trees, as noted above. An apartment complex and associated parking lot borders the site area to the east. This complex may have impacted an unknown part of the site. Indeed, given the distribution of Late Woodland materials, it appears that the site likely continues under the parking lot area.