



## The Joys of Wooden Boat Building

by Heather Mummery

When I met Mike Marini, I didn't know the difference between a canoe and a kayak. We now have three homemade boats in our lives and another one on the way. Boat building requires tools, time, money, and a minimal level of manual dexterity, but as a hobby it is surprisingly resilient to improvisation and good intentions. It is a friendly, inviting hobby; not intimidating. Beginners can do it. It is an inherently rewarding hobby that can be, as you may yet discover yourself, wildly addictive.

### The Boats

Naturally, it is all Mike's fault. Mike built his first wooden sea kayak in 1995, inspired by the price of a retail sea kayak compared to the cost of building his own. Mike had most of the tools, a mostly empty basement, and time to spare. I got involved at that point and provided moral support, an occasional hand, and the ability to divide "29 and 3/4 by three" in my head.

Mike's first boat consisted of basically three pieces of thin plywood: two side panels stitched together at the bottom and a deck over the top. Strips of pine are glued to these panels, then the deck is glued to these strips and nailed in place (two deck beams span the cockpit and provide support for the deck). A thin piece of plywood forms the cockpit, with a piece of steam-bent ash as a lip for the sprayskirt. The seams are sealed with fiberglass tape and epoxy, and the wood is waterproofed with epoxy, paint, and varnish. (Plans and instructions from Chesapeake Light Craft, Inc.) It sounds easy because it was: within six months of the first cut, the 25-pound boat was in the water. Mike was well on his way to a dangerous obsession, and I was not far behind.

Inspired by the success of the first boat, we began a second one with boosted confidence. Not wanting to make things too easy on ourselves, we chose a wood and canvas design (George Putz, "Wood and Canvas Kayak Building"). The plans comprised a table of offsets, which is a chart of distances between strategic points of the boat. From this table we built plywood forms, around

which we bent lengths of wood that formed the skeleton of the boat. Support pieces at the bottom, along the sides, and on the top completed the frame; canvas was stretched over it, nailed in place, painted, and varnished. Eventually, the sides and bottom will be protected by external pieces of wood, and when the boat is done, it will belong to my parents who have been storing it in their garage for the past year. They think they are storing it because we gave it to them for Christmas, but the real reason we gave it to them for Christmas is that we needed to clear the basement to build the next boat.

The third boat was similar to the first one, another Chesapeake Light Craft, Inc. design. The differences were the slightly more complex design and the fact that we actually followed the specifications. By this time, we went all out in rigging the boat, so it has bulkheads to form waterproof compartments, including hatches for access, grab loops, foot pegs, and a seat (the extra "hatch" in the cockpit was not part of the original design, but that's another story: see "The Mistakes" below). This boat is our first complete touring kayak, capable of carrying us and our gear away for a weekend, at least one at a time. (Next time we'll have to build one with a double cockpit. . . .)

The current boat is likely the last for a while, because we have no more room on the basement ceiling from which to suspend kayaks without infringing on the headroom required for building them. Mike is building a traditional Aleutian kayak, or baidarka, which is yet another type of design. The baidarka is a flexible,

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## Next Meeting - canoe camping

The next FLOW meeting will be held Thursday, March 13, 1997 at 7 p.m. at Tent City in Webster (located at the corner of Ridge Rd. and Hard Rd. in Webster Square plaza). Meet in the back of the store in the canoe/kayak area. This month's program will be on canoe camping. Warm beverages and other snacks will be available in the adjacent coffee shop, which is open until 9 p.m.

The Steering Committee will meet on March 6, 1997 at 7 pm at Ann Watts' apartment, 150 Park Ave., Apt. 8. For directions call Ann Watts (716-442-8971).

## FLOW organization

### Officers

<b>President</b>	Steve Kittelberger
<b>Vice President</b>	Harry Weidman
<b>Secretary</b>	Ann Watts
<b>Treasurer</b>	Mike Shafer

### Committee chairs

<b>Facilities</b>	Rick Williams
<b>Membership</b>	Art Miller
<b>Programs and Trips</b>	<i>currently seeking</i>
<b>Communications</b>	Heather Mummery
	Mike Marini

**Education/Instruction** Ardie Shaffer

## Newsletter Submissions

Send us trip reports, articles, information about upcoming trips and releases, ads for our classified section, or anything else you'd like to see in FLOWlines.

### If you have e-mail:

- Send articles in the form of a text file to:  
heather.mummery.0506846@nt.com

### Written submissions:

- Preferably typed in a 10-point font or larger, double-spaced.
- Hand-written submissions must be reasonably legible, or great editorial license may be invoked.

### Mail to:

Heather Mummery  
221 McKinley St.  
Rochester, NY 14609

## FLOW contact list

### For general information, contact:

Steve Kittelberger 716-442-6138

### For paying dues, contact:

Mike Shafer (Treasurer) 716-227-9291

### For membership information and the FLOWlines mailing list, contact:

Art Miller 716-334-5810

### For white water racing information, contact:

Art Miller 716-334-5810

### For questions about instruction, contact:

Ardie Shaffer 716-334-4487

### For information about marathon canoe racing, contact:

Bob Pierson 716-889-4174

### For information about sea kayaking, contact:

Harry Weidman 315-524-9295

### For information about white water paddling, contact:

Perry Vayo 716-256-3930

### For information about the newsletter, contact:

Heather Mummery 716-288-5232

## Upcoming trips/events

### Pool Practices

Adirondack Mountain Club (ADK):

**Mar. 4 – Mar. 25**, Tuesdays 7-9 pm,  
Wheatland-Chili High School

**Mar. 6 – Mar. 27**, Thursdays 7:30-9:30 pm,  
Pittsford Sutherland High School

Contact Gretchen Schauss (716) 223-5023

Ardie Shaffer, certified instructor (supervised practices):

**Feb. 25 – Mar. 18**, Tuesdays 7:30-9:30 pm

Register through Pittsford Recreation Department  
(248-6280), 32\$ per four week session.

### Contacts

The trip, class, and clinic schedule contains events sponsored by the following groups:

FLOW Paddlers Club	(716) 442-6138
Seayaker Outfitters	(315) 524-9295
Pack, Paddle, and Ski	(716) 346-5597
Endless Adventures	(315) 536-0522
Adirondack Mountain Club (ADK)	(716) 223-5023
Ardie Shaffer	(716) 334-4487

## See insert for whitewater and flatwater trips, classes, and clinics scheduled for 1997



## Gauge numbers

Genesee River (Letchworth).....716-468-2303  
Cattaraugus River.....716-532-5454

### Pennsylvania rivers:

Philadelphia (Lehigh and others).....1-800-431-4721

Harrisburg (Loyalsock, Susquehanna, Pine Creek)  
.....1-800-362-0335

Pittsburgh (Yough, Slippery Rock Creek, and others)  
.....412-262-5290

### West Virginia rivers:

Gauley River.....304-872-5809

Southern WV rivers.....304-529-5127

**IMPORTANT:** If you have any additions or corrections, please let us know so that we can provide an up-to-date list to our members in 1997!

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stream-lined, skin boat made with almost no glue, comprising many thin strips of wood lashed together to a wooden frame and covered with a nylon skin. Of all of our boats, this is the most elegant and distinctive, a truly efficient, evolved creature of the sea. The baidarka is strong enough to withstand the storms and tides of the Gulf of Alaska, and will carry Mike swiftly and steadfastly on Lake Ontario or anywhere else he decides to paddle it.

### The Costs

Does making your own wooden boat save you money? Take the average cost of a retail sea kayak to be \$1500. For the two sheets of plywood required to build Mike's first boat, he paid about \$90 (the plywood is 3- or 4-mm marine-grade mahogany plywood). And if he hadn't broken one of those, he wouldn't have had to buy that other piece of plywood at \$50 Canadian. Even so, we're only up to \$140. Add in miscellaneous pieces of oak and pine at \$50, epoxy at \$100, fiberglass tape at \$30, ring nails at \$7/lb, and the cost of materials is still less than \$350 for our first effort. This figure does not include the cost of gas to Toronto for the plywood, or to Tonawanda for the ring nails, or the three hours in long distance charges spent trying to find a supplier of ring nails anywhere on the East coast...as you can tell, those extra hidden costs add up.

The other dangerous cost is the multitude of tools you will be inspired to buy, which increases with every additional hour you spend in a hardware store or working with wood. Beware the overwhelming temptation to buy just one more type of chisel, plane, or saw; it is insidious, even for a woman who is not normally susceptible to such urges. However, having the right tools for the job makes the whole experience more pleasant for all parties involved. Along the way, I learned how to use all kinds of tools I had never used before, such as a block plane, table saw, jig saw, rasp, chisel, and C-clamps (you can never have enough C-clamps). These in addition to other basic tools, such as a hammer, screwdriver, and knife, were the only tools actually required for the boats. There were some tools that Mike regretted not buying earlier, and some that were helpful additions to his collection—such as the band saw—but a basic toolbox is sufficient to start.

Even counting tools, each boat we have built has cost at least 50% less than the cost of buying a comparable craft: the wood and canvas boat at \$250 was the cheapest since most of the lumber could be scrounged from old palettes; my plywood touring boat was more expensive than the first one by a couple

hundred dollars but shared costs with the second (paint and varnish); Mike's baidarka is the most expensive at \$600 for plans and materials, but it will be the most elaborate and durable. The hidden costs in each boat include necessities such as sandpaper, foam brushes, acetone, fasteners, and, most of all, time. Most of these boats can be built in less than 80 hours of work, but that does not ever mean you will have a boat two weeks after you start. Building a boat is a commitment of time and energy that only you can place a value on.

In summary, yes, building your own boat will cost you less than buying one, but it is not something you should get into with the intention of saving money. It is something you do for the sheer joy of building something that is both beautiful and useful, and your own.

### The Mistakes

Along the way, we learned some valuable lessons, most of them directly as a result of making so many mistakes. First of all, we learned that you can never build the boat by following the directions. A lot of the detailed boat-building books are written by professional boat-builders who have shops designed for the task, including such niceties as wooden floors, the correct tool for every job, and doors that are big enough to allow the boat to leave. Not all basements and garages are so well-equipped, forcing you to improvise, often panic, and make many, many trips to the hardware store. Fortunately, your boat is very forgiving and tolerant, and could probably teach you much about those qualities when your significant other reads the plans upside down or spills coffee in the hardening epoxy.

When boat-building you will improvise often, once you realize your boat usually doesn't know the difference between improvisation and calculation. For instance, a table of offsets provides all of the information necessary to determine the shape of the boat. It does not, however, include anything about the Law of Cosines, which I spent an afternoon exploring in the process of making those "minor alterations" to the second boat. We calculated precisely, painstakingly transcribed the derived measurements, and after all that, I cut the forms in the wrong place anyway. The boat still floats. The most important thing to pay attention to is symmetry—if you are going to screw up, do it consistently.

Another important tip and embarrassing admission: always ensure that you completely understand the difference between "bow" and "stern" when following the plans, particularly if you are sawing into your unmarred, virgin hull. Nothing is more painful than cutting the first hole into your boat, unless it is cutting

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the hole in the wrong place. Ow.

### The Rewards

The wonderful thing about boat-building is that no one else but you will ever know what went wrong (unless you or your partner decides to publish). If you follow most of the important directions, you will have something that looks, acts, and feels like a boat. Not only is the process of building something by hand full of its own rewards, but you end up with a beautiful wooden craft that people will hail when they see you gliding in it over the water: this is a most rewarding experience, I assure you.

To me, the most rewarding aspect of boat building is the intimate appreciation I acquired of the crafts we, as paddlers, trust our lives to. I helped Mike build his first boat before I ever paddled a kayak, and it was through learning this sport from the inside out that I truly fell in love with it.

### References

Chesapeake Light Craft, Inc., Annapolis, MD, (410) 267-0137. The designs are elegant, the plans are easy to follow, and the people at this shop are a pleasure to work with.

Chris Kulczycki, "The Kayak Shop." A complete tutorial to building three styles of stitch-and-glue plywood kayaks.

George Putz, "Wood and Canvas Kayak Building." A very thorough guide to building a wood and canvas kayak, including plans.

Wolfgang Brinck, "The Aleutian Kayak." A comprehensive tutorial to building a baidarka.

### References (continued)

George Dyson, "Baidarka." The heritage of the baidarka and the author's experiences building them.

Bruce Lemon, baidarka plans and video.

### Membership and Mailing List

To join FLOW, send name, address, paddling interests, and \$20 per individual membership to:

Mike Shaffer  
Re: FLOW Paddlers Club  
89 Dorstwood Drive  
Rochester, NY 14612

### Classified ads

#### WANTED:

Canoe, wilderness tripper. Prefer Mad River Explorer or Dagger Legend. Call Steve Kittelberger (716-442-6138 or 716-422-4195)

#### FOR SALE:

Seal Sprayskirt, Medium.....\$50  
Mike Marini (716 288-5232)

Contact Rick Williams (716 381-3418) for:

Aquaterra Prism sit-on-top touring kayak w/ thigh braces	.....\$350
Dagger Vortex w/ bulkhead (used 8 times)	.....\$450
SnapDragon Spray Skirt (L) for Medium cockpit (NEW)	.....\$65
Black Diamond graphite kayak paddle (NEW)	.....\$75

*To submit advertisements contact Mike Marini at 288-5232.*

**FLOW Paddlers Club**  
**89 Dorstwood Drive**  
**Rochester, NY 14612**

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