

Early Archaic Pine Forests After Glaciers Living in a Changing

Middle Archaic 10,000-8,000 years ago 8,000-5,000 years ago

PALEO-INDIAN PERIOD

12,000–10,000 YEARS AGO

Big Game Hunting



What is Radiocarbon Dating?

Radiocarbon or 14C dating is a technique that can be used to determine the age of very old things that were once living. For example, some of the things that can be radiocarbon dated include seeds, wood, bark, shell, animal bone, and charred food remains stuck to the inside of an ancient cooking pot. A radiocarbon lab measures the amount of carbon remaining in a sample and uses that measurement to obtain an estimate of the age of the item from which the sample was taken.

ARCHAIC PERIOD

10,000-2,500 YEARS AGO

Late Archaic 5,000–2,500 years ago Copper Artifacts



The artifact on the poster was in an old exhibit at the visitor center at the historic iron-smelting town site of Fayette located along the shore of the Garden Peninsula in Michigan's Upper Peninsula. When the exhibit was disassembled, the artifact was sent to the Office of the State Archaeologist. The archaeologists believed it was an atlatl dart. Originally the wooden shaft was probably about four feet long. Most of the shaft was gone, but the stone point – now missing its tip – and the animal sinew and plant fiber used to tie the point to the shaft still remained. The archaeology staff wondered if it was a reproduction. Intrigued by the possibility that the item might be very old, they scraped a small sample of wood from the shaft and sent it to Beta Analytic, a radiocarbon dating lab. The lab measured the carbon in the sample. The results produced a date of approximately A.D. 20, or about 2,000 years ago. The dart was not a reproduction; it was the real thing!

The atlatl, or spear-thrower, was used in many parts of the world from 15,000 to 20,000 years ago up until just a few hundred years ago. In the Great Lakes region, hunters probably began using the atlatl around 7,000 years ago.

The atlatl is a simple tool. It is commonly a straight piece of wood roughly two feet long with a shallow groove along the length of the upper side in which to lay the shaft of the dart, and a raised "stop" at the end against which the butt of the dart is placed. The atlatl effectively lengthens the thrower's arm allowing the dart to be propelled with much greater force than a spear can be thrown by hand. As a rough comparison, a spear thrown by hand might achieve a velocity of around 60 miles per hour. With an atlatl, a spear can be thrown at about 115 miles per hour.

This publication has been financed in part with federal funds from the National Park Service, U.S. Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior, nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Department of the Interior. This program receives federal financial assistance for identification and protection of historic properties. Under Title VI of the Civil Rights Acts of 1964, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, as amended, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, disability, or age in its federally assisted programs. Michigan law prohibits discrimination on the basis of religion, race, color, national origin, age, sex, marital status, or disability. If you believe you have been discriminated against in any program, activity, or facility as described above, or if you desire further information, please write to: Office for Equal Opportunity, National Park Service, 1849 C Street, NW, Washington, DC 20240.

