



PROJECTILE POINTS CAN YOU DIG IT?

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PHOTOGRAPHY BY JOHN MAXWELL

Ancient arrowheads, spear points, and knives are like history books. Their importance lies not in what they are, but what they tell us about the past. In some ways, artifact making and use, like language, are patterned, and can be translated by archaeologists to reveal, interpret and write history.

Collectively known to archaeologists as projectile points, these tools of earlier times were most often designed to be hafted (or mounted) onto a handle, arrow or spear. Many could be used for multiple purposes, such as piercing, scraping and cutting.

Like any product of technology, projectile points changed not only with technological advances, but also by cultural affiliation, time period, environment, designated use, history and technological traditions of the culture. They also changed to better accommodate new uses, some resulting from new inventions like the spear-thrower, and with the availability of raw materials. Individual makers and users also caused nuances that can still be detected in what we find today.

These items tell us stories about the lifestyle and activities of past cultures. Archaeologists assign time periods and cultures to projectile points by using a few different approaches. They include determining flintknapping (tool making from stone) techniques used; the function of an artifact and how it was

maintained, resharpened or reused; and the date of the stratum (soil layer), site or cultural deposit from which it was recovered. Hafting techniques used and archaeological situations are also puzzle pieces.

Once a projectile point or artifact has been removed from its position and context in an archaeological site, that information is lost forever, unless systematic records about its finding, position and association with other artifacts are kept by individuals trained in archaeological methods and techniques. Further study and analysis of the artifact can be done by future researchers only if the artifact is held by a public institution so that public and professional inspection of the artifact can be made; or if the artifact's owners make it available.

To understand these information-packed treasures, their meaning, the State and federal statutes protecting them, how they may be recognized and interpreted, and what to do if you find one, you first must understand their archaeology, how they were made, and how they changed through time.

ARCHAEOLOGY & ARTIFACTS

Archaeology is the study of past customs, cultures, and cultural processes through investigation of artifacts, features and archaeological sites left behind by humans.

Projectile points found in Indiana; (beginning at bottom—follow the prairie dock leaf veins) Paleoindian agate basin point (bottom, 8500-7400 B.C.), St. Charles point (left, 8000-6000 B.C.) and Kanawha point (right, 6200-5800 B.C.), Mid-Late Archaic Matanzas point (right, 3700-2000 B.C.) and Middle Archaic Raddats point (left, 6000-3000 B.C.), Late Archaic McWhinney point (right, 4000-1000 B.C.) and Karnak point (left, circa 3700-3000 B.C.), Early Woodland Adena point (left, 800-200 B.C.), Middle Woodland Snyders point (right, 200 B.C.-200 A.D.), Terminal Middle Woodland Lowe Flared Base point (right, 200-500 A.D.), Late Woodland Jack's Reef point (left, 500-1200 A.D.), Mississippian Madison point (right, 800-1650 A.D.). Information from Noel D. Justice, 1987.



Any portable object made, used or modified by humans can be an artifact. The most common prehistoric artifacts found in Indiana are made of stone, bone, clay (ceramics) and shell. The reason is simple. These raw materials do not perish in the ground as quickly as organic materials, like wood.

Artifacts, which can be from prehistoric or historic time periods, often take the form of tools, weapons, utensils, ornaments, and artistic and ceremonial items. These artifacts may have been used in relation to a number of activities, including architecture; food procurement, preparation, and consumption; defense; tool making; making clothing; personal uses and recreation; household activities; ceremonies and rituals; and transportation. Projectile points are one of the most recognizable types of artifact.

STONE TOOLS

Most stone tools found in Indiana are chipped stone tools and flintknapping debris made of chert, which is a microscopically very fine-grained silicate rock. Some types of chert are flint, jasper and agate. More than 20 different chert sources can be found in Indiana. Two common types quarried here are Wyandotte and Attica.

Generally, stone tools, including projectile points, were made by reducing the mass of a raw stone by striking it with another stone (often a cobble) or ant-

ler baton, to remove flakes of chert. These flaked stones are called “cores.” Further striking of a core or a suitable piece of chert removed from the core, reduced the material to a basic form or shape of a stone roughed out. These basic forms are called bifaces, or stones flintknapped or “flaked” on both sides. The rough biface was then reduced and refined in shape until the precise shape of the desired tool was achieved. Notching and retouching of the tool finished the job.

TIME AND CULTURAL PERIODS

Paleoindians (circa 10,000-7500 B.C.) were present during the end of late ice age times. They were highly mobile hunter-and-gatherer bands who ranged over a large territorial range and had specialized tool kits. Part of their subsistence was hunting large game. This is reflected in their projectile points, which are lancelike in shape, reflect fine craftsmanship and are made of high quality chert materials.

Early Archaic groups (circa 8000-6000 B.C.) were also mobile hunter-and-gatherer bands. By archaeological evidence—such as larger site sizes and an increase in their number—it appears that population increased and bands of people may have had seasonal gatherings for special activities or tasks. Early Archaic peoples also used high-quality cherts and a spear thrower, and processed wild foods with a variety of ground stone tools.

Early Archaic points reflect

new hafting techniques for new environments, especially by their corner notching and bifurcate (two-sectioned) bases.

During the Middle Archaic (circa 6000-3500 B.C.) age, a notable climate warming trend emerged. There appear to have been more sedentary settlements, more obvious regional differences of cultures, shell midden sites or shell “mounds,” and continued use of ground stone tools (including grooved axes). Spear-thrower weights, beads and pendants were also present.

Side notches and some stemmed points characterize Middle Archaic projectile points.

No clear break shows between Middle and Late Archaic (circa 4000-1500 B.C.), but rather a con-

Archaeologist Mike Strezewski from the University of Southern Indiana and archaeology student Elisabeth Leiserson from the University of Chicago find projectile points at a Strawtown Koteewi County Park archaeology dig during August (opposite top). Mike Powers, a student in the State University of New York system, trowels around dig features at the park along the White River northeast of Noblesville (opposite bottom), while University of Michigan student Sarah Striker screens for artifacts (right).





tinuity. Population increased greatly, with large, semi- to permanent camps; and seasonal, scheduled movement. Regional and cultural boundaries became evident. Evidence points toward a large variety of ground stone tools being employed, use of aquatic resources (as evidenced by shell middens and “mounds”), and the incipient cultivation of plants. Grave offerings and social stratification began to be more apparent.

Late Archaic projectile points are often made of less high quality, more local chert, and are often less well-made. Stemmed and side notched points are characteristic.

Ceramics mark the beginning of the Early Woodland period (circa 1000-200 B.C.), when there appears to have been less use of or emphasis upon aquatic and mussel resources, and evidence of increased use of nuts. Horticulture, such as growing gourds and sunflowers, seems to have been present, as well as celts (ungrooved axes), awls and gorgets (collars to protect the throat). Earthworks and mound sites, some astronomically aligned, occurred, as did Early Woodland burial mounds, with log tombs and grave goods.

With the advent of ceramics technology, it is no surprise that projectile point technology changed. Points from this period are often large, broad-bladed, and used on stemmed tools.

The Middle Woodland era (circa 200 B.C.-A.D. 600) was marked by complex, stratified social organization (possibly tribes), and often the presence of mounds and occasional earthworks. Regional social and political boundaries and regional exchange of goods are notable. New technologies and artifact characteristics included blade tools, blade cores, Havana Hopewell ceramics, and exotic artifacts like cut mica and copper celts. Astronomical alignments highlight this era's earthworks sites.

Middle Woodland projectile points included broad-bladed, corner-notched tools called Snyders, and asymmetrical base tools such as Lowe Flared Base points.

Two important characteristics appeared in the Late Woodland era (circa 500-1200 A.D.): the bow and arrow (and thus the first arrowheads), and intensive maize agriculture. Notched triangular arrowheads appeared along with unnotched triangular points, also arrow points. Tools called Commissary knives appeared.

Population increased. The sizes of sites decreased but there were more of them. Rituals and mortuary behavior were less elaborate. Mounds and earthworks seem to have declined in importance. Occasional small mounds, and stone mounds were evident. Ceramics generally consist of thin, cord-marked pottery and collared vessels.

The last of these projectile point eras, called the Mississippian (circa 1000-1650 A.D.), was marked

by use of triangular projectile points, which continued in this period, as did intensive maize agriculture. A new technology in pottery making included the use of shell tempering.

In Indiana, there are Middle and Upper Mississippian groups—the former generally found in southern Indiana, exhibiting so-called “Classic Mississippian” traits, such as flat-top pyramid mounds; villages and towns with plaza and public ceremonial areas and palisades; and large cemeteries. Upper Mississippian sites and traits are less dramatic, consisting of smaller nucleated farming villages, and fewer earthworks. Mississippian exhibits a chiefdom social organization and a subsistence system based on maize, beans and squash. Ceramic artifacts include ladles and trowels, and stone artifacts, such as chipped stone hoes and triangular arrow points.

DID YOU FIND A PROJECTILE POINT?

You can tell by looking for some of the traits listed above for a flintknapped artifact. These include chert or “flint” raw material; evidence of flintknapping, including “negative scars” from removal of chert flakes; a relatively long blade compared to width; or stems; notches; or a sharp point, triangular or lancelike shape, for example. Remember that projectile points could have been multipurpose.

Also keep in mind the variances by culture, time period, environment, function, and the technological tradition of the group and its individual tool makers.

Under state law, in most cases, the answer to the question “can you dig it?” is if someone wants to disturb the ground it’s legal to collect artifacts, including projectile points found in whole or in part on the surface of the ground; however, you should have the landowner’s permission to be on the property and collect artifacts. If someone wants to disturb the ground to discover artifacts (legally defined as those made or shaped by human workmanship before Dec. 11, 1816), they “must do so in accordance with a plan approved by the DNR.”

For a collection of projectile points to contribute



to history, archaeology or science, the finder should record the location from which the point came on a map; give that site a name, number, letter, or alphanumeric code; and mark the artifact with its location.

Any disturbance, vandalism or looting of an archaeological site should be reported immediately to either local law enforcement officials (who will then contact conservation officers) or the Division of Historic Preservation and Archaeology (DHPA). Of course, any discovery of possible human remains should be left undisturbed and immediately reported to law enforcement and the county coroner.

STORIES PROJECTILE POINTS TELL

Projectile points are a non-verbal record of the past. These tangible pieces of evidence of prehistory, their associations, manufacture, and use are patterned and therefore reflect patterned past human behaviors. They reflect highly skilled craftsmanship and techniques, as well as skilled use of the tools they once were.

Perhaps better than history books, they tell us how people lived. ■

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Notes: If you think you have made a find or want to report the “looting” of a site, contact the author, (317) 233-0953, or rjones@dnr.in.gov. For more information about the Division of Historic Preservation and Archaeology, go to dnr.IN.gov/historic.

Ed Mosher from Monticello uses percussion knapping to shape a chert projectile point at a DNR flint knapping demonstration during this year’s Indiana State Fair (opposite top). The point is finished using an antler tine to press small flakes from the edge and notches (opposite bottom). Chert, often called flint, is found as nodules in limestone formations formed from ancient sea beds (above).



**INTERESTED IN KNOWING MORE?
SEE THE FOLLOWING BOOKS:**

Early Peoples of Indiana (revised edition), 2003, by the author and DNR colleague Amy L. Johnson.

Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States, 1987, by Noel D. Justice, Indiana University Press, Bloomington.

Field Guide to Projectile Points of the Midwest, 2001, by Noel D. Justice and Suzanne Kudlaty, Indiana University Press, Bloomington.

An Introduction to the Prehistory of Indiana, 1993, third printing, by James H. Keller, Indiana Historical Society, Indianapolis.

🌐 Look for atlatl and flint knapping video on OutdoorIndiana.org.

Rex Garniewicz from the Indiana State Museum demonstrates how to use a Native American spear thrower, also called an atlatl (above left). An atlatl increases a dart's range and power. Projectile points hafted (tied) onto atlatl darts (above right), and the bone spur hafted onto an atlatl that catches a notch on the back of the dart or spear.