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A PROPOSED SURVEY OF KNAPPING RESOURCES IN IDAHO

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Problem

Idaho's prehistory is known to extend over at least the last 14,000 years, and during that long period flaked or knapped stone implements were the most common items in native tool kits. Thus, in order to understand the cultural adaptations to Idaho environments over time, we must first understand the basic stone tool production and use systems extant in the past. Tool production is in part a function of the stone resources available for modification into usable forms, and those resources are poorly known at present. Specific quarries or gathering areas are not well identified, yet any such locality qualifies for nomination to the National Register of Historic Places and should be noted in federal agency inventories of such places. Thus, a statewide survey is proposed to identify and describe knappable stone resources, to support general archaeological research and to provide a basis for cultural resource management in Idaho.

Research Procedures

During 1974-76, the Principal Investigator has been conducting a project to identify and describe Smoky Hills jasper from the Medicine Creek quarries in Nebraska, and Prichard argillite from the Harvey Mountain quarry in north Idaho. This work has served as a model for future investigation, in providing familiarity with facilities, relevant literature, appropriate testing techniques, and unit costs and time requirements. A thorough review of the available archaeological, geological, and gemological literature as it relates to knappable Idaho resources has been carried out, to provide a base from which to direct the field and laboratory survey. During the proposed survey, 50 resources will be field sampled and analyzed to provide chemical, textural, structural, and mechanical data. These comparative data will then provide a base for identification of specific origins of archaeological stone specimens, and of the mechanical basis for the selection of certain resources over others. The focus of the proposed survey is identification and description of the resources themselves, not archaeological analysis of either the quarries from which the materials are derived, or the variety of forms into which the materials are altered. Survey results will be published as a scholarly manuscript, be available to federal and state agencies for cultural resource management, and be on permanent file at the Laboratory of Anthropology and in the office of the Idaho State Archaeologist.

Facilities, Personnel

The proposed survey will be conducted under the auspices of the Laboratory of Anthropology, University of Idaho, in cooperation with the Idaho Advisory Council of Professional Archaeologists, the Idaho Bureau of Mines and Geology, the Materials Testing Laboratory (Idaho Department of Transportation, Division of Highways), and the Washington State University

Nuclear Radiation Center. Each of these facilities and groups has already contributed services for identification and description of the Smoky Hills jasper and Prichard argillite, and in the literature review. Dr. Ruthann Knudson, Resource Management Archaeologist and Assistant Research Professor of Anthropology, will serve as Principal Investigator (25% time commitment) during the project. A doctoral candidate in geology will be supported full-time during the survey to coordinate the petrologic analysis and construct a consistent terminology and definition of silicates and related materials. Anthropology graduate students will work part-time at survey and laboratory chores. Office and laboratory facilities within the Department of Sociology/Anthropology and Laboratory of Anthropology will be provided for all major staff members.

Time Schedule

It is anticipated that the survey will take three years, to enable the various facilities to handle the increased workload. Analyses of each resource must be run in sufficient quantities to be statistically significant when comparing ranges of variation, and this takes time. Tentative project time is from 1 July 1977 through 30 June 1980.

Proposed Budget

Based on the past two years' experience with knapping resource analyses, and current wage scales and costs, each resource description will cost approximately \$2500 including overhead. A budget to include 50 resource descriptions, Principal Investigator support, and necessary capital outlay and administrative support will total approximately \$150,000 including on-campus overhead costs of 50% of salaries and wages.