

II. ENVIRONMENTAL SETTING OF THE GABOR SITE

This chapter briefly reviews the Gabor Site's environmental setting. Rutgers completed a fragment of this chapter; this contribution is summarized herein, and is not a word-for-word recapitulation. An incomplete section on the reconstruction of paleo-environments—drawn heavily from various works by Custer (1982, 1989, 1994), Custer and Silber (1995), Carbone (1976), and Wendland and Bryson (1974)—was attached to the above-noted fragment. Given its incomplete nature, this attachment is not included in this chapter.

The Gabor Site and general project area is located in east-central New Castle County, Delaware, at the interface of the Fall Line and Upper or High Coastal Plain physiographic provinces. The transition zone between these provinces is oriented in a northeast-southwest direction through the northern portion of the Delmarva Peninsula. Thomas (1966) designated this area as the Midpeninsular Drainage Divide. The majority of streams in this zone are tidal. As noted by Hoseth and Seidel (1994), streams with steep gradients once flowed from the adjacent Piedmont Uplands and deposited their loads of sorted sands, gravels, cobbles, and boulders that now comprise the Columbia Formation of the Quaternary Period found along the Fall Line. This formation caps older deposits of the Cretaceous age Potomac Formation, composed of silts and clays. These deposits are marine formations, as opposed to the later Columbia Formation, which is alluvial in origin.

These formations provided a wealth of cobble sources for lithic utilization. Sandstone cobbles, cobbles derived from vein quartz, and chert cobbles are the dominant gravel types in the area (cf. Jordan 1964). Dense cobble beds are visible in Cool Run and on the surface of the cultivated fields in the site area. Jordan (1964) states that the area between the Fall Line and the Smyrna River is the southernmost extent of very coarse glacial deposits of the Columbia Formation. In many localities, the resistance of these coarse-grained materials to erosion resulted in a topography characterized by rolling terrain with differences in elevation of up to 16 meters between the headwaters of larger streams and contiguous floodplain marshes.

The central portion of the Ogletown area, occupied by the Gabor Site, consists of extensive poorly drained woodlands, spring-fed ephemeral streams, and bay/basin features. In addition, the site area is only about six kilometers west of Churchman's Marsh. Within the general area of the Gabor Site, differences in elevation between the floodplain of White Clay Creek and the edge of the Fall Line measure about 52 meters. Although this differences in general elevation is less than that observed between the Piedmont and Fall Line provinces, Hoseth and Seidel contend that it was sufficient to have provided differences in the composition of local plant communities.

Soils within the Gabor Site area can be characterized as a mosaic of well and poorly drained types. The northern half of the project area is comprised of the Elsinboro-Delanco-Urban association. The southern half of the site area is characterized by the Sassafras-Fallsington-Matapeake association. According to the General Soil Map in the USDA soil survey report for New Castle County (Matthews and Lavoie 1970), the Elsinboro-Delanco-Urban land associations consist of level to gently sloping and well-drained to moderately well-drained, medium-textured soils. These soils are also characterized as moderately undisturbed to severely

disturbed. These soils, as expected, have formed in old alluvium on stream terraces. The old alluvium parent material of these soils comes from, in most cases, the deposits of the Columbia Formation, described above.

The other soil-mapping unit in the project area, the Sassafras-Fallsington-Matapeake association, is noted as level to gently rolling, with portions well drained or poorly drained and containing moderately coarse-textured to medium-textured soils found on upland localities. Again, the parent material is likely the underlying Columbia Formation noted earlier.

None of these soil-mapping units offer any potential for deeply buried archaeological deposits. Indeed, most of the buried archaeological assemblages in this region come from shallow deposits, covered by episodic and horizontally restricted blankets of wind-blown materials. Frequently, any shallowly buried archaeological context that resulted from natural processes has been largely disturbed through cultivation; in places, though, features are still preserved under thin blankets of eolian caps beneath plowzone horizons. It is assumed that such eolian processes sealed the preserved features at the Gabor Site.

Formerly, the project area was entirely rural in character, a description that applied less and less as development increased from the 1960s to the present time. Residential and commercial development has taken over many of the vast farms that once occupied the Ogletown region and New Castle County in general. During Rutgers' fieldwork in the early 1990s, the project area still maintained its rural character, though it was surrounded by a mosaic of developed areas that now characterize the region.