Editor’s Corner
Bobby Curtis

This issue of the MASIK has encountered delays and taken more time to publish than usual due to the lack of material being submitted. I am anticipating that this is a bump in the road and not a precursor to a thinner and less frequently published MASIK.

I believe that each member of QAJAQ USA has something to offer the MASIK and its readers. If any of you have considered submitting material and were hesitant to do so because of a concern your material was not well written, keep in mind that material submitted does not have to be a flawless written composition or even grammatically correct. There is a staff of people on the MASIK who are available to refine your material if needed. I personally would be lost without my word processor, spell checker, grammar checker and the proof reading services of quite a few others.

I am interested in what our members are up to regarding traditional kayaking. I learn best from the first hand experience of others. From the postings on the forum and the willingness of people I’ve met at some of the QAJAQ USA events who shared there experience firsthand, I know there is a great deal of valuable material available to benefit readers of the MASIK. Traditional kayaking is also great fun, and can be filled with adventure. Share your tales in the MASIK.

I have wondered if the QAJAQ USA on-line forums, being such great resources may in some respect act as a deterrent when considering submitting material to the MASIK. Some may think that similar material published in the MASIK may be redundant. But, for me, I enjoy many points of view on a subject, and my understanding is significantly enhanced by them all.

This issue introduces some traditional kayakers from “down under” in New Zealand. It’s a good sign that Greenland kayaking is spreading in another part of the world and another indication QAJAQ USA has helped to broaden the reach of traditional kayaking. By sharing your experience in the MASIK you can help to fulfill the QAJAQ USA mission of promoting Greenland-style kayaking and supporting the Qaannat Kattuffiat.

MISSION
Qajaq USA is a non-profit membership organization that is officially recognized by Qaannat Kattuffiat (The Greenland Kayaking Association). Qajaq USA is committed to supporting Qaannat Kattuffiat and their efforts to preserve, study and promote the traditions and techniques of Greenland kayaking while seeking to further the appreciation and development of Greenland-style kayaking in the United States.

EVENTS CALENDAR
2004 KAYAKING EVENTS
For more information on events please visit http://www.qajaqusa.org/QUSA/events.html

Link to other Masik issues. http://www.qajaqusa.org/QUSA/newsletter.html
Qajaq Talk
Greg Stamer

QAJAQ USA isn’t striving to be the world’s largest kayaking organization. We ARE striving to fully realize our mission of supporting the Qaannat Kattuffiat (Greenland Kayaking Association) and promoting Greenland-style kayaking.

That’s an ambitious mission for a small non-profit organization that has no paid staff, and a membership roster than currently totals less than 200. However, I’m proud of what we have accomplished thus far, and the credit for this goes to our passionate volunteer staff as well as each of you, our members. Thank you for your contributions, both in terms of time and passion and for your monetary support.

QAJAQ USA is built upon something of a paradox. We certainly don’t own Greenland kayaking and therefore feel it’s not ethical to hoard information about it or require someone to pay a fee in order to learn about it. As much as possible, we strive to make our information as freely available as possible, to everyone. The paradox is that if people don’t have to pay for it, in order to reap most of the benefits, why should kayakers support QAJAQ USA in the first place?

To answer this, consider that in many ways QAJAQ USA is like public radio (except without the irritating fund drives). Radio broadcasts are free to anyone with a radio, so why spend money to support public radio? Surely someone else will do it. Right?

The truth is that QAJAQ USA depends on YOUR support and participation for our continued success. The next time you hear one of those endless public radio fund drives, and are about to turn the dial, I have a “hypnotic” suggestion for you. Just mentally substitute “QAJAQ USA” for “NPR”. There. Now we can count on NPR to help reach our membership audience for free (Oh, and consider supporting public radio too).

Please send your suggestions and comments about QAJAQ USA to info@qajaqusa.org. Thank you so much for your feedback and support!

Share Those Happenings.

Publish Your Experiences in the MASIK.
Any traditional kayaking related material is encouraged (e.g. baidarkas, etc).

On average articles would be one – two pages in length.
Longer articles would be acceptable.

Best if composed with a word processor

Craftsmanship • Travel Skills • Adventures Achievements • Other
Accompany Your Text With Photos
The optimal format: JPEG, 300DPI color, 4-6 inches wide.

Material submitted doesn’t have to be flawless.
Grammar and spelling will be reviewed.

Typos will be corrected.

Changes deemed necessary will be made only upon approval from author.

A draft will be available to the author for review prior to publication.

Send your material as email attachments to: bobby@qajaqusa.org
Making A Chris Cunningham Tuilik
A southern hemisphere interpretation
By Pete Notman and Tony Calvert

This article reflects our experiences for constructing a tuilik and a tuitsaq as detailed in “Building A Greenland Kayak” by Christopher Cunningham.

Pete Notman
I first bought the book with the idea of constructing a skin on frame kayak. I was particularly impressed by the non building information and topics on how to launch, enter, and, paddle, and roll the kayak. The book also had instructions for any and all the paraphernalia that might be required to operate the craft, e.g. tuilik, norsaq, floats, and paddles.

So far I have loaned the book to two friends on separate occasions for “a week”. Both of them returned the book to me after ordering their own and informed me that they were at least half way through building their own skin on frame kayaks. You could say Cunningham’s book has ‘made an impression’ or, at the very least, been influential on Wellington, New Zealand folks.

As for myself, I have just about built everything from Cunningham’s book except the Greenland kayak, but I have secured some freshly milled Macrocarpa (New Zealand for Cupressus Macrocarpa, the ‘Monterey Cyprus’). It is being air dried and will be ready for me to start my own SOF project in about 6 months.

Tuilik
I had been aware of the existence of the tuilik for some time. Their performance in extreme conditions was evident in the posts and pictures of Nicholas Bertrand on the QAIAQ USA Greenland Kayaking Forum. However, I had never seen a tuilik up close and personal until Shawn Baker (the patron saint of New Zealand Greenland paddling) gave a rolling demonstration using his...
neoprene tuilik. Shawn generously left that neoprene tuilik behind in New Zealand so a pattern could be made from it. My initial inquiries soon revealed several sources of neoprene from which I could make a replica “Shawn Baker special”. However, the cost component was enough to make me balk at building a neoprene tuilik (that will be this winter’s project).

The feeble excuse that I needed to construct a tuilik out of cheap nylon (as a prototype) came when I needed a spray skirt for my high performance down river racer. I had brought it out of retirement and hoped to use in a kayak leg of a triathlon.

I used Chris Cunningham’s patterns and instructions. This first tuilik came together very well and worked great. I used the same pattern from this first tuilik, with some fine adjustments, for my second tuilik made from trilaminate breathable material that I bought from Marcel Rodriguez. Marcel is the second patron saint of kiwi kayakers and the source of all the material for the very best tuilik and tuiitsoq in Wellington.

101 uses for a tuilik:

Unlike neoprene skirts, my tuilik easily fit a broad range of cockpits. It is also roomy and comfortable. Furthermore, the tuilik appears to provide a better waterproof seal when compared to a spray skirt/ windbreaker combination. My new tuilik is ideal for punching through our mild southern hemisphere winter waves and it was pretty comfortable the rest of the time.

I soon discovered that a tuilik also makes a useful raincoat, it was ideal for filleting fish in the rain, going to rugby matches, and for taking away on holidays instead of my bulky raincoat. My first tuilik, made of cheap nylon, has become my first choice in the hostile chlorine waters when I practice rolling in a pool.

I also particularly enjoyed the challenge of making a tuilik since I had not done very much sewing before.

The only downside I have experienced is that water tends to pond on your lap. This is a consequence of the nylon material not being able to stretch like neoprene and the generous cut of the tuilik which allows a wide range of motion. A solution may be to use a little piece of sponge to bail out that pesky little pond from time to time.

[Editor’s note: The traditional solution is a set of suspenders that attach to the back of the suit, and lift the front of the tuilik to prevent water from pooling]

The Building Process

While neither of our homebuilt tuilik is likely to be the best ever built, we hope that our experiences will help encourage others to “give it a go”.

As a building step, we would recommend beginning with the tuiitsoq. This project is very simple and confidence building. It can be completed in an extremely short time. The tuiitsoq project will get you familiar with sewing a ‘flattened seam’, laying out the pattern and maybe give you some confidence in figuring the calculations specified in the procedure. Finding that your efforts result in a garment that fits you, your cockpit, and is functional, will be reassuring when you start on the slightly more involved tuilik.

Murphy’s Law being what it is though, you might want to make the tuilik first and then use the left over scraps to make the tuiitsoq. You could begin by making patterns for both. Then mark out your tuilik and cut that out of your material. Then using the left over material, mark and cut your tuiitsoq pattern. In this manner you can have both your cake and eat it too.

Making the pattern is pretty straightforward. Fires figure out your measurements. Get somebody to help you if you can. But, without assistance and using bits of string, it was easy enough to work out my length for the “fingertip to fingertip around back, with arms aiming forward” and other critical measurements. Don’t forget to add the + 1”. Since the Cunningham measurements are for a quarter pattern, the +1” ultimately adds 4” extra for hems etc. This is generous, but I wouldn’t recommend trying to economize on this. The worst that could happen with
the extra length is that you end up with a slightly bulky tullik. This is not bad, as I think roomy is good – it keeps you cool, isn’t clammy, and poses no hindrance to movement.

Tony did forget the additional 4” for his cockpit circumference. His tullik could be fitted to the coaming when on dry land, but it took at least five minutes of stretching and coaxing to get it on. Tony feels “The words measure twice and cut once are a very good philosophy to live by when making a tullik’. We found parts of the procedure in Cunningham’s book were hard for us to follow and relied upon collaboration between ourselves to resolve our misunderstandings.

Tony Calvert: Problems And Solutions
I looked at a couple of solutions for my tight coaming fit. One of the suggestions from Shawn Baker was to cut the hem in a curved line similar to the tuitsoq pattern in Cunningham’s book; another was to put darts in the hem to make it larger. The darts solution was implemented mainly because it was less work. But, in hindsight, Shawn’s suggestion might have been tidier.

DARTS IN THE HEM

I used Gore-Tex material for the major portion of the tullik, but used neoprene to make the coaming seal. While the neoprene is being sewn to the tullik, it tends to bunch the Gore-Tex a little which also reduces the base circumference.

Another problem I had was getting the hood dimensions correct. I ended up with a hood that fit my head, but had a neck hole that was too small to pull on to my head. The solution to this was to add a piece into the front of the neck area so I could get it over my head.

A Gore-Tex tullik is an excellent piece of paddling equipment and in our relatively temperate climate of New Zealand, it can be used all year round. It is my preferred garment when practicing my rolling and I wear it on all but the warmest days here in Wellington. I can recommend a neoprene hem as this is far more watertight than my tuitsoq which just has the Gore-Tex against the coaming.

When Pete assembled his hood, he kept his seams as small as reasonably possible. “My hood is a ‘snug fit’ and the neck opening is fairly narrow. Pulling the hood on requires a bit of care, particularly when I put my head through the neck opening. When I lower the hood for the ‘après kayaking’ (standing around in the tullik with the hood down), it requires a bit of a dance with a lift at the shoulders and squeezing of my head through the hood opening (which is sometimes constricted by the puckering due to the hood cord)”.

If you want to have a garment that is mostly waterproof, the hood has to be close fitting and the neck opening has to be relatively small. Cunningham’s measurements are good, but I recommend you take care to make your hood seams as narrow as you reasonably can.

I also found out it’s a good idea to put the hood on to check the fit, before it’s sewn it to the body of the tullik.

The thing to remember is “It is only a mistake if you can’t fix it”
Pete Notman: Problems And Solutions

When it came to my own tuilik, the only measurement that I had any problems with was the length. ‘Kneecap to sternum’ was ambiguous for me, since I figure the ‘sternum’ goes from just below my throat to just above my diaphragm. Being a good CPR student, I settled on midway the first time around. This resulted in my tuilik being a bit short. This sometimes restricts me from getting into a full layback position. When the front of the tuilik goes tight, it pops off the coaming at times.

I reckon if you read ‘kneecap to sternum’ as ‘below the knee to the base of your throat (say for example, that hollow bit at the base of your throat), it might be a better choice. The worst that could happen is you will end up with a midi-skirt tuilik rather than a mini-skirt. If you really don’t like the length, you can always re-cut it afterwards. This will be easier than having to add material for extra length.

Once you have your measurements, draw them out on a piece of paper. I first used a big sheet of brown paper cut from a roll. But when I recently made my tuuitsq while away on holiday, I taped some newspaper sheets together and that worked just fine in addition to a permanent marker pen.

Don’t bother marking or cutting out the hood location shown in the top right of the diagram on page 134. This is a red herring as the prefabricated hood itself dictates the exact shape that is eventually cut out. This is done after the hood has been constructed and sewn into place. The only thing you really need is to remember to mark the center line.

Keep in mind that the tuilik pattern diagram in the book is for a Cunningham Greenland kayak coaming. This is likely to be smaller and rounder than the more common oval cockpits on regular kayaks (like my extreme down river racer). If you are making your Cunningham tuilik for an oval cockpit like I was, your pattern will appear much more triangular compared to the figure on page 134. This is actually mentioned very clearly in the text at the top of page 134. But being a real kiwi joker and not prone to reading any instructions, let alone the fine print, my first tuilik turned out fairly voluminous. However, that doesn’t seem to have affected its performance much at all.

Sewing:

Use a sewing machine. It is much faster and neater than hand sewing. If you use color matched nylon, the seams will be almost invisible. Don’t hesitate to use heaps of pins; they really help to keep everything lined up when you are sewing. Spacing them two inches apart or less is fair game in my book. If you are worried about all the pinholes you can apply some seam sealer or turpentine diluted silicon sealant after you have made your tuilik.

I pondered on the instructions ‘Sew the extensions on the sleeves’. The first time around, I didn’t buy enough material and ended up with four separate 1⁄4 panels for my complete tuilik. Doing it this way, the sleeves were easily long enough and didn’t require extensions. But it ended up with more seams than I needed and because of this, my first tuilik was prone to leaks.

For my second tuilik, I used a sheet of breathable trilaminate material. Since my aim was to have a simple garment with as few seams as possible, I laid out the material so the fold would create seamless shoulders and arm tops. However, the material wasn’t wide enough for my long arms without adding little extensions. So as Christopher Cunningham says the first thing to do is ‘Sew the extensions onto the sleeves and flatten the seams’.

HEM OF TRILAMINATE TUILIK

At this stage you are making grand progress, but unfortunately most of the work involved in a tuilik is constructing the hood and you will spend most of the time sewing it together. It is not until the hood is assembled and sewed to the tuilik ‘body’ that you can really sprint to a finish.

The next set of instructions are: ‘Fold the two sides of the hood together, sew the curve along the top, and flatten that seam on the inside’. Then you are instructed to make the hood draw cord sleeve which is a tube sewn to the front of the hood to make a semi-water proof seal on your
CONSTRUCTING THE HOOD

In an attempt to make the cuffs more waterproof, I tried to tighten the cuff straps too tight and I ended up with a minor wrist strain. Don’t do that.

As an alternative to the wrist straps, I glued on a pair of mismatched dry suit cuffs that had been given to me. Doing this was fairly straightforward. First, I hunted for a plastic container that was just the right size to fit snugly onto the ends of my tuliik cuffs, holding them in shape. The tuliik cuffs were held in place with some electrical tape about an inch below the ends. This also acts as ‘masking tape’ for any stray glue. The drysuit seals were then fitted so they butted up against the top of the electrical tape line. They were then secured against the plastic container with another wrap of electrical tape over the drysuit seal at the position of the tuliik cuff top. I then folded the cuff back over itself to expose the areas to be glued and applied two coats of contact cement to the drysuit seal and the tuliik cuff. After letting it dry thoroughly, I carefully rolled the drysuit cuff down and there you are, waterproof cuffs.

Installing the drysuit cuffs just about doubled the price of making my tuliik and it is a bit of wrestle to put the sleeves on and take them off again. But, on the plus side, the first thing I do after I get into my kayak is to immerse my drysuit cuff down and attach the tuliik, to is to immerse my sleeves into the water to skooch out into deeper water. With the drysuit cuffs, I get to smile and carry on with dry undergarments.

At the end of the day, drysuit cuffs are probably a bit of an unnecessary extravagance for a tuliik made of fabric. If you really want a dry tuliik, then neoprene would be the material of choice. The tuisitsaq is much simpler and the instructions are straight forward. However, my back is inflexible and I couldn’t come close to a complete layback roll position. My F+1 measurement looked too short. I used artistic license to add about 6 extra inches so that my pattern looked more like the diagram on page 139.

This worked out well and should easily accommodate any likely improvements in my general flexibility.

Talking to Tony, the only other concern was interpreting the instructions
for making the shoulder straps. Chris Cunningham is suggesting a three point system with two adjustable clip buckles at the front which run through a v-shaped loop at the back of the spray skirt. I figured I would soon lose the free flowing strap while paddling, so I improvised by sewing the strap at the back. This worked well except the straps tend to slip off my shoulders in the most unattractive way. I think if I was to do it again, I would anchor the back ends separately on either side of the center so that the straps were crossed over at the back. I was using a regular sewing machine and assumed that it wouldn’t be able to cope with the heavy duty tape that I was using for the straps. So unlike the instructions, I sewed my tabs etc. on after I had completed the tuitsoq.

Pete and Tony cite Grant Glazer living on Waiheke Island, Auckland as a key figure in the future of Traditional kayaking and recommend visiting his website at http://home.clear.net.nz/pages/grantglazer/Kayak/index.html

Mark Hensel lives in Meriden, CT, Shawn Baker lives in Kalispell, MT.

Pete Notman alias “Pete The Pirate” lives in Wellington, New Zealand, and is a research diver for NIWA (National Institute of Water and Atmospheric research). He started white water paddling as a teenager and did a lot of sea kayaking in the early 80’s. Pete discovered the pleasures of homebuilding kayaks about 5 years ago and is fascinated by traditional kayaking techniques and equipment. You can email Pete at piratepete@clear.net.nz

Tony Calvert became interested in Greenland style boats through the Qajaq USA forum and is having a lot of fun learning the various Greenland competition rolls. He lives in Wellington, New Zealand and has been paddling for about a year. He considers himself to be a novice paddler. He has built two Chesapeake 16’s, a Cunningham SOF and is currently building a Sea Spirit Hybrid. Construction of a rolling SOF and a neoprene tuitik are planned for the future. You can email Tony at kayakconstruction@paradise.net.nz and visit his website at http://homepages.paradise.net.nz/acalvert

TUILIK PATTERN AN INTERNATIONAL COLLABRATION BETWEEN TONY CALVERT, SHAWN BAKER AND MARK HENSEL

\[ F = (A - B) \]
(Add 1.5" for seam)

\[ G = (D - E) \]

Min 3/8" chest and undergarments

Min of 1/4" of "Coating + 1" just above wrist gasket

1/2 distance of fingers up to fingers tip rounded back with arm pointed forward.

Note: May need to subtract 3" for drysuit wrist gasket

Gaskets and 'sticky' neoprene are attached AFTER the tuitik body has been sewn together!
Borrowing books from friends is a dangerous thing. There are two Greenland skin on frame kayaks being built in my home town at the moment and they both started from reading a borrowed copy of “Building the Greenland Kayak” by Chris Cunningham. I think I had the top frame completed before I bought my copy of the book.

I am a relative novice when it comes to kayaking. I had my first kayaking experience about two years ago; a three-day journey through the Marlborough Sounds in New Zealand. When I got back to civilization, I decided that I needed a couple of kayaks so my wife and I could go paddling together. My first kayak building project was building two Chesapeake CH16’s. After finishing them and paddling them for six months, I decided that I needed another project and thought a more responsive and less bulky day kayak would be best. I investigated building both a Baidarka and a Greenland SOF, and as I said, borrowing a book made the decision for me.

The process of building the kayak was straightforward and took around two months from the start to just about finished. I still have to fit the deck lines. Using the anthropometric measurements I have ended up with a kayak that is 17’ 9” long and 19.5” wide. The only problem I had during the building process was bending the ash ribs. Getting suitable bending stock in New Zealand is difficult. We have a native tree called southern beech that I will give a try for the next kayak. The majority of the kayak is made from Radiata pine which is similar to the yellow pine found in North America. Along with being a relative novice kayaker, I am a novice woodworker as well. The CH16’s were the first thing I had built in wood since leaving school and the SOF is a step up the woodworking evolution ladder. I never even knew what a mortise was let alone how to make one, but with a little patience I managed to make a bunch of square holes at the correct angle. The frame is a very simple, but effective structure. It reminds me of a Formula Ford chassis, of which I am a little more familiar with. I skinned the kayak in 8.5oz polyester and coated it with flooring polyurethane. Once again, another first as I have never sewn anything in my life before. It is very rewarding to go out to your garage and see a kayak that you have built yourself and paddling them is an even better reward.

My first paddle in the kayak was a little stressful. The initial stability seemed non-existent and I thought I was going to end up in the water every thirty seconds. I decided to try a couple of rolls just to get more comfortable with things and I was pleasantly surprised at how easy it rolled. Secondary stability is great, chest and back sculling is a breeze, and I have been able to do a few different types of rolls in it so far. With a New Zealand summer on the way, I am sure I will have the opportunity to get in a lot of practice.

We are extremely lucky in New Zealand, as we have a patron saint of Greenland kayakers; Saint Shawn. Most of you will know him as Shawn Baker. Shawn came to New Zealand for a holiday in March of this year and while he was here, he attended a kayak symposium and demonstrated a few Greenland techniques to an eager Kiwi contingent. As a result of the raised awareness that Shawn’s visit created, Grant Glazer formed the NZ Greenland Paddling group to promote Greenland paddling and kayak building in New Zealand. We are having our first get together on February 18-20 at Blue Lake in the central North Island.

There are a number of paddlers in New Zealand that use Greenland paddles but not that many Greenland SOF kayaks as far as I know. I am sure the number of kayaks will grow as Greenland techniques become more popular. Most of the Greenland paddle users have also built their own boats. These are mainly S&G and strippers,
with a few are Greenland style boats. I am fortunate that to live in Wellington where I have another fellow kayaker who uses a Greenland paddle. Pete Notman races with his Greenland paddle and is very proficient with it. We also attend pool sessions every Wednesday night to practice our Greenland rolling techniques. Having someone to diagnose problems from above the water is valuable when you are trying to figure out a new roll and, if we are stuck, we can ask Saint Shawn who comes back with solutions to all our problems.

Greenland kayaking is in its infancy in New Zealand, but with the enthusiastic bunch of paddlers we have now, it should not be long before the Greenland gospel spreads far and wide. I think half the battle is convincing people they are able to paddle with “that stick”. My wife borrowed my Greenland paddle about three months ago and now the only time I get to use it is when she is not paddling. So, after I put the deck lines on my kayak, finish the Gore-Tex tuilik my daughter and I are making (did I mention I can’t sew?), I will make another storm and regular paddle for myself. By the time I have finished those jobs, I am sure I will be looking for another project. I think a Baidarka would look good in my garage.

New Zealand is about as far away from Greenland as you can get, but as you can see, we know how to recognize a good thing when we see it and hundreds of years of refining kayaks and kayaking techniques are some things we should embrace.

* Aotearoa – Maori word for New Zealand meaning land of the long white cloud.

### To Soak or Not To Soak

**A Steam Bending Test**

By Brian Nystrom and Jay Babina

On the QAJAQ USA forum, the question came up about soaking or not soaking wood with the consensus of opinion being that soaking was not necessary. Brian and I went back and forth a bit on this and I decided to do some public testing to see how it worked out. Brian felt that presoaking wasn’t necessary and I felt it could only help and probably does.

We tried to be as scientific as we could about this test within reason. I cut up some (green) white oak and some 3 year old white oak that was previously used for ribs. The green stock was milled in early June. The old oak was laying in my yard exposed to the sun as well as partial shade and uncovered to the weather. We wanted to test some old wood in addition to freshly cut stock since the poster on the web was inquiring about some old stored wood. The wood was marked in pairs and half of it was soaked for 12 days before the Mystic Arctic Boat Gathering. The dry wood was stored inside.

We used Brian’s wallpaper steamer which had a hose that attached to a foam insulation steam box, 4 ft long with 4” x 5.5” of space inside. One end was sealed and one end had a door with a vent below it. This system produces plenty of steam. Steam time was 5-7 minutes.

The stock was cut to a thickness of a healthy 5/16”, and some thinner stock was also cut. The old oak was left to its sawn width of 1 1/8” and the green oak was 3/4”. No wood was sanded and the edges were left as ripped by the saw. Both Brian and I agreed that sanding the face and gently rounding the edges helps with the bending. Before we started steaming, pre-soakers were noticeably more pliable than the dry stock.

The tension mounted as the first presoaked piece of green stock came out of the steamer. It easily wrapped around the bending jig, which was a circle with a diameter of 4.5”, with almost no effort. Then the piece of dry wood came out and with a bit of pressure it duplicated the bend. We did 3 pairs of green wood and both the soaked and dry wood made the bends easily. What we noticed was that the pre-soaked wood bent more easily whereas the dry wood took more force to bend and needed to be bent more slowly. However, both groups achieved the bend with no fissures or cracking. But the presoaked pieces had tremendous spring back. If released shortly after bending, they wanted to uncurl back to almost straight whereas the dry wood held its shape much better.

You could re-bend the pre-soakers back to the curl with no further heating however. We used no backing band while bending the green wood, because it was cut a bit too thick for the holding slot in the jig. We pressed on the back side with our palms as we bent it.

The old wood was a different story. Both pre-soakers and dry wood had a rough time making the full circle bend. 100% of it fissured or cracked. The presoaked wood probably failed a little worse than the dry. Once the pre-soakers started to fissure, they would just rip because they were softer. The bend we were doing was more than 180 degrees with a 2.25” bend radius, so it was a tough test. Even the old wood would have made a kayak if we had to, particularly if the bend radius was larger. We just would have had many more failures than green stock. Plus... three years ago, that stock was used for a kayak and it bent like rubber - so there was nothing wrong with the wood grain.

**Conclusions:**

The difference between green stock and old wood is substantial. We both agreed that it was a draw between the pre-soakers and dry stock as far as achieving a bend. The trade-off was interesting to both of us. Pre-soakers bent with less effort but had a tendency to spring back. And dry
wood bent with a bit more force and time held its shape better. So, it’s your call. If you want to soak the wood, no harm will be done. Or if you don’t want to, just start steaming. But if at all possible, get some green stock for your ribs because that’s where the largest difference lies.

From a building perspective, the difference means that you either need to adapt your technique to the wood you use or vice-versa. For example:

With pre-soaked stock, your ribs will need to be held securely to shape while they cool and dry. This can be accomplished either by inserting them into the frame, clamping them to it or clamping them to a form. One caveat to installing ribs in the frame: if your keel stringer is already in place, it should be secured against upward pressure to prevent the ribs from changing shape.

Since dry stock retains its bent shape better, it would be the preferred choice for use with forms and particularly with an adjustable form. An article by Brian “Building an Adjustable Rib Bending Jig” is available on-line in the Summer 2004 MASIK. The ribs will come off the form(s) after a few minutes of cooling with little spring back and be ready to insert into the frame. Once in, their shape should remain stable.

Additionally, we both felt that the use of a bending strap would have helped reduce fissuring and breakage, particularly with older, air-dried stock. The two pieces that were bent using a backing strap didn’t fail. Our experience with using bending straps while building our own boats has shown better results than we saw when bending freehand in this test. We also felt that smoother stock with rounded edges would probably have improved the bending results, again based on experience outside of the test.

There are many variations that could have lead to interesting conclusions such as the steaming time between dry and soaked wood, or the amount of time the wood soaked. Maybe one group actually needed less or more time? We also tested only white oak, so other bending woods may react a bit differently. Brian’s experience with red oak has been that there’s not as much difference between green and older stock, but the basic conclusions of the test are still applicable. It may have to do more with the way the stock is dried and cut than with the species of the wood.

But for now, we’re still friends. Actually, this “wood torturing” was pretty good fun. Maybe we should make it an annual event!

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**Notes from the Regions**

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**FROM THE NORTHWEST**

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**THE GREAT LAKES AREA**

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**Kayak Events**

Find them and post them in The MASIK.

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Opposite Arm Rolls
Roll up on the right side using only the left arm
By Dubside

Anyone who experiments with different ways to roll a kayak sooner or later concludes that the thirty Greenland competition rolls are by no means an exhaustive list. Variations, adaptations, and innovations easily double that number. While many of these are of dubious value in real life situations others have genuine practical use. A category of rolls I have taken to calling “opposite arm” rolls provides the only means to recover from one uncommon, but possible, circumstance.

Consider the effect of a strong crosswind on an overturned kayak. Rolling up on the windward side becomes easier due to the righting action of the wind. Correspondingly rolling up on the lee side is hindered because the hull and torso must push into the wind. The stronger the wind, the more pronounced the effect. Therefore crosswinds dictate the necessity of learning to roll equally well on both sides if one wants to be fully prepared for all situations.

In almost the entire competition rolling repertoire, the arm that leaves the water last does most of the work. In other words if you roll up on the right side your right arm is most active while the left arm stays fairly passive. This is true whether the roll ends on the front or rear deck. The phenomenon is plainly apparent in hand and norsaq rolls. When coming up on the right side, an adept hand roller doesn’t need to use his of her left arm at all.

So what happens if a paddler, through dislocation, fracture, or some other peril, loses the use of the right arm and capsizes in a strong starboard beam (right side) wind? Attempts to roll up solely with the left arm via the armpit roll on the competition rolling list (paatip kallua tuermillugu illeinnarmik), or norsaq/hand rolls will be slammed back under by the opposing wind. The solution is to roll up on the right side using only the left arm. It can be done, and is what I refer to as an opposite arm roll, for lack of a better name.

The only competition move that comes close to the opposite arm concept is the cross-arm roll (tallit paarlatsilligit paateqarluni/masikkut). In this roll both hands are on the paddle, yet the arm on the shoulder that leaves the water first does all of the work. In other words, for a cross-arm roll that recovers on the left side, the right arm provides the key driving force on the paddle. You can perfect the cross-arm roll and better understand the opposite arm idea by doing the following exercises.

Set up for a cross-arm roll with the paddle on the right gunwale, right wrist over left wrist, right hand forward of the left hand. (You will be recovering on the left side of the kayak.) Now simply remove your left hand from the equation. Take it off the paddle and let it dangle at your side. It plays no active part in doing a cross-arm roll and only serves as an obstruction.

To simplify even further, try capsizing and recovering on the same side, in this case the left, holding the paddle perpendicular to the kayak the whole time. The right hand will hold the paddle mid-shaft centered over the cockpit with a blade extending out on each side of the kayak. As you capsize to the left, raise your right arm to keep the paddle above the surface and maintain the perpendicular orientation. When you come to rest upside down, slap the paddle downward so that one blade hits the water as the other pries against the hull. Apply hip snap and bring your torso forward over the paddle shaft as you come up. [For reference, please refer to the video clip on the Qajaq USA site at] http://www.qajaqusa.org/common_images/gp_opposite_arm.mpg

Properly executed, the left arm doesn’t have to do anything. Make sure the paddle strikes the water on the full face of the blade, not slicing in sideways. If your paddle has well defined shoulders you can hold it on the right blade’s shoulders with your right hand to index the blade orientation by feel.

The next step is to do a complete rotation capsizing to the right and coming up on the left. You will need to hold the paddle parallel to the kayak against the right gunwale until you’re upside down. Then set the paddle perpendicular after it surfaces on the far side, using only the right hand. This is an opposite arm roll with a paddle. When you can do it solidly, note that a cross-arm roll is nearly the same thing except that the intertwined second arm limits your mobility and the paddle cannot be raised all the way to the surface, so a bit more sweep helps.

Another way to do an opposite arm paddle roll is by ending on the back deck. The above exercise is the same except that you hip snap and layback after slapping the surface. This layback variation is probably the easiest way to accomplish the hand version of an opposite arm roll. For coming up on the right side without using
the right arm the left hand initially follows the approximate path of where the right hand would travel in a normal layback hand roll (assammik nerailaallugu). The left hand starts at about the left knee and sweeps in a wide arc centered around the right shoulder. As the torso exits the water the left arm comes across the chest, elbow straight, hand sweeping the surface, and in one continuous motion, the left arm swings up past the head and over to the left, functioning as the familiar counterweight by the end of its travel.

Overall, the left arm makes nearly a full rotation like a windmill. As in any well-executed layback roll, the head and shoulders finish flat on the after deck. The maneuver can be made easier by using a norsaq, and it is also possible to do versions that end in the forward position by modifying the arm motion.

It’s hard to imagine that at some point in the past, seal hunters didn’t develop and practice opposite arm rolls, yet I have not been able to determine what they called them, either in Greenlandic or an English equivalent. At the 2004 Qaqortoq competition, I showed the layback hand version of this roll to both Maligiaq Padilla and Hans Kleist-Thomassen, yet they were not familiar with it. For the record, I had no trouble doing it in Maligiaq’s rolling kayak while wearing a sealskin tuilik.

The complete family of opposite arm rolls contains six different versions: paddle, norsaq, and hand rolls, all done either laying back or finishing forward. In my experimentation the forward ending opposite arm hand roll is the trickiest. That entails immobilizing, say, the right arm, capsizing towards the left and coming up on the right side leaning forward using only the left arm. You are a true opposite arm master if you can consistently do this one. (I can’t.)

Oddly enough, these rolls don’t have to be learned to bombproof standards. An opposite arm roll only becomes necessary after a conventional one-armed roll fails. If the wind is hampering one side, it has to be helping on the other. Therefore those of us who can almost reliably do opposite arm rolls can take solace in the fact that should we ever need to use them in real life the wind will be lending assistance and making up for shortcomings in our technique.

To amend an old schoolyard axiom: “Almost” don’t count, except in horseshoes, hand grenades, and opposite arm rolls.

Photos were taken by Greg Stamer.
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