

ARCHAEOLOGY EDUCATION PROGRAM

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**Mississippi
Valley
Archaeology
Center**

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**This year's theme:
Plant and Animal
Remains**

The theme of this year's Archaeology Education Program Newsletter is Plant and Animal Remains. The first issue provided an overview of wild plants, the second focused on cultivated plants, the third issue discussed on woodland animal resources and this issue will cover aquatic animal resources. Dr. James Theler of the UW-La Crosse Sociology/ Archaeology Department and MVAC's Laboratory Director Dr. Connie Arzigian provided content information.

Introduction

Last time we talked about the importance of deer to the Native American diet. Resources from the many rivers and lakes in Western Wisconsin were equally important to the survival of Native Peoples. This section will consider the different kinds of water resources, how they were collected, and what archaeologists know about them.

Fish

The most important aquatic resources were fish. The density of fish in the Mississippi River was, and still is, astounding. A sustained yield of 75 pounds per acre is possible for backwaters in the Mississippi River. Seining or trapping, using funnel-shaped traps, was the major way that fish were harvested from the backwaters. Usually, seining happened during mid-summer to early fall, when the water levels dropped in the shallow backwaters. Oxygen amounts in the water were reduced, and fish were forced to rise closer to the surface where they were scooped up. Each year the backwaters would be replenished with fish, and the cycle would continue. Archaeologists have determined that seining was used, not by finding seines or nets, but by looking at the size of fish caught. There is a predominance of two and three year-class of backwater species, (such as bullhead catfish) just what one would expect if using a seine.

Turtles

Besides fish, turtles were consistently used, often taken during the egg-laying season, when aquatic turtles come up onto the sand banks or higher terraces to lay eggs. Snapping, map and painted turtles are found in sites. The Blandings turtle was used as food, and has a shell that was particularly solid and well suited to being made into a container, with the spine removed and the interior ground down. Unfortunately, it is losing its habitat of marshy wetlands, and is endangered in Wisconsin.

Mussels, birds, and mammals

Mussels were collected and consumed in large numbers. They may have been considered a contingency resource to be used when other resources were scarce. They were probably gathered during mid-summer to early fall when water levels were low. Different species are found on different riverbottom types, and in different speeds of water, thus they are useful for determining the local habitat of a site and how it may have changed through time, such as shifting from a sand and gravel to muddy bottom.

Ducks and wading birds would also have been harvested, including summer nesting ducks and geese. Eggshells from mallards and Canada geese are found. Some migratory birds are taken, but many populations in the Mississippi valley had abandoned the riverbottom by migration time in the fall. Trumpeter swans are rare in the La Crosse area, but three bones were found that were cut and used as tools. The bones are hard and hollow, and are good tool stock for bone tubes and whistles.

Other animals taken include muskrat, beaver, raccoon, otter, all stream-edge persistent species. Beaver and muskrat teeth were used as woodworking tools, and the hides harvested for the furs. Mink and otter often may have been used for special items and bags.

Ancient Recipes

Aquatic resources were an important part of the diet of early Native Americans in Wisconsin. While deer was perhaps the main food source for Wisconsin's early people, fish, turtle, and other riverine animals added variety and nutrients to their diet. The following recipes are taken from *Tribal Cooking: Traditional Stories and Favorite Recipes*, published by Great Lakes Inter-Tribal Council, Inc., 1996.

Baked Trout

4 pounds trout	1 cup bread cubes
salt and pepper to taste	2 Tbs. cream
1/2 cup chopped onion	1 Tbs. parsley
1/2 cup chopped celery	1/2 tsp. fine herbs
1/2 cup chopped carrots	1/4 tsp. salt
1/4 cup chopped water chestnuts	3 Tbs. lemon juice
1/2 cup margarine	1/4 cup margarine

1. Rub fish with salt and pepper.
2. In a skillet, cook the chopped onion, celery, carrots, water chestnuts and margarine until tender.
3. Stir in bread cubes, cream, parsley, herbs and salt. Stuff fish and place in a greased dish.
4. Bake fish until meat flakes, at 400 degrees about 35-45 minutes.
5. Baste frequently with a mixture of lemon juice and margarine.

Fresh Fish Cakes

2 slices bread, broken in pieces	1/4 tsp. pepper
1 cup milk	1/4 tsp. parsley
3 cups flaked cooked fish	1/4 tsp. nutmeg
1 egg	butter, fat or oil for frying
1/2 tsp. salt	

1. Soak the bread in the milk and then squeeze out the excess.
2. Mix with remaining ingredients and form into cakes; fry until golden brown.

Turtle Soup

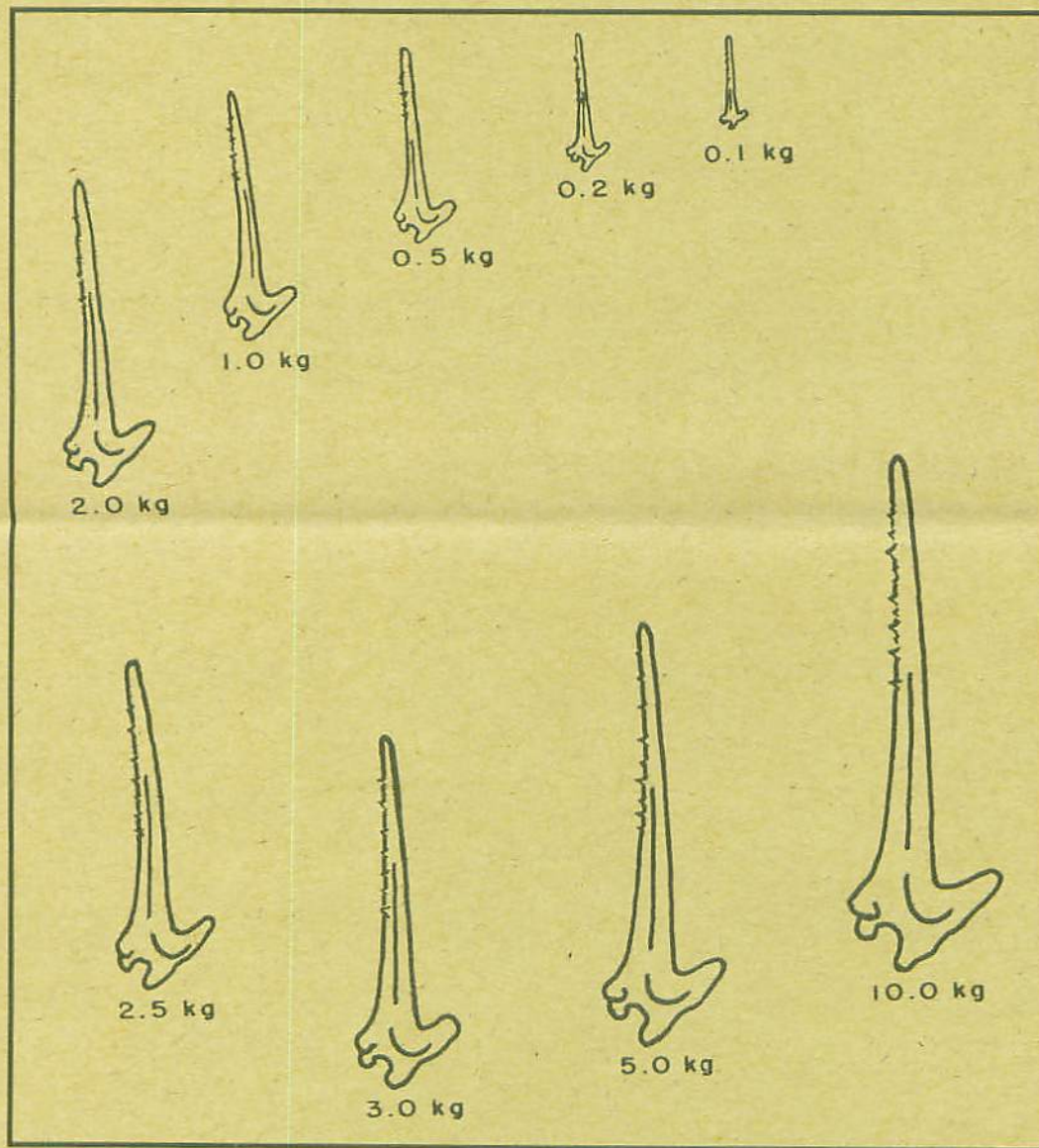
1 fresh turtle	1 large rutabaga, thinly sliced
1 head cabbage, cut up	3 stalks sliced celery
5 pounds peeled & sliced potatoes	2 quarts water (depending on size of turtle)
2 pounds peeled & thinly sliced carrots	

1. Cook turtle in water for about 1 hour.
2. Add remaining ingredients.
3. Cook soup 1 to 1 1/2 hours longer for a total of 2 to 2 1/2 hours.

Serving ideas: Serve with fresh bread, and fresh table onions as desired.

Aquatic Resources Activity

Excavations at archaeological sites near streams, rivers or lakes generally produce large numbers of fish bones and fish scales. Archaeologists look at the size of the fish bones recovered at a site to determine the "live weight" of the fish. This information may help pinpoint the way in which the fish was taken, seining vs. spear fishing, and the time of year the fish was taken.



Fish 1
___ kg



Fish 2
___ kg



Fish 3
___ kg



The diagram on the left shows the pectoral fin spines of a catfish. The length of the spines help archaeologists determine the "live weight" of the fish (2 kilograms = 4.4 pounds). Use the diagram to find the live weight of Fish 1, 2 and 3 by comparing the length of the pectoral fin spine. You can use the diagram to find out how large the fish you catch this summer are too!

Diagram based on the work of John E. Dallman, *A Choice of Diet Report 16, The University of Iowa, Iowa City, 1983.*



Answers:

Fish 1 = 2 kg

Fish 2 = 5 kg

Fish 3 = 1 kg

Aquatic Animal Resources

These book reviews, websites, and places to visit can be used as supplemental information. Let us know if you have found any great resources we can share with our readers.

Book Reviews

Title: Fish Remains in Archaeology

Author: Richard W. Casteel

Publisher: Academic Press, 1976

Age Range: teachers, adults

Scientific introduction to the study of fish remains. A general discussion on the skeletal remains of fish is followed by review of specific elements and what can be learned from them, in terms of fish type, length, and live weight.

Title: Animal Remains from Native American Archaeological Sites in Western Wisconsin

Author: James L. Theler

Publisher: UW-La Crosse Soc/Arc Department, 2000

Age Range: 14 - adult

Focused discussion on the use of animals of western Wisconsin by the early Native Americans of the area. Outlines specific uses of mammals, birds, fish, amphibians, reptiles, crayfish and freshwater mussels from sites in the state.

Web Sites

Wisconsin DNR

<http://www.dnr.state.wi.us/org/water/fhp/fish/3index.htm>

This page of the DNR website focuses on Wisconsin's fish species; complete with illustrations, the common and scientific names, distribution, spawning information and more.

Wisconsin DNR for Kids

<http://www.dnr.state.wi.us/org/caer/ce/eeek/nature/habitate/index.htm>

This is the DNR's "Environmental Education for Kids!" page. Students can learn more about the wetland and lakes habitats to get information on fish and other aquatic animals in a kid-friendly environment.

Wisconsin Sea Grant

www.seagrant.wisc.edu/greatlakesfish/kids.html

This site informs kids about the fish of Wisconsin and the Great Lakes. Additional pages include: Fish profiles, Fish glossary, Anatomy, Freshwater Fish Quiz, and much, much more.

Places to Visit

UW-La Crosse Archaeology Center and Laboratories, La Crosse, Wisconsin

Visit the newly remodeled campus laboratory facility. Exhibits contain many important findings from recent excavations, information about the field of archaeology, and paintings depicting the lifestyle of western Wisconsin's previous inhabitants. Call MVAC at 608-785-8454 for hours of operation.

Riverside Museum, Riverside Park in La Crosse, Wisconsin

Visit La Crosse's Riverside Museum to see exhibits pertaining to the city's long history, from the area's first inhabitants over 10,000 years ago to life during the steamboat era. The museum highlights the important role the Mississippi River played in La Crosse's past history. Open Memorial Day to Labor Day from 10 a.m. to 5 p.m. Call the Visitors and Convention Center at 608-782-2366.