

NEA GRANT: Promotion of the Humanities_Division of Preservation and Access
GRANT AMOUNT REQUEST: \$14,000.00

STATEMENT OF SIGNIFICANCE AND IMPACT

The Palisades Museum of Prehistory (PMOP), incorporated in Washington DC, is a non-profit regional organization dedicated to promoting the awareness and preservation of prehistoric artifacts in the Palisades of Washington DC. The geographical significance of the Palisades is that it occupies a river terrace above the Potomac River. At this stretch of the river, the coastal plain abuts the continental piedmont creating an area commonly referred to as the "Fall Line". From approximately Rock Creek, Washington DC to Little Falls Creek, DC, the Potomac River leaves the slower moving, navigable waters of the coastal plain, before reaching the Fall Line located at Little Falls. In this geographical zone, the Potomac River narrows, gains speed, and hosts annual fish migrations that have occurred for thousands of years. This vital source of protein has attracted Native Americans. As with European colonial expansion, the area constituted a frontier zone between distinct geographic areas - the area navigable by vessel (coastal plain), and the interior piedmont area where much of the prehistoric lithics were quarried.

The especially rich prehistory of the Palisades is relatively unknown by modern occupants. Washington DC is known for its transitory neighbors, and what little interests exists for DC history, that history is dominated by "White and Black" America. Since Native Americans in this area were some of the first displaced, not much historical information exists of them.

The Palisades Museum of Prehistory started with an accidental find of Native American artifacts. The lack of helpful archeological interpretation of the artifacts prompted investigation into the artifacts, and resulted in a discovery of the pitiful state of Native American knowledge of the area. Besides general priority given to "White and Black" history, historical political boundaries have chopped up the fall line zone between DC, Virginia (two counties), and Maryland. Bureaucratic territorialism hinders the understanding of the aborigines whose boundaries did not correlate to today's delineations. A non-governmentally controlled archeological center of aboriginal study resulted.

The museum now houses approximately 155 diagnostic artifacts. The artifacts have been found at numerous building sites around the Palisades, as well as, at the Palisades Park during its renovation. The archeological damage conducted by the DC Government during the park's construction was partially mitigated by the actions of the Palisades Museum of Prehistory. The museum's collection has been labeled and catalogued without any help from the DC government.

In order to educate the people and government in DC and beyond, the Palisades Museum of Prehistory intends to make the archeological evidence of it's current and future collections made public. Limited resources allow some of the collection to be exhibited at the museum's building, but accessibility to the record could be solved by using the internet. Some items are

already viewable on the museum's website. Improved imaging and mapping, and a comprehensive record of the artifacts in the museum's collection will be provided online with this project.

NARRATIVE

Significance

The pace and scale of residential and commercial real estate development is a different threat today to the archeological record than years prior. Over the past 30 years, massive amounts of earth have been moved around during construction projects. In areas thought to be devoid of archeological importance, little consideration is paid to potential cultural resources. This continues to be the case in the Palisades neighborhood of Washington DC, and perhaps the rest of the District of Columbia. Although no laws are required for archeological investigation on private land prior to construction, this should not be a reason to consider cultural items “lost” on private land. Publicizing the archeological record of a given area may inspire private landowners to be cognizant of the potential archeological record on their own land. Much land in the Palisades has been developed without regard to archeology because of ignorance of the history and prehistory of the area. Even in cases of the development of public land, archeological significance has been ignored¹. A method by which the archeological record is publicized may kindle a greater respect and interest in the region’s past, and mitigate future destruction.

Unfortunately right now, even people interested in researching cultural resources in the possession of the District of Columbia are denied access². Cultural resources belonging to the public, but locked up by the DC government only strengthens the ignorance of our history. By publicizing the archeological evidence in the Palisades, the museum hopes to create a positive feedback system where greater knowledge of the past begets more information acquired in the future.

Further complicating a thorough understanding of the prehistory is the jurisdictional boundaries imposed on a unique geographical region. The *Fall Line* of the Potomac River is divided among two states, and the District of Columbia. Repositories for Maryland and Virginia are located quite far from the area, and DC does not have a functioning repository. In addition to these distinct political boundaries, jurisdiction of cultural resources is also fragmented by NPS land and county park lands. Some artifacts are also located in the Smithsonian archives.

The archeological data leaves many questions unanswered. 1) In the museum’s collection is a bifacial artifact found below (older) a stratigraphy that included a 6,800 BC projectile point³. Carbon samples in association with the tool, plus carbonized bone was also recovered. The debate concerning the first humans to arrive in North America continues to be a hot topic, and one that might be benefitted by the careful collection of “paleo” period remains. 2) Aboriginal populations appear to have mushroomed at different times over 5,000 years. The first population explosion occurred around 5,000 years ago and is thought to coincide with a global climatic and

sea level equilibrium. The issue speaks to the current debate over climate change. 3) Similarly, populations swell during the “Savanna River” cultural incursion. Is this a case of *displacement* or *cultural diffusion*? 4) During the contact period, at least at the time of John Smith’s arrival, Indian populations were not as great as one would expect. Did European diseases strike Native Americans before the colonizing Europeans could reach them? 5) The obvious industry of fishing along the Potomac is largely absent from the archeological record, with the exception of some net impressed pottery and a few soapstone net weights. Were the Palisades catering to a different group? 6) Anomalies such as a glass point found along the Potomac River in Arlington county and graphite pendants shown to be ritualistically destroyed go unexplained.

The information proposed for accessing on the internet will allow anyone to see the prehistoric evidence of the current collection. A common refrain by people visiting the museum is “how can you tell if the rock is an artifact, or just a rock?” Or, “I’ve never considered rocks being anything more than, hmm, rocks.” The video imagery should allow the layperson to have a better understanding of what an artifact looks like.

History, scope, and duration

The Palisades Museum of Prehistory has been in operation for approximately three years. Besides curation of artifacts found almost exclusively in the neighborhood, the museum produces primitive technology videos, shows 16mm Native American films, travels to schools for Native American presentations, and serves as a green technology research center. About half of the artifacts have been recovered from agreements between property developers on private lands. The rest of the artifacts come from the Palisades Park during the construction of a soccer field and parking lot. Interpretation of the artifacts has been conducted by Dr. Stuart Fiedel³, of the Louis Berger Group, and Scott Silsby, a retired naturalist and archeologist from Arlington County. Several other archeologists have commented on the artifacts, such as Dr. Stephen Potter of the NPS, and Mike Johnson of Fairfax county.

The artifacts have been recorded and labeled, on paper, and currently total 155. Data fields associated with a record include: description, provenance, unique ID number, material, and comments; some records also include include weight, length, and era.

Artifacts not included for recordation are several pottery shards with common association; and crude scrapers, projectile point fragments, and flakes made of common lithics.

The idea for the grant project is to take individual artifacts and create a short 360° video image of the artifact rotating on one axis. After creating the image, provide the associated record’s metadata, and show the location of the site where it was recovered⁵. The proposed project encompasses the digitization of 155 artifacts. The project hopes to serve as a prototype for making more extensive collections available on the internet.

The project will begin in May of 2009 with digital imaging.

The first stage of the process will be setting up the artifact imaging studio, and shooting the artifacts on a rotating stage. One employee setting the artifact in a base caliper will turn on the electronic dolly and shoot the artifacts with a Panasonic DVX 100B, with at least two video segments comprising at least 180° on either side of a rotating artifact.

The second stage includes digitizing the mini-DV tape, masking the background image (area behind revolving artifact), splicing the video segments into at least 360° continuous image.

The third stage includes inputting the individual artifacts, their record fields, into an Excel spreadsheet. One of the fields will be the Youtube web address for the specific artifact.

The fourth stage will be inputting the records into Google Maps.

Methodology and standards

The project involves four different stages:

- 1) The initial stage will be shooting video of the rotating artifact with a Panasonic DVX 100B. Two (or three) separate light sources will be used to illuminate a box studio. The first light will be tungsten light with a Dichronic Daylight filter. The second light will be an incandescent light. The idea of the two (or three) lights is to cast a pale shadow on the artifact as it rotates. The 100-watt light with daylight filter will cast the shadows and provide the primary light, with the incandescent(s) “softening” the shadows. Holding the artifacts in position will be a caliper stand, custom built by mount-maker David A. Graham. Serving as a rotating platform is a mechanized electronic dolly. The platform is housed in a 2X2X2ft lightbox.
- 2) The second stage is digitizing and editing the DV tape. Using Final Cut Pro, the tape is digitized at 720X480 pixel resolution. Video filters in Final Cut Pro can be used to remove any of the background or caliper stand, leaving an artifact in space. After splicing the edits of a rotating artifact into a 360° - 420° image view, the file is exported as a flash video (flv). The exported flash files are then uploaded to Youtube, thereby assigning individual web addresses.
- 3) The Youtube addresses (embedded code) are inputted into an Excel spreadsheet, along with the other associated fields of the individual records, such as unique ID, description, provenance (site number), material, comments, and in some cases, weight, length, and era.
- 4) The records will then be transferred to Google Earth (right now manual cut-and-paste actions provide the obvious method, although networking file records may be developed). The artifact records will be grouped into individual “sites” reflecting the coordinates of the site. Google Earth allows only one record (under a grouping) to be viewed at a time. A viewer can scroll through the records of a grouping, select that record, and see the associated information and embedded Youtube video. Flash (flv) formatted files may allow

the possibility of video-hosting by someone other than Youtube. Flash (flv) formatting also allows the possibility for exhibiting the images on any website (a format generally considered more universal than any other format on the web).

Geocoding of artifact records will be grouped by individual site locations. Coordinates for a site will be based on the approximate location found on Google Maps. This means that coordinates will be precise to about the level of an individual property lot. Coordinates are displayed as Degrees-Minutes-Seconds (DMS). Seconds are carried to two decimals. In theory, coordinial precision for any artifact could be recorded within a few feet. Google Maps uses *WGS-84* as a datum, and Simple Cylindrical Projection which is essentially a Universal Transverse Mercator (UTM) projection.

Site location numbers (DC SHPO Archaeological site number) are assigned by the DC archeologist⁴.

Google Maps is a free software that can be downloaded from the web. In order to access the Palisades Museum of Prehistory data via Google Maps, users will need to download a KMZ file created by the museum's Google Maps account. The KMZ file serves as a pointer to data stored on Google servers. This KMZ file can be either accessed through a posting or sent via email. There may even be a means by which Google Maps serves as a portal on the PMOP website, thereby providing access to the information through the pmop.org address.

Work Plan

First stage - video shooting will average 26 artifacts/day. This will take approximately five working days, with one person performing all the tasks.

Second stage – digitization of video tape, masking images, editing and exporting Flash videos, average 26 artifacts processed per day will take five days. Uploading 155 artifact videos to Youtube – 1 day. With one person performing all these tasks, this stage will take six working days

Third stage – Creating an Excel spreadsheet of the records with various fields. Processing 15 artifacts a day will take 10 days with one person performing tasks.

Fourth stage – Records transfer to Google maps. Processing 15 artifacts per day, with one person performing the tasks will take 10 days.

Final stage – Testing and artifact fact checking. Prior to going live with the data, all records will be reviewed by archeologist Stuart Fiedel for comment.

Preliminary work with Google Maps free service forms the basis for the estimate of the Fourth stage. Requested in the project is Google Maps Pro service which expands the number of records permitted to be displayed and opens up the ability for networking of record databases.

Without counting the final stage of testing and data validation, the total number of work days is estimated at 31 days. The budget calls for one dedicated employee to work for a period of approximately 2 months.

Staff

The work will be performed by the museum director, Doug Dupin¹². With a background in archeology, mapping, and videography/editing, the project will supplant initial work conducted by Mr. Dupin at the museum (see <http://www.pmop.org/artifactmap.html>). He is also the one who recovered the artifacts or, in a few instances, was familiar with their discoveries.

Data validation and confirmation of previous artifact analysis will be performed by archeologist Stuart Fiedel.

Museum mount maker, David Allen Graham, has been consulting and building mounts for the museum. A custom caliper stand capable of displaying all the given artifacts in the imaging studio quoted the costs of providing two different sizes.

Dissemination

The dissemination of the museum's digital collection will be geographically presented. The spatial distribution of artifacts is important in determining what areas may still be archeologically significant. Besides its importance in planning, location of artifacts is a fundamental pillar of archeology.

Bringing the Palisades Museum of Prehistory's collection to the web will ensure that the public will have access to the cultural resources of *our* collective (pre)history.

Sustainability

The strategy of using Google Maps and Youtube as a platform for serving data helps ensure that this information will be made available for the foreseeable future. The data residing at the museum will be essentially using these free services as backup, and a means for quick data-sharing with the public.

The PMOP hopes this project will serve as an exemplary method of bringing access to cultural resources that are now currently inaccessible in the DC archives.