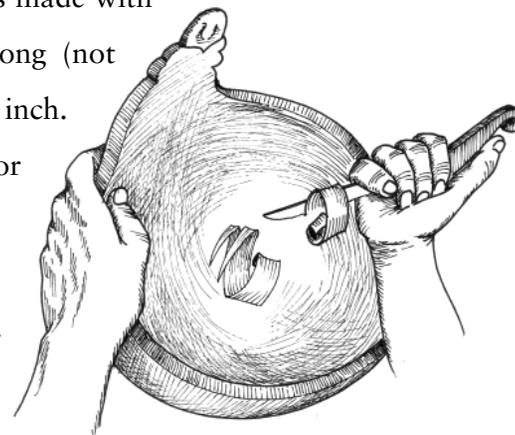


# The Anatomy of the Mocotaugan

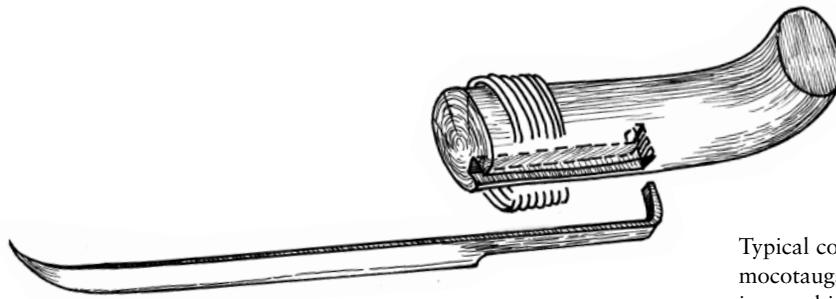
THE WOODLANDS INDIANS' MOCOTAUGAN WAS A MANY-PURPOSE TOOL. IT WAS UNIQUELY adapted to the Native man's life of hunting and gathering deep in the boreal wilderness. With its upturned tip, the knife could be used for cutting, carving, shaving, gouging and smoothing to take fullest advantage of the plentiful wood, reeds, rushes and hides taken from the surrounding lakes and thick forests. It could be used for heavy-duty work or to produce the finest hair shavings for tinder or the most intricate shapes in a work of art.

What makes the knife "crooked" is not the upturned tip: it is the angular relation of the handle to the blade. The blade of a typical mocotaugan was made with a recycled piece of European steel, was about four inches long (not including the tang) with an average width of about one-half inch.

Blades were shaped in many ways; simply made flat on a plane or slightly bowed overall, and often curled up at the tip, some slightly, some sharply and some in truly peculiar ways. One blade at the American Museum of Natural History, for example, looks in profile something like an old-fashioned button-hook; a long straight shaft with its end bent very tightly to about three quarters of a small circle. The tips, too, would be finished in various ways: squared, angled, rounded, or pointed at various angles. The cutting edge was formed mostly by beveling one side only, like a chisel, quite often by tapering both sides equally from the top of the blade, and rarely by sharpening the edge on both sides of the blade.



"The knife was grasped, fingers up, with the thumb steadied against the angled end of the handle. This was no whittling knife. Rather, the crooked knife was a one-handed draw knife that cut by pulling toward the body."  
—C. Keith Wilbur



Typical construction of a mocotaugan. Tang of blade is seated in the mortice of the handle, then bound for maximum strength.

Both blade and handle were made for either left- or right-hand use.

The handle was first tooled to seat the blade tang firmly, then fixed to the blade with any one of a variety of bindings. These bindings were leather thongs, spruce roots, twine or wire, and occasionally strips of cloth or patches of hide swabbed with pitch, tar or fish glue, and later with rivets and even tape.

Eventually the Indians were offered trades for an imported ready-made, high-quality steel blade, but their poverty still generally required them to make their own. As one observer has noted, the Indians were “master recyclers.” Discarded saws, scissors, razors, skillets, trap springs, barrel hoops and even swords and gun barrels were all reworked into knife blades. The most desirable discards were worn-out files: their exceptional high-quality malleable steel made the best blades by far.

At first, these metals were likely worked in ways similar to the historic ways of treating copper. A furnace to create the necessary heat for both reshaping the scrap iron and tempering the resulting blade could relatively easily be generated by a well-tended wood fire set into a hollow in the ground and fanned by blowing through a hollow reed. In a paper published in 1986 in the *Journal Canadien d'Archaeologie*, metallurgists Jean-Luc Pilon and Sandra Zacharias wrote: “In former times, the temperatures and speeds of the heating and cooling process [for the mocotaugan blade] were varied so as to circumvent the need for high temperatures while still producing metals whose properties suited the intended tasks.” When the final temper was less than perfect, the user simply would have to sharpen the blade more often. As the Natives adopted the more advanced European technologies — especially the heavy iron “smithy” hammer — they made their knives increasingly effective.

As for the handles, the Indians *always* made their own — again out of anything handy and suitable, usually hardwood, but sometimes bone or antler.

Within this generic form of the knife, there are no two exactly alike. The man who made the knife was typically the man who used it. He shaped both handle and blade to meet his own special needs, to make the most of his own skills, and in some cases, to express his own artistic urgings.

Mocotaugan blades were shaped and heat-treated in a variety of ways to serve a variety of purposes. In addition to the general-purpose shape, the four most common shapes were these: A) a flat, straight blade about one-half to three-quarters of an inch wide for stock removal and rough planing; B) a narrow, flat, straight blade about three-eighths of an inch wide for fine planing; C) a narrow curved blade about the same three-eighths inch width for gouging or hollowing with the grain; and D) a wider curved blade about three-eighths of an inch wide for hollowing or gouging across the grain.

The typical handle would be “crooked” from the blade at an angle of about 30 degrees, sometimes noticeably more or noticeably less. It would be sized for a large or small hand, and engineered in various ways to hold the tang of the blade.



#### Unlike the mocotaugan ...

Eskimos and Indians of the Northwest Coast also used drawknives with blades made of steel, but of a very different form from the Woodlands knife. The blades were typically only one to two inches long, and relatively broad. The handles, made mostly of bone or ivory, were often quite long, likely for both one-handed and two-handed use, and set at little or no angle to the blade. The handles were very infrequently decorated, and even when so treated were typically carved with very simple designs. The highly embellished knife is a remarkably rare exception.

*Eskimo Drawknife*  
Circa 1840 - 1860  
Bone, leather, curved reworked steel 3/4" blade,  
overall 6 1/4" long  
Incised decoration on one side only  
Collected in Massachusetts  
Private Collection

The vast majority of handles carried no ornamentation at all. When present, design ranged from simple and crude to ornamented intricately and with considerable sophistication. The designs themselves ranged from ancient patterns traditional in Woodlands culture to images clearly derivative from the various newly imported European cultures.

### **The Native Skill of Blade Making**



The present-day craftsman David Cameron of Riverport, Nova Scotia, makes the blades of his mocotaugans in much the way he learned from Micmac tribal tradition. For raw steel, he occasionally uses blanks of high carbon he bought years ago. Mostly, though, he recycles old high-carbon kitchen knives he finds in flea markets, old crosscut saw blades and leaf springs from abandoned baby buggies and farm equipment. For shaping and treating his steel, he uses neither the Natives' traditional fire pit nor the common European forge. Rather, he finds a soft, high-temperature kiln brick and scoops out a hollow for the unformed steel to rest in; then he heats the steel with an ordinary propane torch. After annealing the raw steel to its proper hardness, by heating it red-hot then cooling it slowly, he uses an electric bench grinder to shape the blade. Then comes the true artisan's mastery of his material. Cameron describes the process this way:

“I just wave the torch flame back and forth along the blade 'til I see the colour I want. Heated red-hot (again), the tang is bent at an L at the narrow end and then sideways a bit where the tang meets the ground section of the blade. It is also crooked a tad at that place to give it a canoe shape along the back. Then the business end is reheated cherry red and hardened by quenching in motor or cooking oil (peanut oil is best), while the tang is kept cool with a wet rag or leather. The final tempering is done after I hand-sand the blade until it is bright. I gently heat the blade by wafting the flame so I can see the new temper colours flow until the backbone turns dark blue and the edge turns straw to light blue. The edge can be kept cooler during this process by either coating it with heat-sink oil or burying it in a cucumber. As soon as the desired temper colours are reached, the blade is quickly quenched in oil. This gives a springy, break-resistant blade with a hard edge, good for staying sharp.”

*(See page 160 for an example of Cameron's fine knives.)*

# How a Modern Master Uses the Mocotaugan

HERE'S HOW PRESENT-DAY CANOE-MAKER HENRI VAILLANCOURT OF GREENVILLE, VERMONT, carves a center thwart for one of his famed hand-crafted canoes, as reported by John McPhee in his classic 1975 book *Survival of the Bark Canoe*.

After Vaillancourt had, with an ax, trimmed out a piece of a birch log to a forty-inch, two-by-three board, and seated himself in a rocking chair, McPhee writes:

*“He then picked up his crooked knife and held its grip in his upturned right hand, the blade poking out to the left. The blade was bent near its outer end (enabling it to move in grooves and hollows where the straight part could not). Both blade and grip were shaped like nothing I’ve ever seen. The grip, fashioned for the convenience of a hand closing over it, was bulbous. The blade had no hinge and protruded rigidly — but not straight out. It formed a shallow V with the grip.*

*“Vaillancourt held the piece of birch like a violin, sighting along it from his shoulder, and began to carve, bringing the knife upward, toward his chest. Of all the pieces of a canoe, the center thwart is the most complicated in the carving. Looked at from above, it should be broad at the midway point, then taper gradually as it reaches toward the sides of the canoe. Near its ends, it flares out in shoulders that are penetrated by holes, for lashings that will help secure it to the gunwales. The long taper, moreover, is interrupted by two grooved protrusions, where a tumpline can be tied before a portage. The whole upper surface*

*should be flat, but the underside of the thwart rises slightly from the middle outward, then drops again at the ends, the result being that the thwart is thickest in the middle, gradually thinning as it extends outward and thickening again at the gunwales. All of this comes, in the end, to an adroit ratio between strength and weight, not to mention the incidental grace of the thing, each of its features being the mirror image of another. The canoe's central structural element, it is among the first parts set in place. Its long dimension establishes a canoe's width, and therefore many of the essentials of the canoe's design. In portage, nearly all of the weight of the canoe bears upon it.*

*“So to me, the making of a center thwart seemed a job for a jigsaw, a band saw, a set of chisels, a hammer, a block plane, a grooving plane, calipers, templates and — most of all — mechanical drawings.”*

All accomplished with a mocotaugan.