

Section Making your own traditional Greenland style paddle

Description

Traditional Greenland paddles can get fashioned cheaply from basic stock with a little wood working skill and a few simple tools.

THE GREENLAND PADDLE - ITS CONSTRUCTION AND USE



by Gerry David of

About two and half years ago I met Tom Lucas on one of Al's Hudson River trips out of Cold Spring. He was using a Greenland paddle, and it just looked right--especially after I blew a bunch of rolls with my Werner paddle, including the all-time mud roll in which I left the paddle stuck in the mud, after nearly impaling myself on it. I came out of the boat and got to shore, and Tom caught a glimpse of the four inches of the paddle sticking above the surface from where I planted it in the mud at Peekskill and, making like Arthur pulling Excalibur from the rock, managed to retrieve it. On the train back to Cold Spring, I tried to pick Tom's brain for everything he knew about Greenland paddles, because about that time he had written an article on [Greenland paddling](#) for The Drift and obviously knew his subject. In the article he alleged that one could be made from a two by four.

That week I hied myself to The Home Depot and bought a couple of stud-grade spruce 2x4's, and made my first Greenland paddle following the rules of thumb in Tom's article (length-- anywhere between your wrist and finger tips with arm extended over your head). I inlaid some mahogany tips to keep the wood from splitting, mopped on a couple of coats of high gloss spar varnish, and the next time I met Tom, about four weeks later, on a Connecticut River trip, he expressed amazement that I actually did it.

"But you said in your article that a two-by-four would work," I said.
"Yeah, but I didn't know it could actually be done!" he remarked.

There may be a moral in all of that somewhere. I'm not exactly sure what it is--something about those who tell don't know and those who know aren't telling, perhaps. In any case, gentle reader, you have been warned.

That first paddle was seven feet long, a little too narrow for the Sea Lion I was paddling at the time, so I made another one about seven-feet two or three inches long, and gave away the first one, which has done its new owner yeoman service to these past two or more years.

Eager to propel my kayak faster and more efficiently, I omitted an important step in making that second paddle. I failed to use a good piece of wood. Too lazy to make another trip to the Home Depot, or too cheap to shell out the \$1.99 they wanted for those eight-foot lengths of stud-grade spruce, I made use of a couple of bad pieces of wood I had purchased on my first trip. Using what I thought was the best stuff out of a bad batch, I laminated the blank for the paddle from the straightest and soundest bits and pieces I could scrounge. Once again, I inlaid mahogany tips and slathered on a couple of coats of varnish. Looked right spiffy, it did. But the piece I used for the shaft was spalted, and although it had a nice figure in it, on a trip in The Thousand Islands it cracked across the grain. Now, it didn't crack all the way through, mind you--just enough to make it a little flexible. I should have thrown it away right then, but being either lazy or cheap (maybe both?), I pried the crack open and flooded that baby with epoxy, poured it right in there and watched the excess ooze out. I made another paddle and kept number two for a spare. It got a free ride down the Saguenay Fjord on the back of my boat, and I was fortunate enough never to have to use it. Don Gorski was not so fortunate, however.

Greatly aided by the use of the Greenland paddles, I developed some proficiency in bracing and rolling, and on a trip out of Barn Island with Jane Ahlquist, the big G expressed an interest in the paddles I was using. I demonstrated my skills and generously offered him my spare so he could give it a shot. . . . I helped him back into his boat while Jane picked up the pieces of the paddle, floating in the tranquil waters of Fischer's Sound. It snapped on his second effort. Hardly an endorsement for Greenland paddles or their maker. Use good wood.

Greenland paddles are almost always made unfeathered, but paddle number three began to warp until it looked like an airplane propeller. A high school baton twirler could have moved the kayak like an airboat just by spinning that paddle without dipping it in the water at all. Yet the twist never seemed to affect its efficiency for either paddling or rolling.

Part of the beauty of the Greenland paddle for rolling is that it virtually orients itself on the surface. When you push up to the light, as Derrick Hutchinson puts it, if you let go of the Greenland paddle, it will float flat on the surface in the correct orientation for planing. All you have to do is grab it with your wrists cocked before you start your sweep. Being symmetrical about all three axes, it has very little tendency to dive. It's also very easy to control when sculling, which involves slicing either a horizontal or vertical figure-eight through the water. Euro-style paddles with their feathered, asymmetrical spoon blades have a mind of their own and struggle against you to exert it by fluttering and diving. But twisted as it was, paddle

number three still behaved itself, and I would probably have kept on using it, if I hadn't tried Erika's paddle.

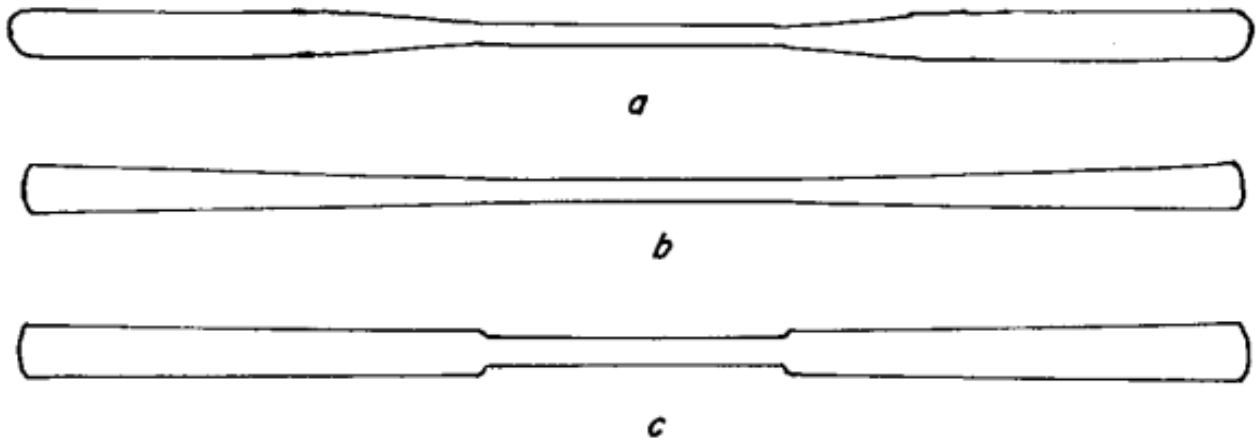


Figure 1

Up to this point, my paddles were more or less based on the design used by Cricket and Betsie Bay and looked something like the paddle in [Figure 1-a](#). The blades were about 3 1/2 inches wide at the tip (the full width of the 2 x4) and maintained that width up to about ten inches from the throat where they tapered into the loom. The looms were as round in cross section as I could get them. In fact, I prided myself on the round shafts, which I made using a set of antique rounding planes. I felt that people who made paddles with squarish looms lacked the skill to make them round. Regarding the blades, my object had been to get as much area as possible to maximize the bite on the water--in other words to deviate as little as possible from the idea of the conventional paddle. Erika's paddle, made by Mark Rodgers, had a squarish shaft and narrower blades, which formed a straight taper from the tip to the loom like the paddle in [Figure 1-b](#).

Such blades have considerably less area and less bite on the water than my parallel-bladed ones, but when I tried Erika's paddle in the Greenland style boat I had just bought, I seemed to move faster. Erika explained that the rectangular-sectioned shaft fitted the grip between thumb and forefinger and held the blade at the correct angle--the "dig" angle as Andy Steever calls it in his book *Oars and Oar Making*. I had become aware of the importance of this dig angle because I noticed that I frequently splashed my way along with a very audible "plop," as did other Greenland paddlers. I also noticed I was pulling a sizeable whirlpool behind the blade, which is inefficient. I had tried several techniques to eliminate it, including kind of poking the blade into the water with a stabbing motion, somewhat as if I were harpooning an imaginary whale swimming alongside my boat. But because of its squarish loom, Erika's paddle entered the water more quietly and didn't pull a whirlpool. I didn't have to harpoon an imaginary Moby Dick. [Figure 2](#) illustrates the "dig angle."

The narrower blades--they were 3 1/4" wide at the tips(still wide for an Eskimo paddle, Erika said)-- required a faster cadence, but with a limited amount of power it is always easier to take many smaller bites than fewer larger ones, and the older I get, the more limited my power. The smaller blades make it easier to maintain an efficient cadence against wind or current, much like riding a bicycle in a lower gear while going up hill. As kayakers, we are basically one-speed bikes, and it is better to keep that gear ratio on the low side. Vellodrome racers use one unbelievably high gear, and flatwater racers use a paddle with lots of area, but they are conditioned athletes competing under specialized conditions, and we are cruisers (at least I am) who must deal with a variety of conditions, and the lower ratio is for me. Moreover, the narrower blades with their constant taper, make it easier to grab them anywhere along their length for the extended paddle strokes, which are an essential part of the Greenland repertoire.

Some Greenland blades have a "shoulder " where they meet the loom as in [Figure 1-c](#). I have heard two plausible reasons for it.

First, it allows for more blade area by carrying the width up the blade instead of making the tip wider, thereby still allowing one to grip the blade anywhere for extended strokes.

Second, the shoulder encourages water to drip off the blade, an important consideration for paddling in cold water if you don't want to soak your sealskin gloves.

However, because the shoulder inhibits the use of the slide stroke, a valuable Greenland technique, I believe it is a disadvantage. Surely, the shoulder is unnecessary for helping to orient your hands on the paddle. Because you grip the short-loomed paddle at the throat (where the blade meets the loom), you can always judge its position quickly by feel. Back to Erika's paddle.

Besides the narrower blades, rectangular-sectioned loom, and straight taper from the tip to the throat, there were two more features about it that I liked.

It had much thinner edges than I had been accustomed to putting on my paddles.

It was unvarnished. It had an oil finish of some sort, but it was not smooth and shiny like the paddles I had been making.

And my paddles, smooth and shiny as they were, were not as smooth and shiny as some of the commercially available Greenlanders. More than once that smooth and shiny paddle had slipped out of my increasingly arthritic hands--once during a roll right smack under the middle of the George Washington Bridge. Smooth and shiny is not good.

So I took some measurements from Erika's paddle (and some from Captain Al's, for his was similar, only bigger), and came up with a design I believe suited me. Referring to Tom Lucas's article for the proportions,

I made the paddle seven-feet three inches long with a seventeen and a half inch loom (which was too short as I discovered more than one year later) and a width of 3 1/4" at the tips. I gave the loom a husky cross section of 1 5/8" by 1 5/16".

Twelve years or so ago I had purchased a twelve-foot western red cedar 4 x4, which had been aging in my cellar rafters ever since. I forget why I bought it, but it was a beautiful piece of wood--clear, straight, and fine-grained. I resawed it perpendicular to the annual rings, in effect coming up with two quarter-sawn 2"x4"s. I fashioned the paddle in the manner indicated below and dipped it in the water for the first time on October 22, 1994 on Barnegat Bay, and used it as my number one paddle for over a year--something over 400 hours. It has no finish, and although it has weathered to a beautiful gray, it is smooth enough to slide effectively for the slide stroke but has never slipped out of my hands. Although western red cedar is softer than spruce and not as strong, it is lighter and strong enough. I dispensed with the cross-grain inlaid tips but believe some precaution should be taken to prevent the tips from splitting, although the paddle is probably in greater danger from a car door than it is from a rock. I have made a few repairs, but nothing major--glued down a minor split and worked out some dings and nicks in the edges. All-in-all it has been a satisfactory paddle.

Nevertheless, the good can always be made better--can't it? I made a paddle for a friend and made the blades much thinner than those on mine. Her paddle was extraordinarily light--less than twenty-four ounces. The thinner blades might be more efficient.

I read an article in Anorak that our current obsession with short paddles--in the seven-foot range--was erroneous. Longer paddles have greater tip speed, so they ought to drive the boat faster, right? So I made an eight-foot paddle with thin blades. Wrong. The paddle would have had greater tip-speed if I had the strength to move the tips through the water fast enough. But I was on the wrong end of the lever. The resistance of the water was multiplied through the greater length.

Stick with the proportions in Tom Lucas's article. Steve Burkhardt, who is six-foot seven uses a paddle about seven-foot two.

There is a neat Eskimo paddle in the American Museum of Natural History with bone tips and edges--h'mm. Bone is hard to come by. How about plastic tips and edges to protect cedar from the ice? So I found a great retail outlet for plastic and made one by mortising the plastic to the cedar. I doubt whether epoxy (or any glue) would be good for this job. Were I to make another edged paddle, I would mortise the tips, but use bronze ring nails to hold on the plastic edges. The bronze nails properly placed would also inhibit splitting. In fact, on my recent paddles, I have driven brass pins across the grain at the tips for that purpose.

My current number-one paddle is seven-feet five inches long--the absolute longest I can make using the Inuit rules of thumb. It weighs about 1 1/2 pounds. It has thin blades and a longer loom than my first cedar paddle--19 1/2" compared to 17 1/2"--the distance from the little finger of the right hand to the little finger of the left when my elbows are bent as if I were going to do a pullup. I had wrongly determined that distance on the earlier paddle, perhaps measuring the distance between my thumbs. Those two and a half inches make a world of difference. With the earlier paddle, because the loom is too short, in order to increase the leverage, I frequently grip the paddle below the throat on the flat of the blades. This throws off the dig angle, which spoils the efficiency considerably. On my next paddle, I may increase that distance another inch. One writer recommends making the loom the same width as the boat in front of the cockpit. Pay attention to the length of the loom!

Undoubtedly, the Greenland paddle is a less hydrodynamically efficient propulsive device than the modern Euro-style paddle, whose wide spoon-shaped blades bite with less slippage. Unfortunately, I am not as biologically efficient as I should be to derive optimum benefit from the more efficient paddle. I am slipping, and a slipping paddle suits me fine. On the positive side, the Greenland paddle is a more generalized and less specialized tool than the Euro-style paddle. Its unspecialized symmetry suits it for sculling, bracing and rolling. Its center of effort is much closer to the paddler than that of a comparable Euro-style paddle: 18 1/2" inches on my current number one paddle, vs. 21 1/4" inches on my Werner paddle, which permits a faster cadence. However, the slide stroke allows me to increase the lever arm dramatically from 39" to 66 1/4" inches (vs. 50" on the Werner, unextended, because it is rarely used in the extended position)--thus allowing strong sweep strokes for turning. The blades on my paddle (made of one piece of Western Red Cedar) are as thin as I dared to make them. The paddle flexes with each stroke, and when I did some rolls, a kayaker who observed me was amazed at how much the paddle flexed. (They must have been pretty poor rolls because the legs, not the paddle, should be applying the force.)

There are many ways to make a Greenland paddle. But they fall into two basic methods: laminate it or carve it from one piece. The laminated types allow different widths and thicknesses to be glued up into a blank thereby eliminating a lot of rough shaping by removing wood. It is also possible to use different types of wood in the lamination and to orient the grain in order to control flexibility. My experience to date, however, shows that one-piece paddles are more flexible, which I like. I also think that if you have the right tools, a one-piece paddle is faster to make because you don't have to do a lot of

clamping up and waiting for the glue to cure, etc. Carving a Greenland paddle from one piece is not difficult, but there are a couple of things to keep in mind. First, lay out your paddle carefully on an accurately squared piece of wood. Second (and this applies to laminated paddles as well), work from center lines drawn on all six sides. [Figures 3 and 4](#). The easiest way to do the rough shaping is with a bandsaw, but other tools will work--a Sawzall or a heavy-duty saber saw. The classic way to rough out the blank is with a drawknife or a crooked knife. (It takes only a little longer than with a bandsaw.) Careful work with an ax would suffice. The best tools for the final shaping are a couple of planes, a spokeshave, and perhaps a rasp or a Sureform tool.

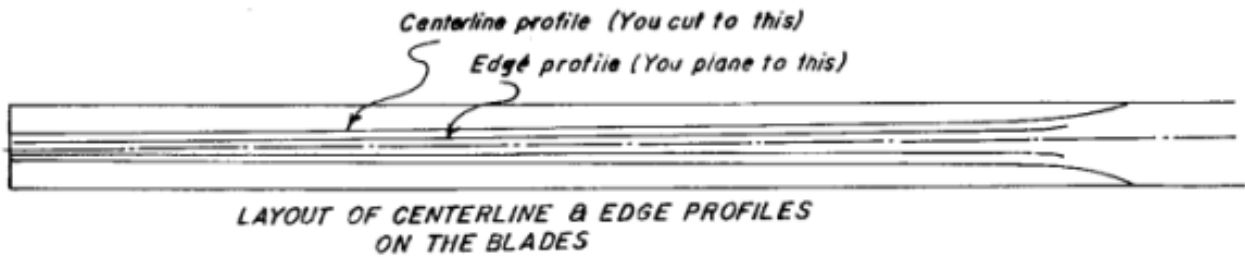


Figure 3

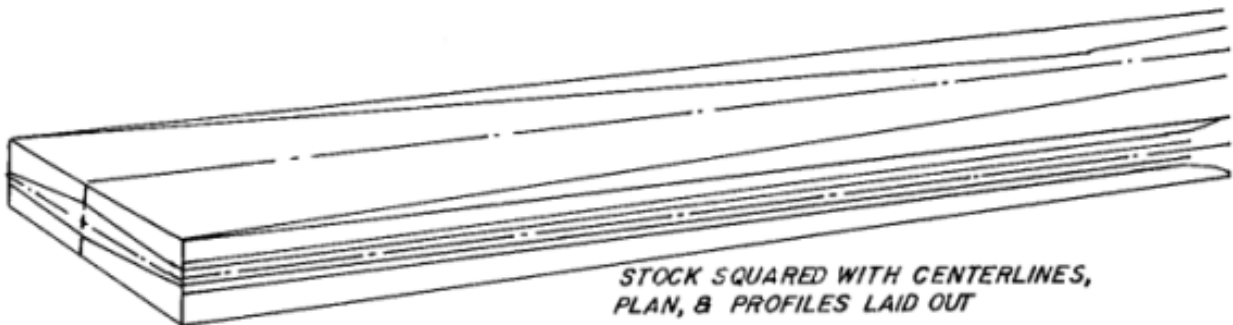


Figure 4

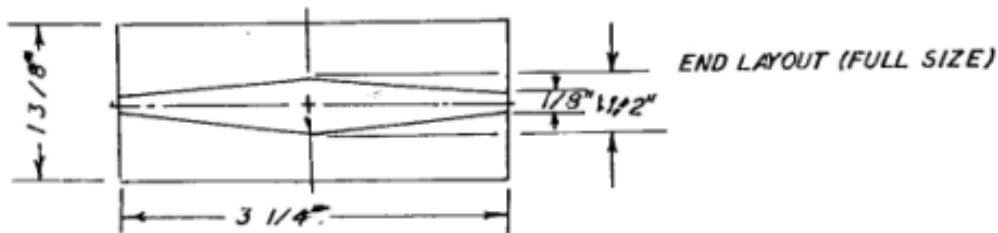


Figure 5

Drawings illustrate the key steps:

First, determine the size and shape of your paddle, and lay it out clearly on a SQUARED piece of stock. I have included typical dimensions and cross sections in [Figure 6](#), but you should make your paddle to suit yourself. [Figure 5](#) shows the layout of the end. The annual rings should be vertical, as this makes for a stiffer and stronger blade than flat-sawn lumber with its horizontally oriented rings. The spruce I have worked with has a tendency to warp, but the stud-grade 2x4's I have used are inexpensive, so you could buy a bunch and let them sit for a couple of weeks and choose the straightest ones. Avoid stock from the very center of the tree containing the pith, as this will have the most tendency to warp. Good quality fir or pine would do very well. I like western red cedar because it is light, and good quality stock is readily available. Straight and clear eight-foot cedar 4x4's currently cost me about \$24.00, and I can resaw one into two 2x4's with the grain running the right way. If you do not work with squared stock, you are making things difficult. Manuals on handtool woodworking explain how to square a board.

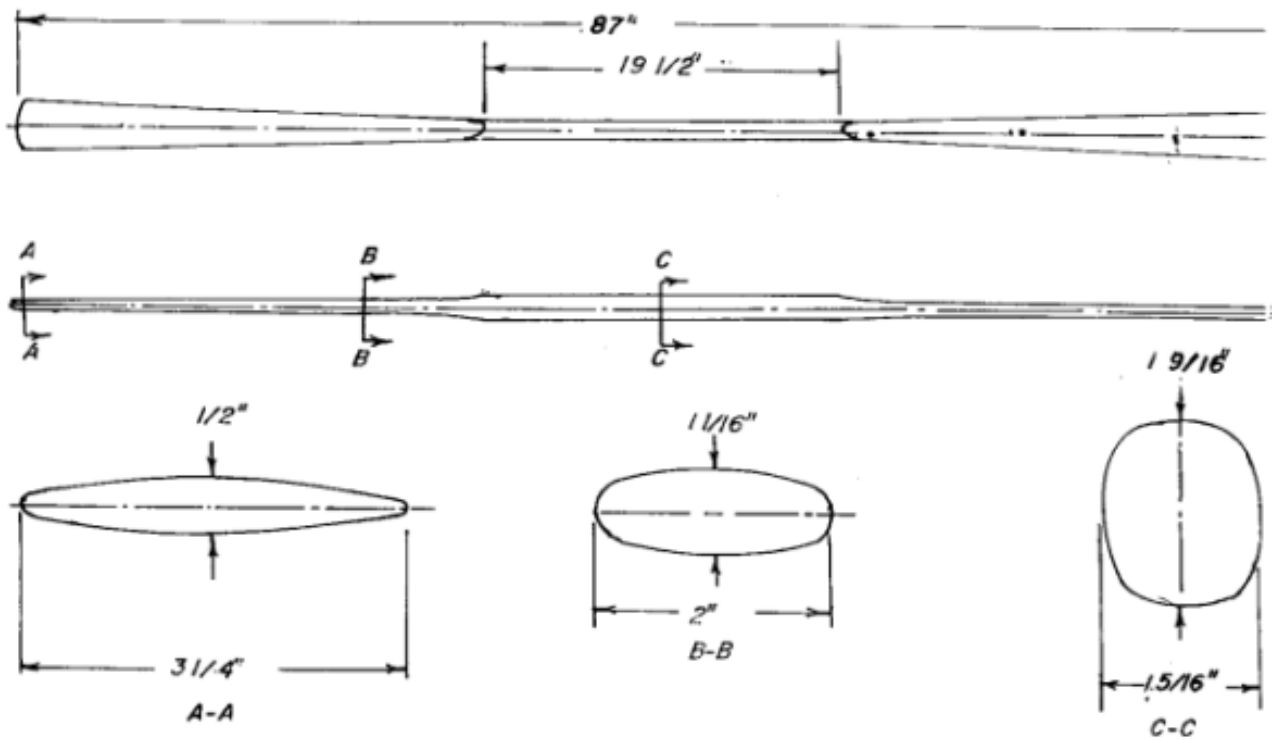


Figure 6

Next, lay out the paddle accurately, both plan and profile. As [Figures 3 and 4](#) show, there are a bunch of lines in the profile view. To simplify things, you could omit the edge profile in your initial layout and draw it in after you have shaped the blank to the center line profile and before you begin beveling from the centerlines to the edges. Work the paddle uniformly--keep the ends balanced as you go along. In [Figure 7](#) the beveling is complete, and the redrawn edge profile has been worked off. Notice how in order to save weight the profile of the blade sweeps down from the loom in a curve before it straightens out about ten inches away from the shoulder. But the important thing is to WORK FROM THE CENTER LINES.

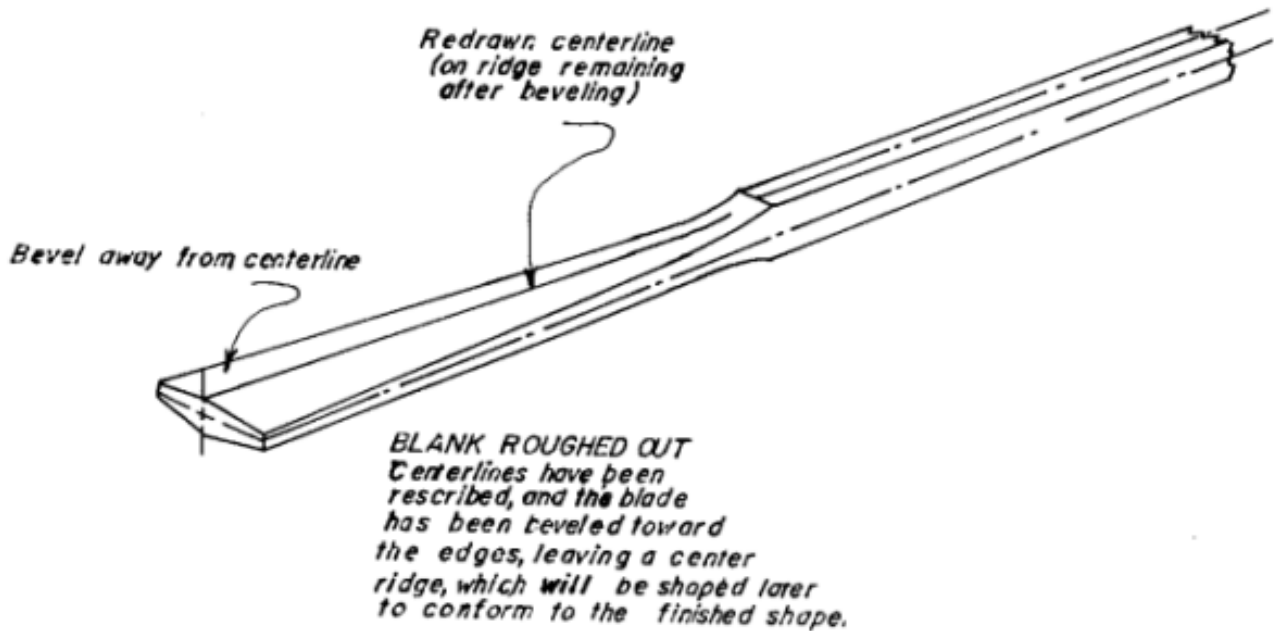


Figure 7

Finally, after you have achieved a precise but very angular paddle with sharp edges and a well-defined center ridge, drill for the brass pins, and do the final shaping and rounding as shown in [Figure 8](#). A 2-in. pin driven in from each edge should suffice. There is no need to drive them exactly opposite each other. I use a variety of planes and spokeshaves for shaping. Using the longest plane possible in a given situation, a jackplane, helps keep things square. But a 6-inch block plane is

very useful as well. A straight-bladed spokeshave with a curved stock is very useful in shaping the narrow part of the blade where it sweeps in a curve up to the loom. To transform the loom from a rectangular cross section to a squarish oval, I still use some antique rounding planes, but they are not necessary. After I have it shaped as accurately and smoothly as I can with cutting tools, I sand it. I use a palm sander where possible on the blades and sand the loom by hand. I start with 60 grit paper and proceed through 100 and 150 grit. After I have it smooth, I paint it with water to raise the grain, and sand it again with 150 grit and finish off with 220. Cedar requires no finish, but if you insist upon some sort of protective coating, I would stay away from anything that produces a smooth, shiny, and slippery surface.

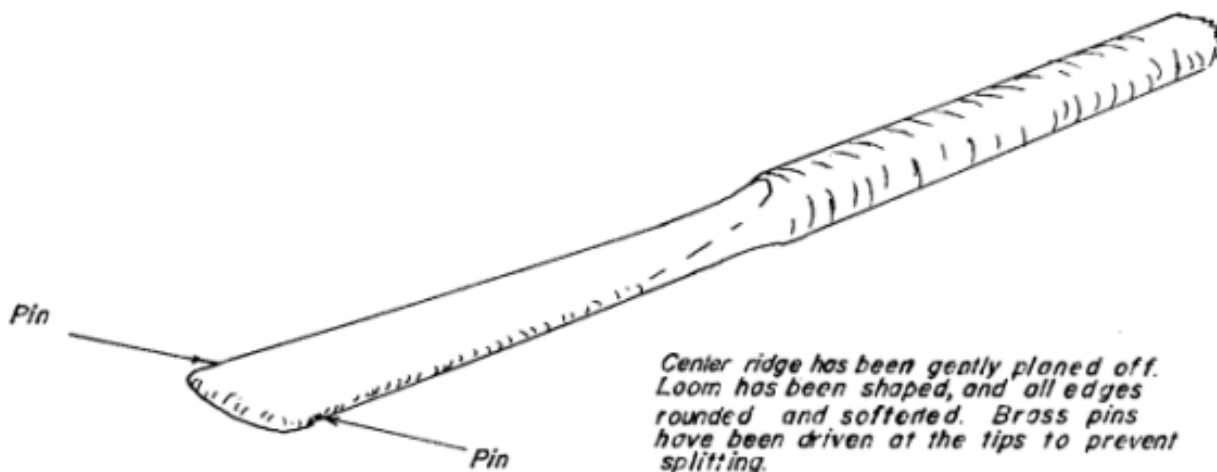
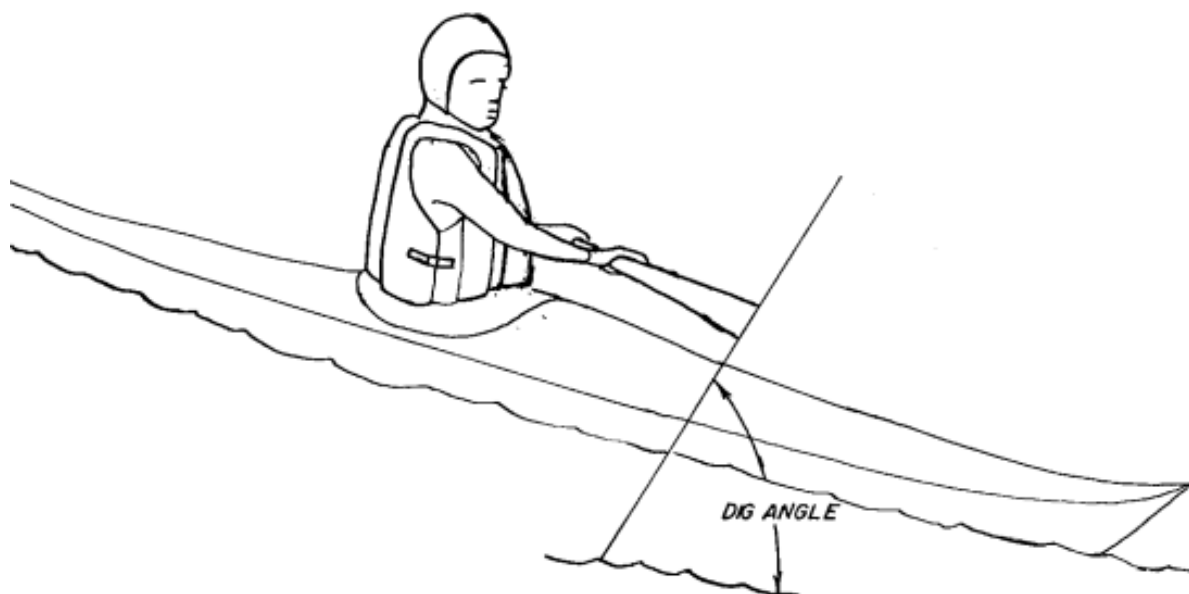


Figure 8

I have mentioned some things about using a Greenland paddle. The technique differs really very little from that used with a Euro-style paddle. The cadence is faster because the blades are narrower, and because the center of effort is closer to the paddler, the paddle can be carried lower permitting the strokes to be more sweeping than with the Euro-style paddle, where the strokes tend to be more vertical. Carrying the paddle lower results in less fatigue and keeps the blades more out of the wind, which diminishes the closer one gets to the surface of the water. What Derrick Hutchinson says in *Sea Kayaking 4th edition* comparing the basic touring stroke to the racing stroke is an accurate description of the basic Greenland stroke.

Remember the appropriate dig angle [Figure 2](#) illustrates the "dig angle." --a paddle that enters too perpendicularly will plop and draw air behind it. Strive for a stroke with no splash and no whirlpool being pulled by the tip of the blade. I frequently follow the tip of the paddle with my eyes to check on its efficiency. A smooth and efficient forward stroke is as satisfying as a well-performed roll.



Because of its short loom which blends smoothly into the blades, the Greenland paddle is well suited for extended strokes, which are used most commonly for sweeps, sculls, and rolls. In the extended position, the Greenland paddle, with its

shorter lever arm, actually exceeds the lever arm of the Euro-style paddle considerably, so turns, braces, and rolls can be very easily accomplished. However, there is another stroke associated with the Greenland paddle, the slide stroke, a stroke often ignored by converts to the Greenland paddle.

In his article Tom Lucas quotes John Heath's description of the slide stroke from *Sea Kayaker*, which I will not repeat. However, I have experimented considerably with the stroke, and have discovered some things about it I would like to pass along.

Basically, the stroke consists of a series of extended paddle strokes on alternate sides.

The stroke requires the paddler to make these alternating extended strokes as rapidly and as smoothly as possible. Perhaps best done with a storm paddle, a Greenland paddle with normal blades and a loom about a foot or more shorter than a standard paddle, it is effective with a standard paddle as well.

To do the stroke,

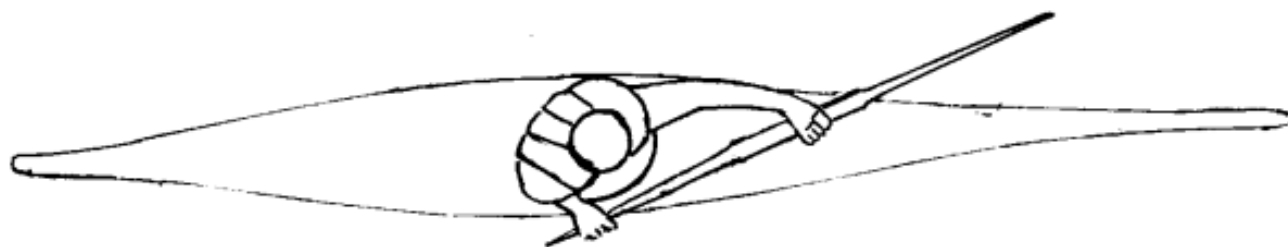


Figure 9-A

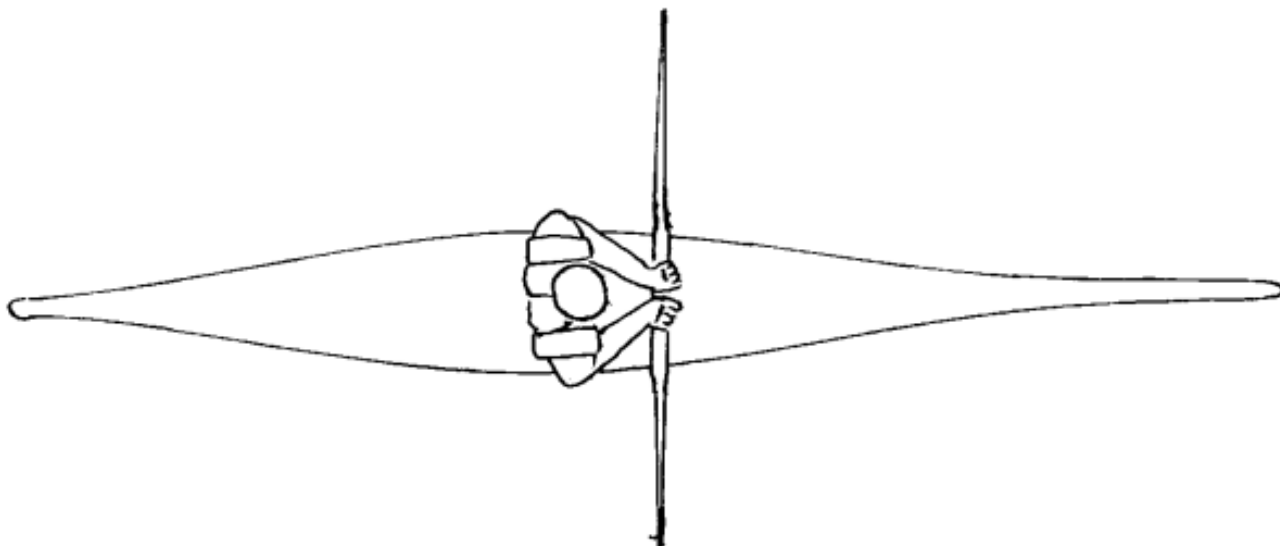


Figure 9-B

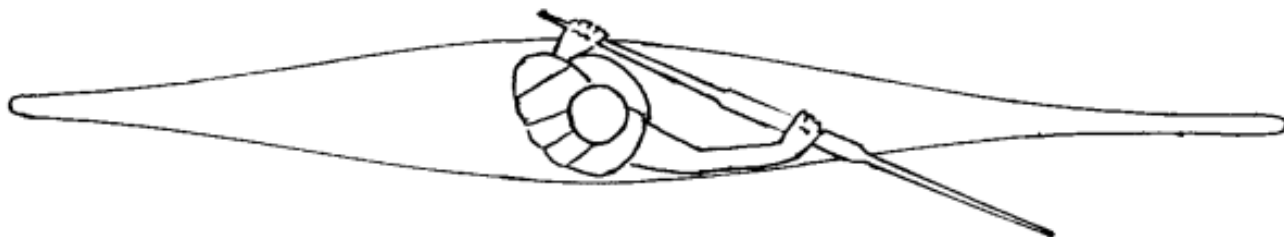


Figure 9-C

starting on the left side, rotate your torso to the right and reach as far forward as you can and quickly slide your forward (left) hand backward to the center of the loom and your right (rear) hand backward along the blade as far as you can. With my current seven foot-five-inch paddle, I manage to get about ten or twelve inches from the end of the blade. You are now in the position illustrated in [Figure 9-a](#).

Keeping your forward (left) arm straight or slightly flexed, rotate your upper body to the left until just before the paddle is perpendicular to the side of the boat. Continuing to rotate your body, allow the left elbow to flex as it lifts the blade from the water and, still gripping the center of the loom, allow the paddle to slide through your right hand until the two hands bump.

You are now in the position illustrated in [Figure 9-b](#).

When the hands bump, the right grips the loom, and the left relaxes as the right arm extends, pulling the paddle through the left hand to the position shown in [Figure 9-c](#), which is the end of the complete cycle.

Although it looks as if the blade hand slides forward to meet the loom hand, the reverse is true. The blade hand remains basically still, allowing the paddle to slide through it until the loom hand bumps it, and then the blade hand grips the loom, becoming the loom hand; the loom hand relaxes, becoming the blade hand, and all the while the torso continues to rotate.

Some comments on performing the stroke:

Although the loom hand pulls the blade through the water, the stroke's power derives from the thrust on the paddle exerted by the blade hand, similar to a canoist exerting thrust on the grip of his paddle with his upper hand; but although the positions are similar, do not extend the blade arm like a canoist punching the grip forward. Instead, keep the blade hand close to your chest and allow it merely to transmit the thrust generated by your rotating torso. As the whitewater boys say, "Paddle in the box." At least Sean says it. Only in this case, because one arm is extended, the box is really a trapezoid.

Because one important purpose of the stroke is to minimize wind action on the paddle, the closer to the end of the blade you can get your blade hand the better. If you grip the paddle loosely enough, you may be able to allow it to slide considerably beyond the center of the loom, thereby increasing the lever length still further and keeping the upper blade out of the wind. Notice that while the loom hand moves maybe half the distance of the loom--perhaps ten inches--the lever arm is really from the center of effort to the blade hand--a considerable lengthening.

Keep the paddle low, stab it into the wind, rotate with vigor, and get as much of your legs and back into the stroke as possible. By leaning as far forward on the deck as you can at the start of the stroke, you can closely imitate the action of a rower pulling on an oar, and this action, combined with the sweep generated by your rotating torso, makes for a very powerful stroke.

The cadence of this stroke is somewhat slower than that of the basic Greenland stroke, mainly because the tip of the paddle has further to go. It requires more effort than the standard stroke because the water has that longer lever with which to resist your efforts, but practice the stroke until you can get it going pretty fast.

It is a good stroke to bring other muscles into play. I like to sprint with it and get my back into it simply because in leaning forward over the deck, I stretch my lumbar muscles and whatever else is down there.

Some boats seem to respond to it more dramatically than others. My Recluse doesn't seem to pick up speed dramatically with the stroke, perhaps because it is such an easily driven boat that I can get it to hull speed pretty easily with the standard stroke. On the other hand, my Prijon Oddysea double, which I frequently paddle solo while pushing my dog around in the forward cockpit, seems to go remarkably faster with this stroke. I think it's because I can't get it up to hull speed with the standard stroke.

It is also a very wet stroke. If your spray skirt has holes in it or is not otherwise very water resistant, be prepared for a lot of water in the boat. And that is what I know about Greenland paddles and technique.

P.S. Since this was written, I have modified my ideas somewhat. Steve Winning, who has built several kayaks and a lot of paddles, keeps the blades on his paddles quite thick in cross section--"egg shaped," he says. They seem to be very efficient and pull less air than the more flat-bladed paddles. My next paddle will have thicker blades. Lately, I have been doing a lot of paddling with a 5' 4" storm paddle, which moves the boat very well. It also makes the slide stroke imperative. There is no faster way to learn the slide stroke than with a short paddle. Greenland paddles are inexpensive and fairly easy to make. Half the fun of this Greenland paddling business is trying out new ideas.

Who knows, maybe you'll be the one to rediscover the legendary ten-knot paddle.

GREENLAND PADDLING

Notes From A Novice:

by Tom Lucas

I first became intrigued with Greenland paddling technique for purely aesthetic reasons. On a weekend trip to the Chesapeake Bay last spring I observed several paddlers, all recent converts to Greenland-style equipment, using these short skinny sticks with remarkable skill. The easy grace with which they handled their boats, upright, upside down and in between was wonderful to watch. One of the things that always appealed to me about kayaks was their elegance and kayakers never appeared quite so elegant as when they were being propelled with Greenland paddles.

I bought my own Greenland paddle in July of 1992, a **"Greenlander" from Betsie Bay Kayak** and all aspirations to grace and elegance quickly dissipated. My forward stroke splashed and clunked and got me nowhere. My sweeps failed to turn the boat and my roll, hard earned over the winter in weekly pool sessions simply vanished. I was very discouraged, but not defeated. I read whatever I could. I laid down my conventional paddle and used the Greenlander exclusively, beginning in a small pond (on windless days no less!) and graduating from there.

This is what I've learned so far.

Greenlanders used various anthropomorphic measurements to size their paddles. Most are between 7 and 7.5 feet in length. The loom or shaft of the paddle is usually about 18 to 22 inches long, although it may be longer. The paddle blades grow wider as they extend outward from the loom to a maximum of 5 to 4 inches. It is important that the paddler's hands fit comfortably and securely around the blade even at its widest point. The paddles are always made of wood and the blades always unfeathered.

The forward stroke comes in two basic varieties: the traditional and the slide. John Heath, a Greenland aficionado and probably the best writer on the subject, provides the most succinct description of the traditional forward stroke:

"In executing this stroke, the paddle is gripped with the thumb and forefinger around the loom and the remaining fingers around the inboard end of the blade. Forward movement is achieved by twisting the torso, not by pulling or pushing on the paddle. In the beginning it is helpful to exaggerate this movement while locking the elbows in place. On the day after paddling if anything hurts besides your abdominal obliques, you probably were doing the stroke incorrectly."

I'm convinced that Greenland paddles, like baseball bats have a "sweet spot". When a pitched ball is struck with the sweet part of the bat, an economical swing; smooth, compact and quick, will drive the ball an extraordinary distance.

The ball is said to "fly off the bat", like an animate object with a power all its own. On the best days when you find the sweet spot of the Greenland paddle (and you don't always find it), something similar takes place. The traditional stroke seems effortless and the kayak glides not through the water but over it. It is truly a cause for joy.

A special case modification of the traditional stroke is worth noting here. Sometimes it is necessary to accelerate the kayak rapidly, e.g. when punching through surf or catching a ride on a following wave. To do this with a Greenland paddle, the hands are spread a little further apart and the paddle is held nearly vertical. The stroke is hard and as close to the gunwale as possible. The acceleration achieved in this manner belies the narrowness of the blade; it is surprisingly effective.

The slide stroke is a little more difficult to describe as well as perform. Once again, John Heath:

The "smooth, continuous movement" is the tough part. When I use this stroke, I find that my hands rarely come together at the middle of the loom. Rather, the upper hand stops about 6 to 8 inches shy of the lower- a kind of "half slide" that facilitates the linking of strokes. As in the traditional stroke, the hands are kept low and rotation of the torso provides the primary thrust. In addition, the upper blade is pushed forward and down throughout the stroke for added power. This is similar to the forward stroke with a conventional paddle.

The cadence for the traditional stroke is roughly 60 repetitions per minute, or better, for the half-slide about 40-50 per minute. Both strokes result in comparable cruising speeds. I find that I switch frequently between the two, sometimes just to vary

rhythm and break the monotony, sometimes in response to wind and sea.

The slide stroke is particularly useful because it can be modulated almost endlessly to accommodate the conditions immediately at hand. For example, in a steep quartering sea it might be appropriate to execute an extreme slide on one side of the kayak and a minimal slide on the other in order to keep one course. A short time later it might be appropriate to tone down the difference between the strokes and a short time after that to reverse the difference. This ability to vary your response quickly to changing conditions is a great advantage in rough seas. And far from being a nuisance, it's actually enjoyable. It's also less taxing over the course of a long day on the water.

The slide stroke is the bridge to the extended-paddle position and the extended position is the only effective way I know to turn a kayak with a Greenland paddle. A sweep stroke with both hands on the loom is futile. In the extended-paddle position the upper hand grips the non-working blade at or near the end, while the lower hand grasps the loom just below the inboard end of the same blade. The sweep itself is performed exactly as with a conventional paddle but now there is a full 4.5 -5 ft. of paddle on the sweep side. This provides both a powerful lever for turning the boat and a stable platform for supporting an aggressive lean throughout the sweep. This combination is extremely effective. I have never been able to turn my boat as well with a conventional paddle as I can with my Greenlander.

The extended-paddle position is also the bridge to Greenland style braces, rolls and sculls. But that is another story best reserved for another day. For now I only hope that I have aroused your curiosity regarding Greenland technique and given you some helpful information to get started. There are some relatively inexpensive traditional paddles on the market or better yet, you can make one from a standard 2 x 4. Remember though, you probably won't like it at first and a few brief attempts is not really a fair test. I suggest you strap the paddle to the deck of your kayak and use it a little each time you go paddling. If you still don't like it, just leave it on your deck; it makes a great spare. It's readily accessible and since it requires no assembly, it is easy to put to use in a real emergency.

There has been some controversy recently regarding the advantage of the conventional vs. the Greenland paddle (ANorAk June/July, 1992 and August/September, 1992). When couched as an all-or-nothing proposition, this is a red herring issue. Just as there is no one perfect boat for all people and all conditions, there is no one perfect paddle. There are pluses and minuses to both styles. For me the pluses fall heavily in favor of the Greenland paddle. For you the answer might be different. The best way to make that determination is to take paddle in hand and use it. Perhaps you might find that you like what you discover or that you can adapt some of what you learn to your own paddling style. Perhaps not.

I leave you with a quote from a man who surely never paddled a lick in his life but whose words are nonetheless right on the money:

"Different stokes for different folks. "

Sly and the Family Stone, 1969

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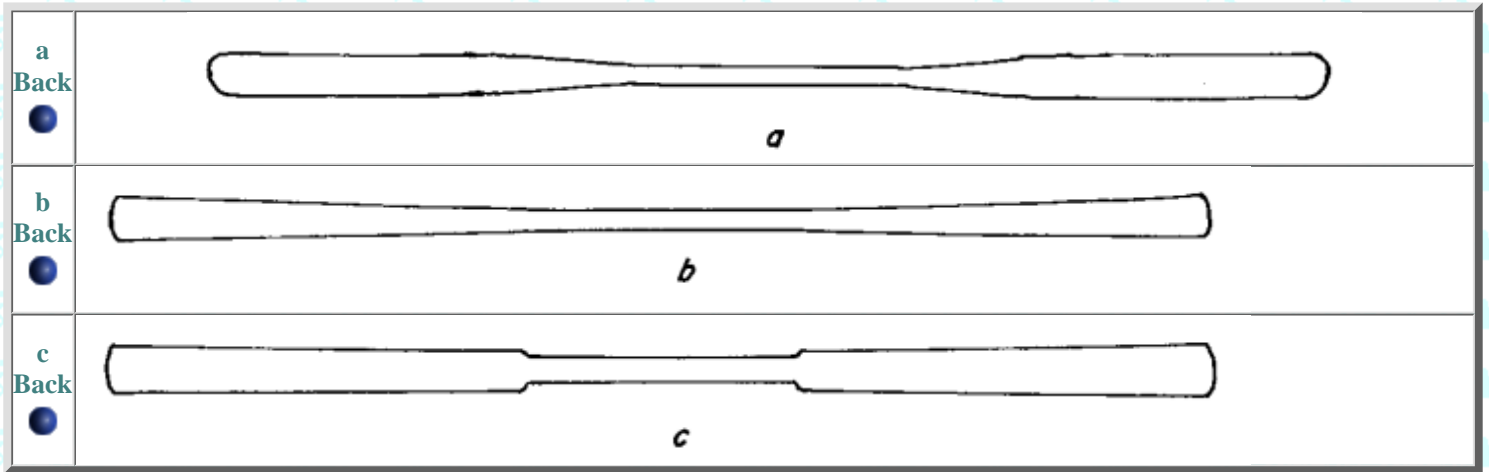
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Figure 1



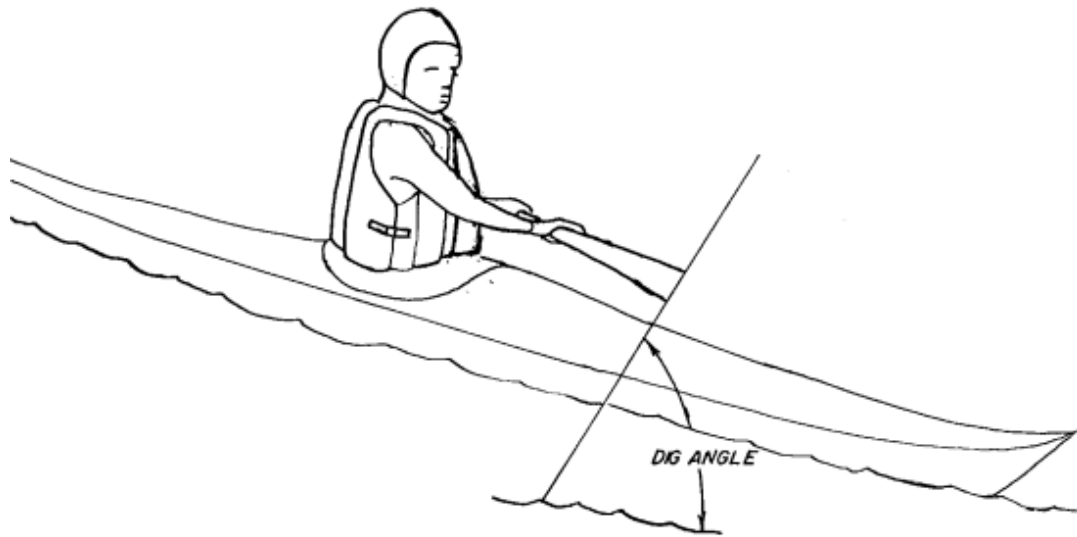
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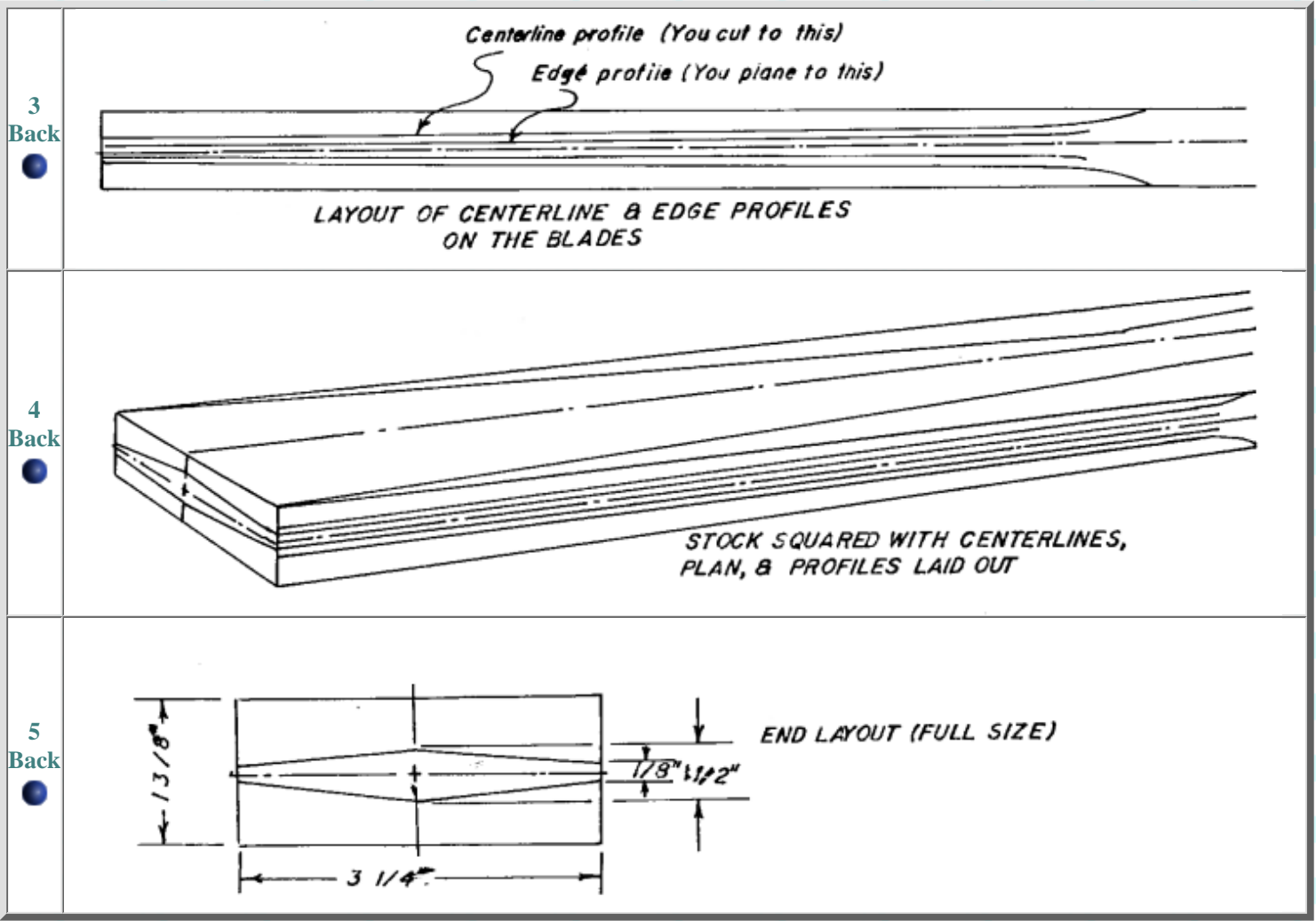


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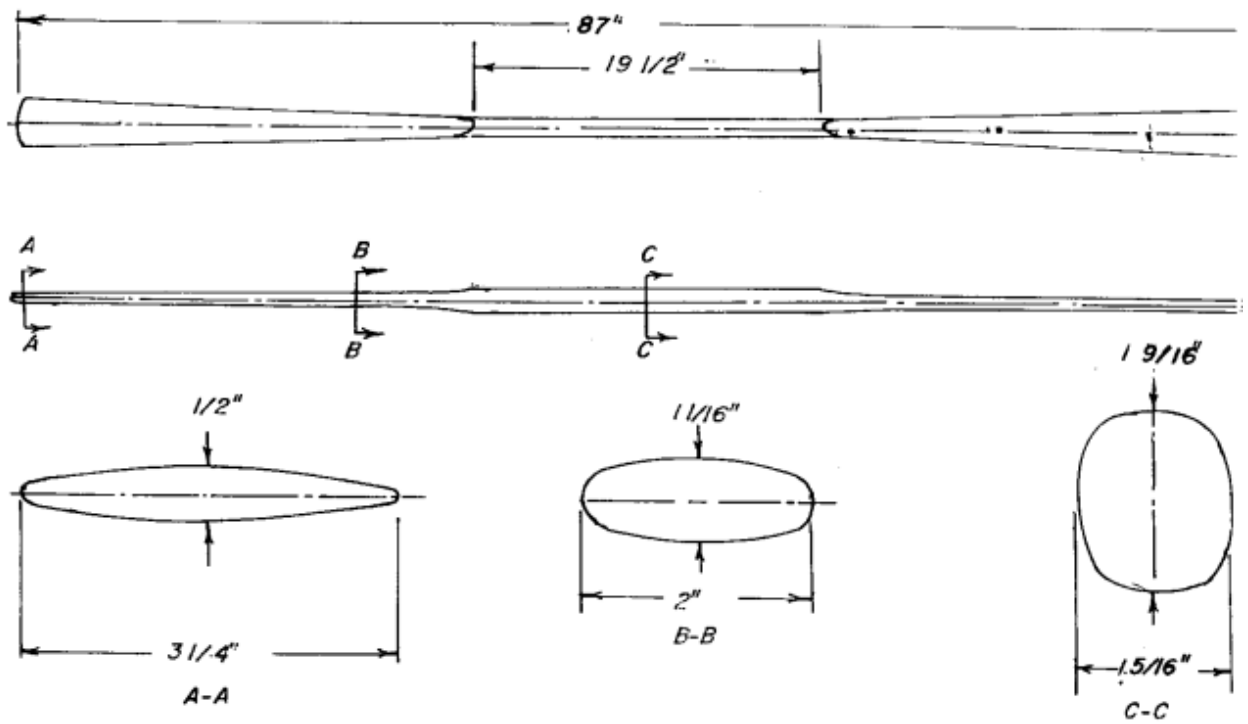
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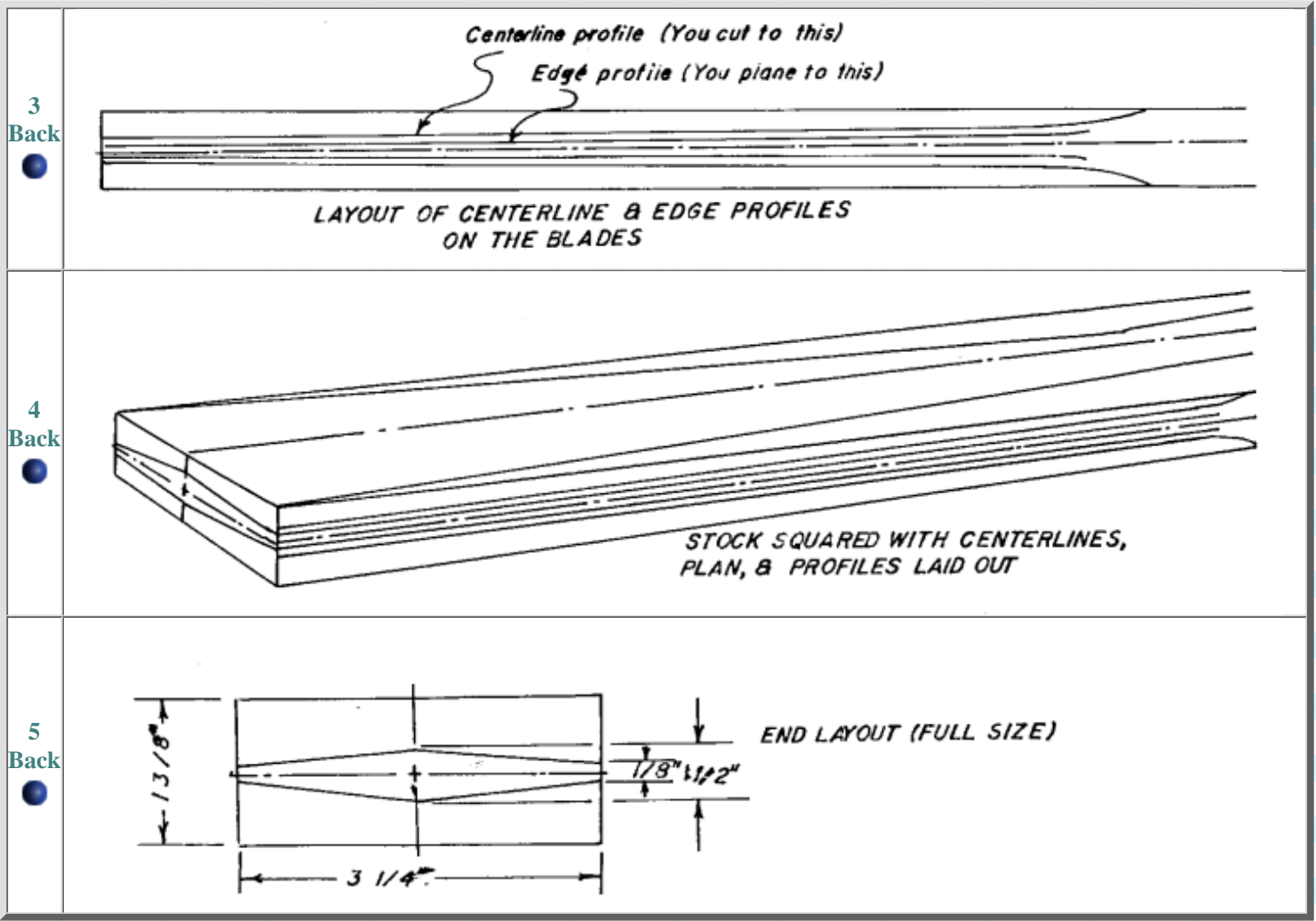


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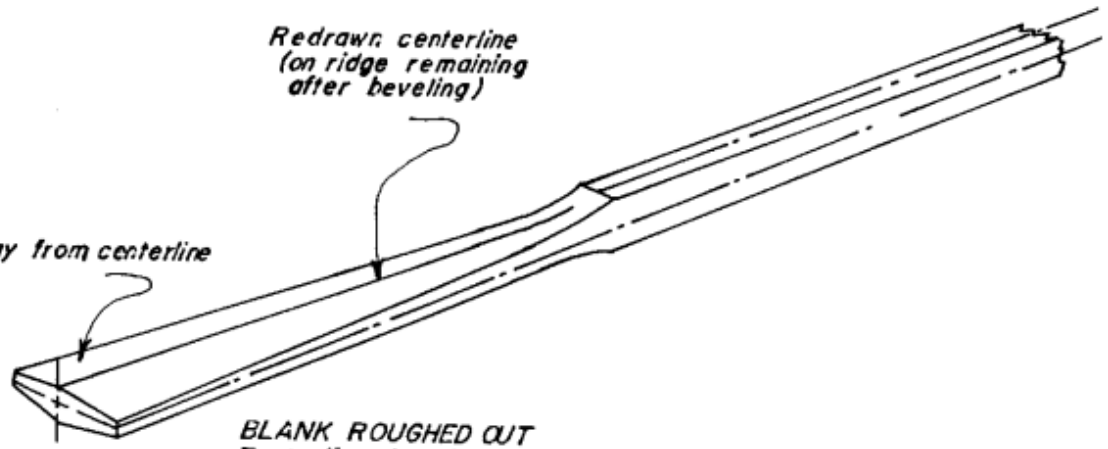


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Bevel away from centerline

Redrawn, centerline
(on ridge remaining
after beveling)



BLANK ROUGHED OUT
Centerlines have been
rescribed, and the blade
has been beveled toward
the edges, leaving a center
ridge, which will be shaped later
to conform to the finished shape.

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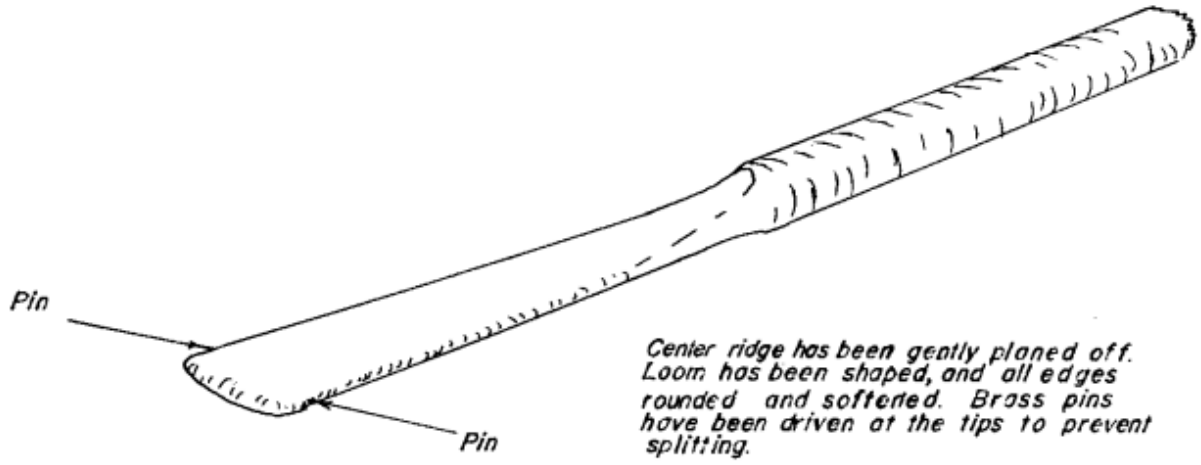


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Center ridge has been gently planed off. Loom has been shaped, and all edges rounded and softened. Brass pins have been driven at the tips to prevent splitting.

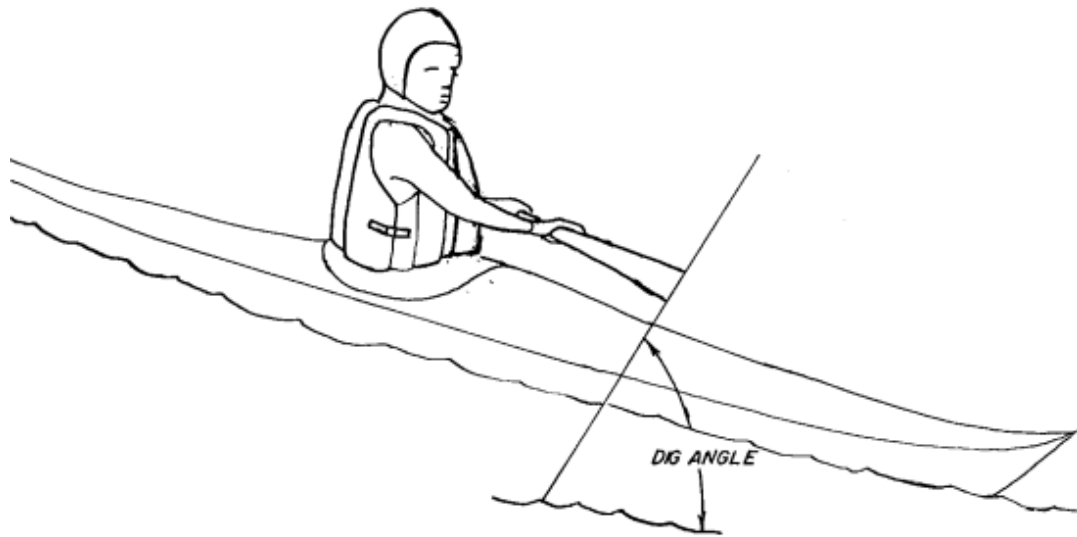
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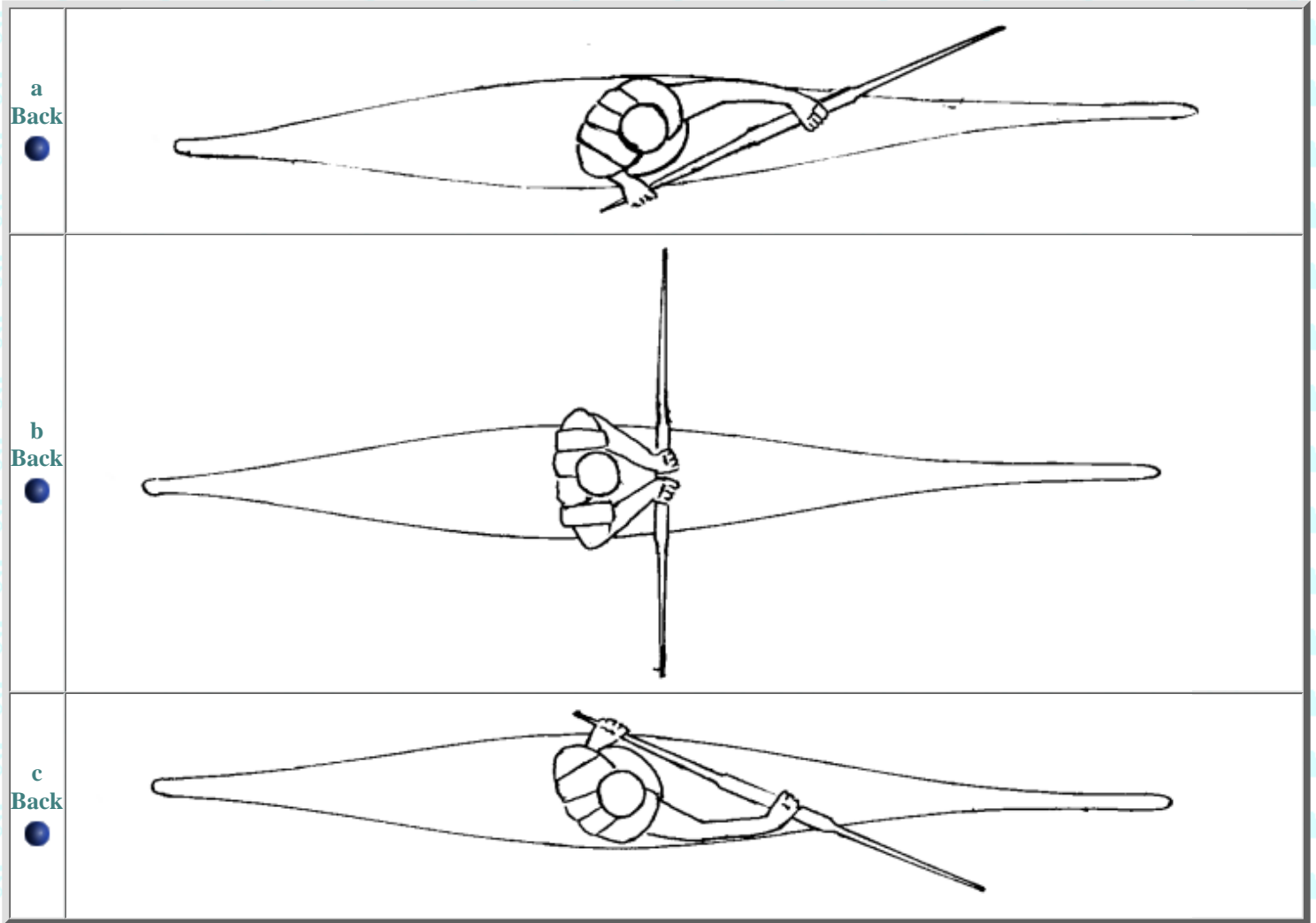


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Figure 9



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