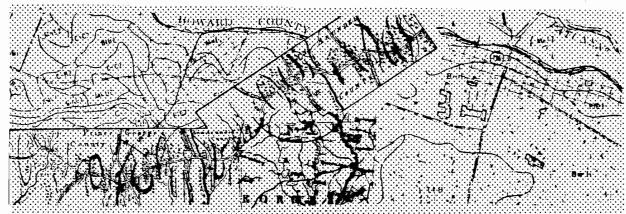
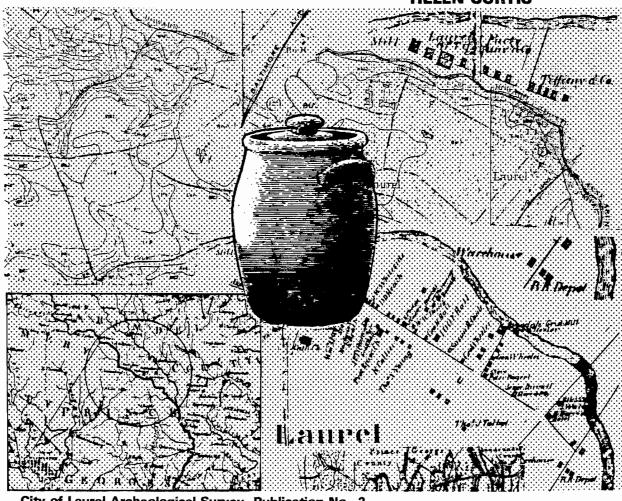
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HUMAN ADAPTATION TO THE FALL LINE SETTING

A FRAMEWORK FOR THE ARCHEOLOGY OF LAUREL MARYLAND

CONRAD JAY BLADEY EN CURTIS



City of Laurel Archeological Survey Publication No.. 2

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Update to the 1983 Edition- December 1, 2010

When I started work as the first municipal archeologist in the state of Maryland I was optimistic that the truths self evident in our relationship to the archeological record would help to structure the relationship of people and governments to the land.

If only we could transform the archeological record into a dimension of the ecology that was respected as being as essential and valuable as any other. We have been taught to respect the air, the ground water and now we are expected to recycle and refrain from pollution. Why could we not extend this awareness to the archeolgocial record?

The awareness that I sought required archeology to become a part of the life way. The interface between the record and all human activity needed to be respected at all times. Awareness could not be limited to significant sites nor could it neglect the presence and absence information inherent in artifacts found without context. Just as one would never pollute the earth or ground water one would never disturb the earth unnecessarily and when necessary take steps to always record what was present scientifically and care for the artifacts and information responsibly.

While I was fortunate to have my archeological program recognized by the City of Laurel, Maryland, even though it was not funded. At the first instant of its implementation I found myself hauled in before the city administrator and mayor who steamrolled careless development and essentially shut my program down.

Today writing in 2010 I see some but very little progress. The Archeological environment in contrast with other dimensions of ecology is neglected and respect for it is still not a part of the life way. We have to depend upon limited government mandates and even then we find negotiations rather than insistence that the environment is treated scientifically at all times.

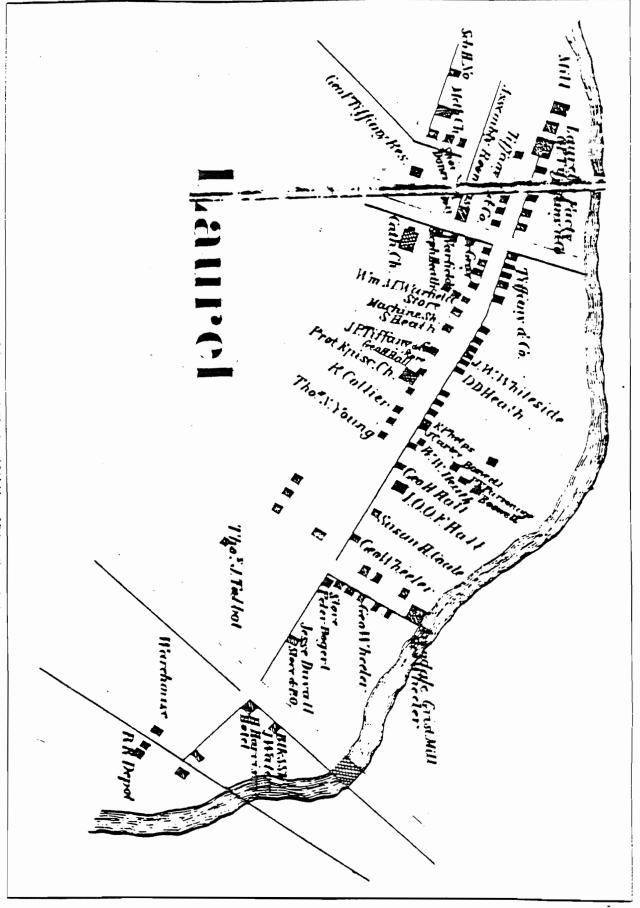
Governmental and benevolent funding can not and never will be able to accomplish what can be done when like recycling, archeological awareness is brought into the life way of each and every citizen always.

This publication brings together important drawings, maps, ecological and soil studies and observations which demonstrate the existence of an important Archeological environment in Laurel, Maryland. I hope that by granting greater access that someday that environment will be respected by one and all.

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This is the Laurel regment of the Simon L Martinet 1861 Map of Prince George's County.

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Introduction

Human cultural history within the study area known as Laurel, Maryland has remained a dark confusing unknown across which generations of city planners and Laurel residents have stumbled repeatedly in recent centuries and decades. A prerequisite to understanding any history is an accurate and high level description of the human and natural setting in which such history occurs. This study has made a beginning in the process of description so essential to future fieldwork and final explanation. In the chapters that follow an attempt has been made to document the present state of our knowledge, our predictions for future discoveries, and the basic and broad trends of human adaptation in Laurel. It is hoped that following from this work will be a more complete study of the underlying cross-currents of multi-lineal evolutionary adaptation which helped to weave the basic patterns in the tapestry of Laurel's history. From these basic trends we shall build a path to the understanding of particular selections and a final explanation of this particular evolutionary course. Thus, by accounting for the past we may be more able to account for the selections of the future.

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Location and Boundaries

The study area is located in Laurel, Maryland and lies in the northeast of Prince George's County, senatorial district twenty-one, Maryland Archeological Research Unit number thirteen (Patuxent Drainage, map 12). The area of study is defined by both natural, technological, and cultural/urban boundries (maps 1, 2).

The Patuxent River running northwest to southeast forms the boundary between Howard and Prince George's Counties; its banks on the Howard County side define the northern boundary of the study area.

The Walker Branch, which flows into the Patuxent at the transitional Fall Line zone between the Piedmont and and Atlantic Coastal Plain physiographic provinces, will be considered the northwest boundary.

The Crow Branch defines the southern boundary of the study area and serves both as an urban and natural boundary.

The B & O railroad track, laid in 1835, forms a transportation and technological boundary reflecting a soils/ ecological boundary. The railroad tracks are also located on the Prince George's County and Anne Arundel County line, that marks the eastern boundary of the study area.

Soils

There are nine varieties of soil in the study area. These soils vary in characteristics of slope, drainage, and potential for supporting plant and animal populations.

Within the boundaries of the study area the most abundant soil type is the Beltsville Urban land complex, followed by Beltsville silt loam. The other soils present, in order of predominance are: Leonardtown silt loam, Manor loam, Bibb silt loam, Croom gravelly sandy loam, Comus silt loam, Ochlockonee silt loam (local alluvium) and Hyde silt loam. Slopes range from 0% to 60% while the average slopes are 5% to 15%. Soil drainage ranges from poor to excessive with more soils having poor drainage.

These soils currently have the potential to support a variety of plant and animal communities. Open land wild-life may include: rabbits, deer, quail, and pheasants; while woodland wildlife may include: deer, squirrel, turkey and birds. Wetland environments may support raccoon, muskrat, duck and geese populations (USDA 1967: 155). Plants ranging from grain and seed crops in open lands to hardwood and coniferous trees and shrubs in woodlands are well suited to these soils.

Within the study area approximately 5% is currently open land, 25% is woodland, and 5% is wetland. The remaining 65% is urban development.

There are a few problems associated with the soils found in the study area. The soils in the Beltsville series have a thick, very compact fragipan in the lower subsoil (USDA 1967: 16). They have only a moderate effective depth for agricultural purposes. Most of the previously mentioned soils are moderately to severely eroded and require special precautions if used agriculturally. Poor soil drainage is a problem for the urban complex within the study area and control measures are required for development (USDA 1967: 17). Permiable and acidic soils adversely effect preservation of organic and metallic remains except when sandy/clay spring soils are present, in which case concretion barriers are formed. These sandy/clay spring soils are present in the study area.

Soils will be further discussed in the section on physiographic provinces.

Underlying Geology

The underlying geology of the study area consists of both crystalline and sedimentary rock. The Patuxent formation is the predominant sediment, followed by Brandywine gravel. Crystalline Laurel migmatite is present in a small portion of the study area and Wicomico sediments form a distinctive boundary for the area of study (map 4).

The Patuxent formation consists of large round pebbles, fine white, pink, or yellow sand and thin lenses of white or iron stained clay and kaolin. The sand beds commonly contain disseminated kaolin. This deposit which is 100 feet thick and is probably an outwash deposit from the Lower Cretaceous Epoch is found in the northeast and southwest of the study area.

Brandywine gravel consists of ancient alluvial fans sloping gently downward from an altitude of about 300 feet above sea level. This deposit which is about 40 feet thick dates from the Pliocene Epoch is located in the center and south of the study area.

Laurel migmatite is a crystalline rock of an unknown age. It is a composition of intensely granitized schist with impure granite (muscovite and biotite granite) and is located in the northwest and south within the study area.

The Wicomico formation consists of gravel, sand, and silt and has a thickness of about 30 feet. This deposit

dates from the Pleistocene Epoch and is not located within the study area but is found directly to the east of the B & O railroad tracks (Cooke 1951).

Physiographic Boundaries and Features

The study area lies in a transition zone (the "Fall Line") between the physiographic provinces of the Coastal Plain and the Piedmont Plateau (map 5). Within the study area there are both river and stream enviornments and urban/ residential tracts. The boundary between the Coastal Plain and Piedmont Plateau is ill defined, marked mainly by the termination of the softer Cretaceous formations and the beginnings of the harder crystalline rocks of the Piedmont Plateau (Vokes 1974: 39). In the stream valleys the softer strata have been eroded, leading to the development of rapids and waterfalls over the crystalline rocks of the Piedmont. The Fall Line, by causing this change in gradient of the Patuxent River, led to the use of water power in Laurel. The Fall Line's most characteristic feature is a change of sea level of 400 feet from the Montgomery County line to city limits of Laurel.

Rivers and Streams

The Patuxent River, forming the northern boundary of the study area, is the longest river lying entirely within the state of Maryland (Corps of Engineers 1975: 5). It drains approximately 2486 square kilometers and is 175 kilometers in length (Steponaitis 1980: 2). The river has an underlying geology which includes formations of laurel migmatite in

the Piedmont province and Patuxent formation in the Coastal Plain area (Cooke 1951: Map). The two major soils along the river are Comus silt loam and Manor loam. Comus silt loam is a well drained fertile soil occuring on the flood plains and consists of sediments that have been washed from crystalline rocks of the Piedmont Plateau (USDA 1967: 28). Manor loam is a well drained soil that developed from materials weathered from highly micaceous rocks (UDSA 1967: 45).

Streams within the study area, the Walker Branch and Crow Branch, form the western and southern boundaries, respectively. The Walker Branch soils are like those of the river. Banks of the Crow Branch consist of Bibb silt loam which is a deep, level, poorly drained soil (Vokes 1974: 19).

The river, streams and their banks currently have the potential to support a variety of plants and animals. Plants include: trees, such as oak, yellow-poplar, pines and spruce; and marsh vegetation such as cattail, water millet, river bull-rush, spatterdock, and others. Animals may include: fish, raccoon, muskrat, duck and geese (USDA 1967: 155, 157).

Lithic resources such as stealtite, quartz, and quartzite deposits are exposed by the downcutting action of the Patuxent River (Steponaitis 1980: 3).

The river and stream network can be characterized as a system which is both ecologically diverse and rich in resources, surrounding and dissecting the study area.

Coastal Plain Section

Of the study area, approximately 85%, the central and southeastern portion, lies within the Coastal Plain Province. The topography of this area is characterized by rolling uplands. The underlying rock formation differs in the west and east of the study area. The western half is underlain by Brandywine gravel, while the eastern half lies over the Patuxent formation. To the east of the B & O railroad the Coastal Plain is underlain by the Wicomico formation.

There are many different soils within the Coastal Plain in the area of study. Beltsville-Urban land complex makes up approximately 50% of the total, Leonardtown silt loam 25%, Beltsville fine sandy loam 15%, Hyde silt loam 5% and Ochoeckonee silt loam 5%. The Beltsville-Urban land complex consists of disturbed land that is composed mainly of Beltsville soils (USDA 1967: 18). These areas have been altered by community development. Beltsville fine sandy loam is a moderately well drained soil that developed from silty to sandy materials deposited by the wind (USDA 1967: 17). Leonardtown silt loam is a poorly drained, nearly level to gently sloping soil found on uplands of the Coastal Plain (USDA 1967: 44). Hyde silt loam consists of poorly drained soils that are dark in color and rich in organic materials that washed from silty or sandy uplands (USDA 1967: 53).

These soils presently have high potential for the

support of plant and animal communities. Plants may include: grain and seed crops, legumes and grasses, wild herbaceous upland plants, and hardwood trees and shrubs. Wildlife may include: rabbits, some deer, quail, pheasant, other upland birds, squirrel and turkey (USDA 1967: 156-161).

The section of the study area that lies within the Coastal Plain has the most fertile soils and therefore the most ecological potential for both wild and domesticated plants and animals.

Piedmont Section

The Northwest 15% of the study area lies within the Piedmont Plateau. Broad undulating surfaces, low knobs and ridges, and deep narrow stream valleys are characteristic of the Piedmont region. The underlying geology is crystalline Laurel migmatite and the Patuxent cutting through this formation exposes steatite, quartz and quartzite deposits (Steponaitis 1980: 3). There were important sources of raw material for both aboriginal and historical peoples of the area. Soils are almost entirely of the Manor variety previously mentioned. Flora in the Piedmont within the study area may include: trees such as yellow-poplar, pine and oak; wild heboceous plants, and hardwood and coniferous shrubs. Fauna may include: rabbits, some deer, quail, pheasants, and other birds (USDA 1967: 156-161). The portion

of the study area that lies on the Piedmont Plateau is characteristically rich in resources, both lithic and ecological.

Urban Area

A large part of the study area is currently utilized as a commercial, residential, and political district. Major thoroughfares include US Route 1, Maryland State Highways 198 and 216 and Main Street (map 1). Route 1 runs north to south in the eastern part of the study area. It is primarily a strip style service area with fast food restaurants, gasoline stations, banks, and convenience stores. It is a major transportation artery connecting Washington and Baltimore.

One ninety-eight, a divided highway, running east to west in the study area, crosses through the older residential area of Laurel, passing newer multifamily units and clusters of service oriented establishments. These major thoroughfares mirroring the framework of rivers and streams reflects Laurel's strategic location as a center of commerce in the Baltimore-Washington corridor and have influenced the development and growth of the study area attracting commerce while isolating and preserving the historic city.

Planning zones in Laurel reflect the internal historic development, urban diversification, and ecological

