Stone-Bladed Axes

Today, most Americans enjoy a lifestyle geared towards comfort and convenience. It tends to insulate us from having to think about the basic things that support our lives or about the non-human world around us. For example, if we want to cut a tree down, most of us simply go to the store, buy a chain saw, purchase some fuel, and cut it down. We may never reflect on who made the saw, where the parts of the saw came from, or about the life of the tree itself. Before colonization, our Choctaw ancestors practiced a very different lifeway; one that kept them aware of their surroundings and which required them to draw upon their own intelligence, talent, patience, and spirituality to accomplish basic everyday tasks. In this month's edition of Iti Fabvssa, we are going to present the steps and a little bit of the traditional knowledge that our ancestors employed to make an ax to cut down a tree.

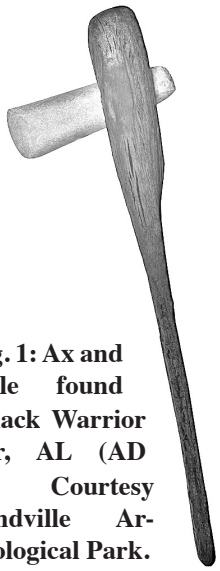


Fig. 1: Ax and handle found in Black Warrior River, AL (AD 600). Courtesy Moundville Archaeological Park.

One-thousand years ago, Choctaw ancestors made beautiful stone-bladed axes, called "iskifa" in the Choctaw language (Fig. 1). The first step in making these axes involved finding the right type of stone for the blade. It had to be a stone that could be shaped, but also one that would make a durable finished tool. For Choctaw ancestors, greenstone was a favorite material (Fig. 2). This beautiful dark-green colored metabasalt is dense, hard, and so tough that it is difficult to break with a sledgehammer. The nearest source of greenstone was located in central Alabama (Gall and Steponaitis 2001), 50 miles from the closest ancestral Choctaw villages of that time. To make an ax blade of this material, and many were made from it, our ancestors probably walked the 100-mile round trip to get the stone (ibid).

Cobbles of greenstone would be selected for the desired size and shape, and tested to make sure that there were no cracks or internal flaws. While the stone was still damp from the earth, it could be more easily shaped. The ax-maker would begin by hitting the greenstone with a round rock on just the right spots to knock off a series of thin chips, giving it the rough outline and approximate blade angle of an ax head (Fig. 3).

The ax maker would then set the rough-shaped ax head on hard dirt, and begin forcefully pounding it at a 90-degree angle with a hard, sharp-pointed rock, again, and again, and again. Rather than fracturing a chip off, each impact removed a tiny pit of stone from the surface of the emerging ax head. The greenstone would be continually dipped in water to keep it as soft as possible, and to cut down on rock dust. After literally hundreds of thousands of impacts in the right places, the shape of the stone would be near that of a finished ax head, and its surface would be smoothed out and covered in thousands of tiny pits (Fig. 4).

Above, Fig. 2: Raw greenstone.

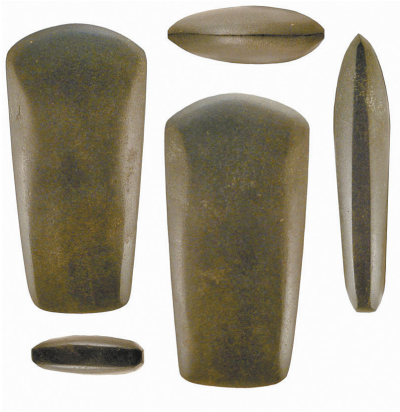
Finally, the ax-maker would grind the ax head back and forth on a flat piece of stone, covered in wet sand to act as an abrasive. This would grind away all of the little pits, leaving the ax head smooth to the touch, beautifully polished, and with an even blade edge (Fig 5). It easily took a full week of work or more to make a greenstone ax head.

Ax handles were made from hardwoods like hickory or oak. The wood was worked while it was still green, using stone and mussel shell tools. After it was roughed out, it was slowly and carefully dried to prevent cracking. After several months, the handle would be ready to fit to the ax head. A thousand years ago, stone ax heads were made to stick straight into the handle, through a hole known as a "mortise." Cutting a mortise across the grain, right through a thick piece of dried hardwood without using steel-tipped power tools is no easy task. Our ancestors did it with fire (Thompson 2008). A coil of damp clay was wrapped around the perimeter of what would become the mortise (Fig. 6). Then, a hot coal was set inside the coil of clay, and a hollow piece of cane was used to blow downward on the coal, forcing heat onto the wood. The directed heat caused the wood to heat up and burn. Coals would be replaced as they burned out, and

Fig. 3: The same piece of stone with flakes removed, rough-shaping it into an ax head.

Right, Fig. 4: Same stone after 200,000 impacts with sharp-pointed stone.

Below, Fig. 5: Same stone as a finished ax head (5 views)



damp clay would be packed on the edges of the hole as it deepened. Over several hours of careful work, the mortise would be burned all the way through the handle. Then, its edges would be fine-tuned using flat pieces of sandstone as files.

One-thousand years ago Choctaws used no glue or binding to hold the ax blade to the handle, rather they were compression fit. When looking from the flat side, the ax heads are shaped like wedges, narrower at the base, and wider at the blade. The mortise was made just long enough so that it would contact the two narrow edges of the ax blade. Every time the ax was used, the impact would push the wedge-shaped ax blade harder and harder into the handle. Because the force was against the grain of the wood, the handle would not split. At the same time, the mortise had to be wide enough that the flat sides of the ax blade would not touch the handle. If this happened, the ax head would act as a wedge on the handle, and split it apart.

These Choctaw axes took a huge amount of time to make, easily several months from start to finish (including time to season the handle) with three weeks of direct working time. People put a great deal of themselves into making these durable implements, and once made, these axes were held onto and even passed down (Fig. 7).

The axes our ancestors made were highly functional implements, and could be used to fell any tree in the woods. Compared to a modern steel-bladed ax, the old Choctaw axes are heavier, and must be swung harder, but they cut quite efficiently (Fig. 8). They were also quite durable. Traditional stone axes made by individuals in recent years have held up to cutting down more than one thousand trees (Kinsella 1999).

When Europeans entered Choctaw country in the 1500s they brought socketed iron ax blades. At first, Native Southeasterners used stone tools to reshape the strange iron blades into wedge-shaped native-style ax heads. However, they quickly began using the socketed axes as is, finding it easier to trade hides or agricultural produce for an iron-bladed ax rather than putting in the effort to make a traditional one. Stone axes were one of the first elements of Choctaw traditional culture that was given up during colonization. By the early 1700s, they had disappeared from Choctaw communities, except for a few held onto by the old people as a memory of earlier days (Adair 1775:405).

Today, nothing prevents us from making and using these axes exactly as our ancestors did many generations ago. When one takes the time to do so, the hours spent connect us back with these ancestors and a Choctaw lifeway that existed before colonization. There is power in that. If readers are interested in making and using this ancient type of Choctaw ax, please contact the Historic Preservation Department for more information.

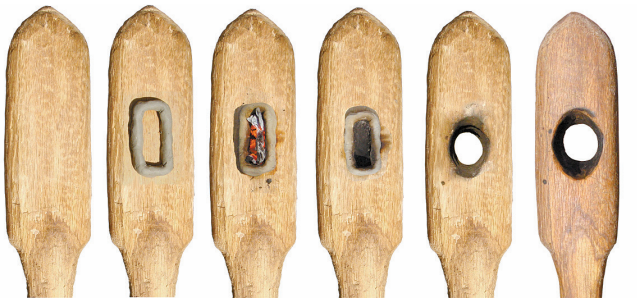


Fig. 6: Process of burning out a mortise to receive the ax head.

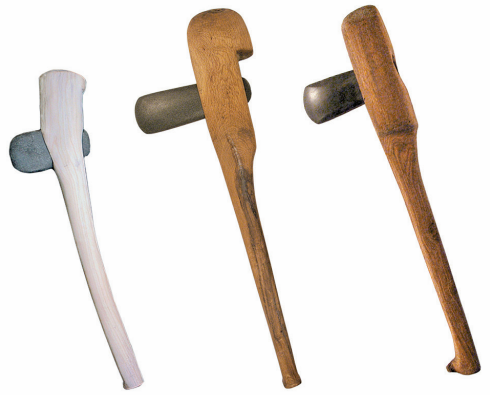


Fig. 7: Three axes made by author. The example at the right was made entirely with stone and shell tools.

Fig. 8: Four bois d'ark trees cut down with stone axes.