

Living Archaeology Newsletter

Summer 2003

**Middle Woodl and Procurement, Processing, and Use of
Anadromous Fish in the Delaware Valley: Contributions From
a Living Archaeology Experiment**

Volume 2, Issue 1

Purpose	1
Introduction	1
Phases	2
Overview	3
Important Dates	3
Procurement and Manufacturing	4
Additional Materials	5
Call for Participation	5
Forward Look	5
Biographical Form	6

Special points of interest:

- ◆ Brief Summary of an upcoming large-scale Experimental/Living Archaeology Study
- ◆ Information on numerous ways to participate
- ◆ Important deadlines
- ◆ Sign-Up Form for participation
- ◆ Contact information

Purpose

This newsletter will be the vehicle through which information concerning the upcoming multi-phased living/experimental archaeology research project, "Middle Woodland Procurement, Processing and Use of Anadromous Fish in the Delaware Valley: Contributions From a Living Archaeology Experiment," will be disseminated. The audience

for this newsletter includes volunteers, students, contributors, and any other interested parties. It will be distributed on a periodic



basis and is my hope that it will serve to keep you up to date with the progress, deadlines and needs of project. If you know of anyone that would be interested in receiving this newsletter, please refer to my contact information in the return address on the back of this newsletter and provide me with their name, address, phone number and email.

Introduction

Archaeological evidence suggests that a major shift in economic focus toward intensified procurement of anadromous fish occurred in the Middle Atlantic region between the Terminal Archaic and Middle Woodland periods (Cavallo, 1987; R. M. Stewart, 1999; Wall, Stewart, Cavallo, & Busby, 1996; Williams & Thomas, 1982). While this has been linked to environment and sea levels, active technology, social interactions and complexity (Cavallo, 1984, 1987; Custer, 1984, 1989, 1996; Dent, 1995; Kraft, 2001; H. Stewart, 1977; R. M. Stewart, 1999) virtually none of the assumptions concerning procurement and processing strategies

employed, the quantity of food that could have been acquired and stored, and to what extent this food source significantly increased the amount and stability of the food supply, have been tested. In order to more fully understand the implications of this subsistence shift, we need to comprehend the corresponding technological and practical realities of this subsistence production. The proposed research supplements traditional methods of interpretation by attempting to understand the physical and cognitive processes that were involved in the production of the archeological record. These processes include (1)

procurement of materials (2) production, curation and use of tools, and (3) the rationale behind their eventual abandonment. This requires the use of an experimental archaeological approach that investigates these processes and products through the formation and testing of hypotheses based upon the archaeological, ethnographical and historical records. Hypotheses are then tested within the context of a structured scientific experiment by using the same materials, techniques, and strategies believed to have been employed in the past. Finally, the data generated from these experiments is used to support and/or refute current, and possibly

Introduction cont'd

to develop new interpretations.

This research seeks to employ an experimental archaeological approach to investigate the influence of the procurement, processing and use of anadromous fish on the technological and social changes in the Delaware Valley during the Middle Woodland period. The specific research inquiries include: (1) What technologies (e.g. procurement of

material, design and manufacturing processes) may have been employed in the production of the tools and other material culture of these people? (2) How effective and efficient were these tools for the procurement, processing and use of anadromous fish and related activities of daily life? (3) What is the relationship between effort (e.g. energy expended) and nutritional return regarding the procurement, processing (e.g. drying, storage, oil rendering), and

use as a resource? (4) Do the results of this study support or refute the existing interpretations regarding the intensified procurement of anadromous fish in the Delaware Valley during the Middle Woodland period?



**A Pamunkey Indian (Virginia, 2003)
Removing the Roe from the First
Shad of the Year**

Phases

To address these questions a variety of research strategies are proposed that include a combination of qualitative and quantitative methodologies. This project has been planned over a 20-month period beginning in the summer 2003. The research is designed in five phases that represent the following:

Phase I: Baseline Data Formulation: Archaeological, Ethnographical and Historical Data

Phase II: Procurement of Natural Resources and Production of Tools/Material Culture for Experiments

Phase III: Anadromous Fish Procurement: Design, Construction and Implementation of an Experimental Fish Weir

Phase IV: Anadromous Fish Procurement, Processing and Use: Living Archaeological Field Experiment

Phase V: Data Analysis: Qualitative and Experimental Research Findings

It is expected that this research project will have a significant influence on the interpretation of the prehistoric life in the Delaware Valley. Through the use of experimental research methods, the findings of this study will enhance our understandings through the generation of new information as well as the re-evaluation of our current knowledge. There are additional advantages and outcomes of this project that are benefits of an experimental archaeological approach. These include improved

fieldwork and strategies for interpreting archaeological sites as a result of insight from the actual manufacturing and use of material culture as these relate to formation processes. Furthermore, this research project includes the development and documentation of a "living archaeological site" resulting from the use and maintenance of tools and execution of experimental research. This presents a unique opportunity for future archaeological investigations through (1) direct observation of site formation processes over time; (2) future blind excavation and interpretation of the experimental site; and (3) on-site visitation by scholars and the public.

**"It is expected
that this research
project will have
a significant
influence on the
interpretation of
the prehistoric
life in the
Delaware Valley"**



**Argillite Biface Cache from the
Abbott Farm National Historic
Landmark (This Project's Type Site)**

Overview

In more basic terms, this project is a multi-phased research endeavor that spans more than a year. Currently, I am engaged in activities associated with Phase I (Baseline Data Formulation: Archaeological, Ethnographical and Historical Data) and Phase II (Procurement of Natural Resources and Production of Tools/Material Culture for Experiments). Phase III (Anadromous Fish Procurement: Design, Construction and Implementation of an Experimental Fish Weir) will take place during the Spring 2004 Shad run in a select area of Crosswicks Creek, NJ and will be manned by a combination of students enrolled in an Experimental Archaeology field school I will be teaching at Temple University and a number of volunteers. The construction of the weir will take place over 4 days and will be used and monitored for a period of time afterward.

Phase IV (Anadromous Fish Procurement, Processing and Use: Living Archaeological

Field Experiment) is the main component of this research project. This living archaeology field experiment will take place on a 128-acre, uninhabited island in the Delaware River. While on this island, a combination of student enrolled in a Temple University living archaeology field school in, again combined with a number of volunteers (total number approximately 12), will be living in a recreated Middle Woodland fish processing camp. There we will be using only the replicated tools thought to have been used at the time to investigate a variety of fish procurement, processing and use activities for two weeks. Thorough documentation of all activities, including the main research project, various individual research projects, and daily living activities, will be accomplished through the use of pre-printed record forms, videography and photography. In order to create the proper context within which this research will be conducted, we will be eating similar foods, living in replicated shelters, using repli-

cated tools, cooking in replicated pots, foraging for wild foods, and hunting and trapping with replicated weapons (e.g. atlatls, bows, rabbit sticks, etc.).

The vast amount of work involved in the procurement of natural resources and production of tools/material culture for experiments requires the cooperation and help of many people. There is information in the section titled "Call for Participation" explaining how you can offer help if interested. If you would like to be a participant or student in the field school in either Phase III or Phase IV, relevant information can also be found there. If interested and eager, no matter what your skill level, there are many ways you can help make this project a success and show how valuable experimental archaeology can be. For your information, additional explanation of the individual phases of this project can be found online at www.parkerscreek.com.



Cooking in Recently Fired Pots at Errett Callahan's

"This living archaeology field experiment will take place on a 128-acre, uninhabited island in the Delaware River"

Important Dates

The following are the dates of the two main phases of the study:

- Weir (Phase III) – April 29 – May 2, 2004
- Project (Phase IV) – May 31 – June 14, 2004

Additionally, there is a vast amount of procurement and processing of materials that needs to be addressed before those phases can take place. Please see the preliminary list of materials that need procurement and material culture that need manufacturing on the following page. If you feel you can help in any way, please fill out the form at the end of the newsletter and let me know. Thank you in advance.



Northern Tip of Isl and in the Delaware River

Procurement and Manufacturing Deadlines

Communal Cooking (produce)

5 Large Cooking Pots	March
Pot Tongs	March
Utensils	March
Water Container	March
Storage Vessel (Baskets, Gourds, Pots)	March

Shelter (procure)

Tulip Poplar Bark Sheets	Spring
Cattails	July-October
Phragmites	July-October
Cordage/Lashing (Hickory, Basswood, etc.)	On site, Spring
Saplings	On site, Spring
Mats	End December
Hammers (Rocks, etc.)	End December

Shelter (produce)

Mats (Cattail, Phragmites, etc.)	End December
Axes, Celts, Adzes	End December
Bifacial Knives	End December
Flake Tools	End December
Plans	End August

Fishing (procure)

Cordage (store bought? Hemp? Cotton?)	August
Dogbane	October/Nov
Milkweed	Oct/Nov
Antlers	February
Arrowwood	November
Grn Black Walnut Hulls	Fall
Mullein Seeds	Summer/Fall
Deer bone	January

Fishing (produce)

Nets	February
Bone Hooks	February
Wood Hooks	February
Antler Harpoon (1)	February
Antler Harpoon (2)	February

Weir	On site/May
Basket Traps	February
Floats (gourds, woods, etc.)	February
Net sinkers	February

Food (procure/produce)

Acorn meal	Fall
Corn (ground, parched)	April
Chestnut meal	December
Dried blueberries	July
Dried Persimmons	November-January
Dried Cranberries	November
Dried Apples	April
Dried Paw-Paws	Fall
Dried Jerky	March
Dried Jerusalem Artichoke	September
Sunflower seeds	October
Black Walnuts	November
Hickory Nuts	Fall
Granulated Maple Sugar	April
Meat?	Spring
Fish	Spring

Hunting (procurement/production)

Bows	March
Arrows	March
Atlats	March
Darts	March
Rabbit Sticks	March
Trap parts	March
Extra projectile points	April
Knives	April
Wild Turkey Feathers	Spring
Sinew	Late Winter/Early Spring
Hide Glue	Spring
Pitch	Spring

Additional Materials

Additional Items Needed for this Project (Some may have been already mentioned above, but more is required for other purposes)!!!!

- ◆ Antlers (whitetail, moose, elk) – we need a lot for billets, pressure flakers, tools, etc.
- ◆ Sinew
- ◆ Leather and skins (with hair on)
- ◆ Hides
- ◆ Chert (preferably NOT from the area surrounding the Delaware Valley – we do not want to compromise the true archaeological record)
- ◆ Nets (preferably hand tied)
- ◆ Baskets (Woven and Bark such as Tulip Poplar)

Call for Participation

Participation can be in the 4 different forms:

- ◆ **Student** enrolled in six-credit Living Archaeology Field School through Temple University (not necessary to be Temple Student)
- ◆ **Participant Volunteer** for Weir (Phase III) and/or Living Archaeology Field School
- ◆ **Skilled Manufacturing Volunteer** for help in the production of tools/supplies. If skilled in any relevant primitive skills and wish to participate, here is your chance to be a valuable asset to this unique research (Phase IV)
- ◆ **Contributor of funds**

or supplies

Although the call for participation is extended to anyone with an interest in primitive skills, archaeology, living/experimental archaeology, woodlore, etc. experience or formal education are not mandatory for consideration for this project. Rather, due to the physical and mental demands that will be an everyday part of this project and at times, potentially intense, careful consideration will be given to the applicants possessing a strong work ethic, positive outlook/attitude, good people/social skills, and an intense desire to learn.

Please refer to the “Procurement and Manufacturing” section for a proposed list of necessary supplies to be procured and assembled.

In order to make this research as valid and useful as possible, the tools/supplies need to be accurate and true to the archaeological and ethnographical record. Additionally, important record keeping is a real and necessary aspect of this research. Please contact me prior to the beginning or any tool/supply production for this project so that these needs and concerns can be addressed.

Forward Look

Future issues of this newsletter will include such topics as:

Answers to basic questions

- ◆ Participant personal gear list
- ◆ Information pertaining to participant preparation
- ◆ Diagrams and instructions for replication of pertinent material culture
- ◆ Topics for individual study for participants in main study
- ◆ Interesting archaeological, historical, and ethnographical information that is currently being gathered
- ◆ More important dates
- ◆ Names and addresses of fellow participants and other interested parties
- ◆ More....

“In order to make this research as valid and useful as possible, the tools/supplies need to be accurate and true to the archaeological and ethnographical record”

Acknowledgements

This project, although still in its infancy, has already been blessed with the help of some wonderful people. To date, a special thanks goes out to:

My wife, Christina and our family, Bill and Barrie Schindler, Heather and Larry Freeman, and Steve, Jane and Michael Nightingale; the Callahans, Errett, Linda, and Melody; my advisor, Dr. R. Michael Stewart; professor, Dr. Tony Ranere; consultant, Dr. Jerry Petroff; President of the Society of Primitive Technology, Steve Watts; primitive technologist, Doug Meyer; ceramic replicator, Maria Louis-Sidoroff; potter, Mike Porfino, The Delaware River Shad Fisherman’s Association.

Biographical Information Form

Please select type of participation that applies (more than one may be checked):

- Student participation
- Skilled Manufacturing Volunteer
- Participant Volunteer
- Material/Funding Contributor

Name _____ Date of Birth _____ Age _____

Address _____

Phone _____ Email _____

How you wish to contribute _____

May I post the above information in future newsletters? _____

If you wish to contribute as a Material/Funding Contributor, please stop here

Experience (if any) in Primitive Skills (describe type and level of experience) _____

If not experienced in any primitive skills, please describe interest _____

If you wish to contribute as a Skilled Volunteer, please stop here

Occupation and/or Education/Major _____

Related Activities/Hobbies (e.g. camping, hunting, fishing, scouts, military service, etc.) _____

Considering the physical demands and isolated location of this project, are there any health concerns or accommodations that I need to be aware of? (Please describe) _____

Emergency contact (Name and Phone Number) _____

Participants will be contacted after receipt of this application form, but should feel free to contact me by phone, email or post with any questions regarding any aspect of this project. Those volunteers wishing to be an active participant in the living archaeology project on the island will be contacted to schedule an interview. Please include a 2x3 photo for my records.

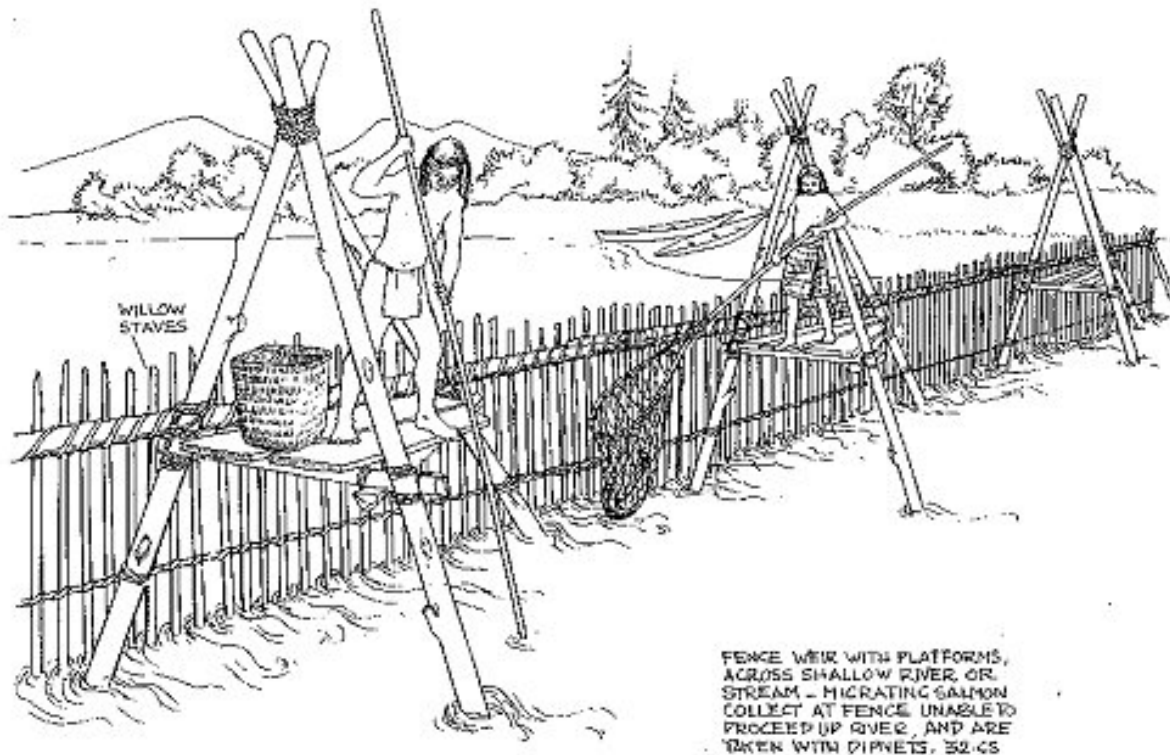
**This form MUST be filled out by EVERY participant, volunteer, contributor, etc.
This form may be photocopied**

Return to: William Schindler, Parkerscreek Primitive Technologies, 24 Trenton Ave, Frenchtown, NJ 08825



American Shad (*Alosa sapidissima*) will be the main species of fish used in this research

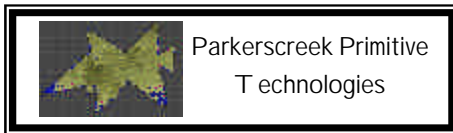
FENCE WEIR WITH TRIPODS



Drawing of a First Nations fish weir by Hilary Stewart from Indian Fishing: Early Methods on the Northwest Coast, page 104

***The designation of this series of the Living Archaeology Newsletter as Volume 2 refers to its continuation of a series of newsletters with the same title and purpose that were authored and disseminated by my mentor and friend, Dr. Errett Callahan who used them to inform the participants of his living archaeology experiments in the 70s and 80s. It is my hope that I can carry the torch and, as successfully as he, use experimental archaeology as a viable and useful research tool

Discovery Through Experimentation



William Schindler
24 Trenton Avenue
Frenchtown, NJ 08825
lithic@temple.edu
(908)627-1568

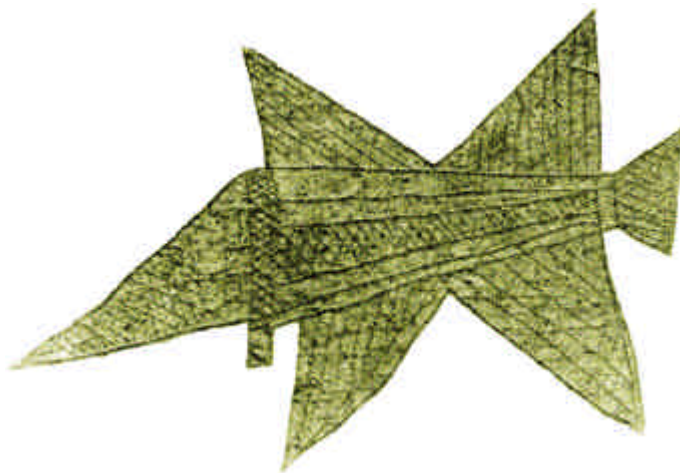
We're on the Web!

*Find further information about
this project and Parkerscreek
at www.parkerscreek.com*

Living Archaeology Newsletter

Summer 2003

Volume 2, Issue 1



This newsletter is the official form of communication for the living archaeological study, "Middle Woodland Procurement, Processing, and Use of Anadromous Fish in the Delaware Valley: Contributions from a Living Archaeology Experiment."