



Model Evaluation of Paleo Indian Archeological Sites on DoD Installations with Pleistocene Shorelines

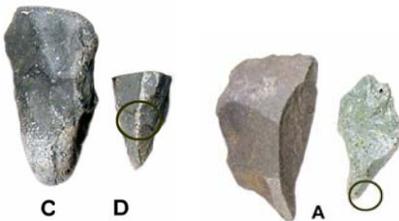
Project #
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Background:

Discovery of a polyhedral microblade core on a site associated with the beaches of Glacial Lake Iroquois on Ft. Drum coincided with publication of evidence for paleo boat building on San Clemente Island, a Navy property off the coast of southern California. The fact that the Fort Drum and San Clemente tool kits were morphologically similar, and were from comparable landforms, prompted military archeologists to think about the possibility of paleo maritime culture across North America. Given the extensive archeological inventory of DoD acreage from coast to coast, the Legacy Program realized that DoD had an exceptional opportunity to test the paleo maritime hypothesis.



Fort Drum Tools



San Clemente Island Boat Building Tools

Objective:

This project had three objectives: The first objective was to establish a paleo maritime landform model for North America that would determine the potential for paleo shorelines. The second objective was to evaluate DoD property to develop a list of installations that would have the potential for paleo maritime archeological sites and examine their collections for evidence. The third objective was to establish a paleo maritime website in order to encourage archeologists from across North America to re-examine their own sites and collections as part of the hypothesis testing process.

Summary of Approach:

Paleo environmental reconstructions were used to establish locations for North American shorelines during the Late Pleistocene and Early Holocene. GIS analysis used USGS topographic data combined with elevations of

prehistoric shorelines from the geological literature. Both marine and glacial lake shorelines were included in the study. DoD installation boundaries were superimposed to identify properties where these land forms occur. Three installations in addition to Ft. Drum and San Clemente Island were selected for closer study based on immediate evidence of Late Pleistocene/Early Holocene waterfront combined with extensive archeological site inventories. They were Yakima Training Center, Hill AFB / Utah Test and Training Ranges, and Dugway Proving Ground.

Benefit:

The contextual modeling approach shows tremendous promise for helping cultural resource managers at the installation level make sound decisions concerning potential significance of archeological sites. DoD now has tens of thousands of identified archeological sites in its inventory, and the vast majority of these await evaluation. Placement of individual sites within known contexts offered by models provides a faster, cost effective approach to evaluation with the likelihood of more accurate decisions. Selection of potentially significant sites should be more accurate, and better site management should result in increased sustainability with a decrease in training restrictions due to archeological site protection requirements.

Accomplishments:

The paleo maritime website is up and running. The URL is <http://www.cemml.colostate.edu/paleo/index.htm>. Interest in the project has resulted in five participating installations in addition to a series of academic partners. The preliminary mapping has shown that in the eastern and central US, the majority of DoD properties have study potential. The project is also yielding tantalizing scientific results. For example, discovery that exotic lithic sources are linked to paleo sites via the Pleistocene tributaries of Glacial Lake Bonneville may lead to new research in the Great Basin. The project has also produced a summary pamphlet for public distribution.

Contact Information:

Dr. Laurie W. Rush
Cultural Resources Program Manager
85 First Street West
Fort Drum, NY 13602
Phone: 315-772-4165
Fax: 315-772-1001
laurie.rush@us.army.mil