

# The MASIK

Quarterly Newsletter of QAJAQ USA  
The American Chapter of the Qaannat Kattuffiat



[www.qajaqusa.org](http://www.qajaqusa.org)

## Editor's Corner

Bobby Curtis

I'm back with my *paatit* again  
Out where a *qajaq* is a friend  
Where the sun shines down  
On a windy wavy sea  
I'm back with my *paatit* again

Please bear with me as I join the trend to use Greenlandic terms in the articles published in the MASIK. I find this trend very admirable and encourage more of it. Being a novice when it comes to the use of Greenlandic terms, I find two resources on the QAJAQ USA website useful in providing English translations for them. Roll Translations at [http://www.qajaqusa.org/QK/rolls/rolls\\_phonetic.html](http://www.qajaqusa.org/QK/rolls/rolls_phonetic.html), and the Greenland Kayaking Audio Glossary at [http://www.qajaqusa.org/Movies/audio\\_glossary.html](http://www.qajaqusa.org/Movies/audio_glossary.html). Greenlandic terms are italicized in the MASIK.

Recently, I did some paddling in windy conditions and also executed a few rolls, though rather poorly. This experience has convinced me that that my heart is fixed, and the stitch & glue work on my chest bone has finally cured. I'm very I grateful for this.

I haven't paddled this winter, but from what I can gather, a lot more people have been taking the plunge. Can the Montreal Madness be spreading? It's been a long time since I went swimming in 40°F but I remember very well its numbing effect. Maybe I should have had on a pair of the neoprene gloves described in this issue.

Here in Connecticut the vegetation is turning green and the water is warming up, conditions to me that are most welcome.

At the present time I'm more inclined to contemplate the value of the article in this issue on cold weather paddling rather than experiencing it personally. My winter was spent making a new wooden kayak. I haven't made a traditional Skin On Frame qajaq and yet, I keep telling myself it's about time I did. But, for now, I'm inclined toward plywood, cedar, fiberglass, and epoxy. The East Greenland SOF qajaq and the rib bending jig described in this issue are great incentives for getting started on one though.

The MASIK has received some feedback from our readers, and want to share it with you in this issue. So far, it's all been good. I very much appreciate hearing from the readers. If any of the material in the MASIK has enhanced your traditional kayaking experiences, please let us know.

Bobby

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## 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.

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## My Minganie Winter

### Exploring the sea ice

By Valerie Dillon



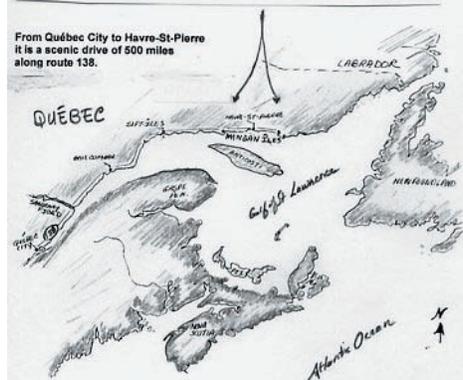
HIGH TIDE ALONG THE ISLAND'S ICE-DRAPED CLIFFS

The thermometer reads minus 10° F. A layer of ice covers the bay. In a few hours, as the sun shines higher and the tide drops, leads will open and hundreds of eiders will gather in the pools. Gray seals may haul out onto the thicker rafts of ice and bask in the sun. Farther off shore, the harp seals are having their babies. There is no paddling here today, maybe tomorrow. The forecast hints that a warm front will be moving through the region.

Some folks may think it is strange to head north for the winter. Perhaps you too wonder about our sanity. Many years ago, my husband Douglas and I accepted an invitation to experience winter in the Minganie Region of Quebec (see map insert of the Gulf of St. Lawrence). Our curiosity continues to be rewarded each season!

### REFERENCE MAP

Minganie Region stretches 100km along the north shore of the Gulf of St. Lawrence between Longue-Pointe-de-Mingan and Natashquan. Includes over 900 islands.



There is so much to tell you about this winter wonderland. You'll pardon my pun when I say this collage of photos is only the "tip of the iceberg". Sometimes

I am fortunate to share adventures with Doug and our buddies Andrew Coutts and Nicolas Bertrand. You may notice them in, or credited for, the photos. Maybe you'll be tempted to join fellow "loup du marin noir" (black sea wolf - so kick named for the dark silhouette of tuilik garbed in a skinny kayak) in the isles of Mingan.

One thing that can be said about winter here is that it is white. There are an amazing variety of shades and each tells a story about the conditions - fresh snow, new ice freezing, or metamorphosed crystals. I guess that is why the Inuit have more than thirty words to say snow!

### VALERIE RETURNS FROM AN ICY PADDLE.



When I paddle among the sea ice, my thoughts drift back to the days when kayaks carried Inuit hunters tracking seal and walrus in this bay. The names of bays, rivers and islands remind folks of the heritage. Cabot, Champlain and Joliet were among the explorers who helped map the region. Names such as Pointe aux Morts tell of the struggle between the Innu (Montagnais) and Inuit. Basque whalers once frequented the region. By the 1850s Acadian families established the fishing village of Havre-St-Pierre on Pointe aux Esquimaux. More

recent politics transferred the land from Labrador to Quebec. Today most of the archipelago along the north shore of the Gulf of St. Lawrence is managed by Parks Canada. The islands and rugged shore are known for summer ecotourism. Outdoor enthusiasts can also find plenty of opportunities in the winter. Among those adventures is kayaking.

This winter (2004) was unique in that Baie Placide Vigneau did not freeze solid. Locals mentioned that it was the first time in about twenty years they couldn't walk over to the islands. For me it was a grand opportunity to observe the various stages of the sea freezing. Better yet, it was a chance to paddle throughout the winter. We certainly appreciated the ease with which our Greenland style kayaks plied the winter sea.

Dressed in drysuits & neoprene, Douglas, Andrew and I welcomed in the New Year with a paddle. The sea was "sort of fluid" after the recent tempest had churned up waves. Ice was starting to build up on the shore. As the sun set, the air temperature quickly dropped and the cooled sea surface started to crystallize. I couldn't resist donning my dive mask to observe the ice crystals suspended and coalescing. Then the 28° F seawater does feel warmer than the air! We'll never forget the golden reflection off the cliffs as we stroked towards the flaming western sky. Venus guided us home. Fortunately the low tide allowed easy, though slippery access to the dark shore.

#### FINDING THE NORTHWEST PASSAGE ANDREW LEADS THE WAY



It's tough going when the air temps are subzero!! I usually wait until its above 10° F to launch. So, during a thaw - it is ready, set and go for a paddle. While I was out, those gentle north winds which had pushed ice away from the beach veered westerly and picked up some. The sea ice slowly migrated back towards my shore. I enjoyed the tranquility of paddling along the sparkling sea and the warmth

of the sun. It was a good thing I wore my "sun hat" over the neoprene! As I explored the ice fringe, a couple of gray seals checked me out. I came across some elastic ice that undulated when I bounced it. Eventually I relaxed and stretched out with my favorite yoga pose - floating in the balance brace position was a snap in the saline waters. And keeping with tradition, I even practiced a few rolls before heading in. That was two hours of pure joy!!

Tides and winds are always a factor when paddling in the archipel. The winter adds the dimension of shifting ice and new freezing as the temperature drops. So it is very important to keep a perspective of where you are and what's happening around you. As beautiful and intriguing as it is, the ability to call for assistance is not to be counted on. Paddlers entering these waters are on their own. Assessing conditions and anticipating changes is part of the risk assessment before and during the paddle.

For short paddles, I tend to favor sliding in near low tide. That allows a few hours of coastal cruising before any challenging haul out. Some sections of the shoreline develop nearly vertical walls. It can be fun to seal launch from those perches. Just be sure you know what's below! Solid bracing capabilities are a must or you'll be exercising your roll.

#### VALERIE PERCHED TO SEAL LAUNCH



Each day, the coast morphs. Storms can pound apart frozen sections and toss huge layers of ice chunks upon the shore. Tides often redecorate and rearrange the ice creations. New ice pushed up onto shore has a blue glow. Sand sprayed or fresh snow quickly changes the colors. Wind blown snow forms dunes over it all.

It is quite something to watch pancake polygons grow. The best times seem to be in the mornings when the rising sun reflects off the glistening sea. Some days the sea looks like a mirror in a smoky haze. If it stays cold (near 0° F or colder), the freezing continues. The incoming tide adds more water. I observed the

## EVENTS CALENDAR

### 2004 KAYAKING EVENTS

For more information on events please visit <http://www.qajaqusa.org/QUSA/events.html>

### SSTIKS 2004

#### South South Traditional Inuit Kayak Symposium

"A weekend educational and cultural experience featuring the top US Greenland-style paddlers".

Qajaq USA Event

**When:** June 11-13, 2004

**Where:** Twanoh State Park  
Belfair, Washington

**Contact:** Mike Hanks

**E-mail:** [mike@qajaqusa.org](mailto:mike@qajaqusa.org)

**Web:** [www.qajaqpnw.org](http://www.qajaqpnw.org)

### MEET AT THE BEACH

A gathering of kayak builders. There is everything from very traditional skin-on-frame Greenland style kayaks to innovative new skin-on-frame hybrids, as well as strip-built and stitch-and-glue.

**When:** June 19, 2004

**Where:** Bluff Point State Park  
Groton, Connecticut

**Web:** [kayakforum.com/meet.html](http://kayakforum.com/meet.html)

### GREENLAND NATIONAL KAYAKING CHAMPIONSHIP

The Greenland Kayaking Association welcomes kayakers from all countries and of all skill levels to participate in this event. Please join your fellow Qajaq USA members in this exciting and educational contest in Greenland.

Qaannat Kattaffiat Event

**When:** July 8-14, 2004

**Where:** Qaportoq, South Greenland

**Web:** <http://www.qajaqusa.org/QK/QU2004%20Program.htm>

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# QAJAQ USA

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forming ice pushed, and then curling at the rims. When the sea is in this early stage of freezing, the crystals rub against one another making a hissing sound. Soon there is a conveyor of ice peeling off and pushing up against the shore or making pressure ridges.

March 11<sup>th</sup> brought a unique opportunity - just too cool to pass up - for the curious and us "want to be" arctic explorers. Pack ice drifted into the bay overnight. This ice was not the regular shore ice or bay ice. It came from the break up of the pack ice in the Gulf of St. Lawrence. We had a warm spell and just the right conditions of wind and tide to move some of the ice into the open bay. Hundreds of birds took advantage of the pools and ice rafts. I heard that the baby harp seal were now taking to the water.

### EXPLORING THE PACK ICE



By late afternoon, the winds had dropped and the sea beckoned us to come and visit. The vista was enchanting and something to be cautious about. From what I could see, some of the ice rafts were 3-4 feet thick (and I understand further out they were more than 6 feet thick). Most of the ragged edges we passed by were less than 2 feet thick. A couple of small sections grounded on the offshore sand bar later re-floated and then circulated around the bay for a few days.

Most interesting was maneuvering through the maze of leads and testing the various states of freezing conditions. We noticed snow sculptures on the ice floes. Upon closer look, it was evident that pushing forces had plowed and sheared sections of ice sheets forming pressure ridges. Healed fracture lines were also present. Some snowy ice seemed to glow a pale blue, just like the ice along shore. Here was more evidence that freezing seawater rejects the salts as ice forms. We even found freshwater lenses on those ice sheets.

Doug and Andrew tempted fate and ran-up and over ice rafts. The contest would last until the kayaker was either

"king of the hill" or the raft broke up. It was possible to ease onto the flat ice sheets and hand-walk slide the kayak. Andrew had perfected some of his techniques of traversing the ice during his days as an ice canoe racer crossing the St. Lawrence River at Quebec City.

### ANDREW SCOOTs ACROSS THE ICE



As the sun dropped lower onto the horizon, a rosy light reflected off the smooth surfaces. Sometimes it was difficult to discern the new freezing water from the solid ice. A mosaic of crystals which had melted and re-crystallized into larger crystals marked leads that had closed. We passed through what the locals refer to as "maugan". That molasses like ice sludge is common on the cooled surface of the sea. You might know the ice as frazil (suspended crystals below the surface) or the next step in freezing, grease (when crystals coagulate forming scum strong enough to support a bird, often milky looking and will undulate as a small wave passes). When twilight fell, it was time to head back into shore or risk being frozen in the ice...

We are glad we went then because by dawn the magical scene was all but gone. Winter returned, depositing 25 cm of new white snow in a gale which drove the storm surge high on shore. Those waves were littered with ice chunks and logs dislodged from the shore.

Towards the end of winter we had some rather large air temperature swings. Overnight chill (minus 10° F) and calm formed a thin crust of ice on the bay. The icy coat was too thick to paddle through and only strong enough for an eider to sit on. By noon, things were melting. Leads opened and soon the bay was blue and nearly ice free. Light winds rippled the water surface and pushed around the remnant ice floes. The high tides heaved blocks of ice along the shore. Some of it glowed pale blue. That was until snow flakes changed the scene to white on white. All very beautiful! We checked

*Continued on page 6.*

# Qajaq Talk

Greg Stamer

## An “event”-full Summer

It wasn't very many years ago that you would have been hard-pressed to find a “Greenland-style” kayaking event in the United States and Canada. Information was not easy to find and it was quite difficult to meet other kayakers interested in Greenland-style kayaking.

The Delmarva retreat, created by Charlie and Cindy Cole, and now organized by Qajaq USA board member Robin Snow, was one of the first events in the United States to “go Greenland”. As Greenland-style kayaking continues to increase in popularity, new events are springing up regularly. These events range from multi-day symposia with guest speakers and many instructors, to casual and informal “Greenland-days”.

Qajaq USA events feature instruction based on the principle of “mentoring” rather than certification. This models the informal but highly effective manner in which kayak instruction is generally applied in Greenland. At the training camps in Greenland excellent kayakers are brought together with willing students. A flexible agenda coupled with ample time to observe, experiment, practice, ask questions and “play” can open new doors both for students and instructors. Mentoring

also acknowledges that we still have much to learn from our Greenland friends. We need to keep our minds open to new information, ideas and techniques. It is my belief that prematurely codifying and “certifying” Greenland-style kayaking, especially when based on incomplete or incorrect information, can do much more harm than good.

Qaannat Kattuffiat (the Greenland Kayaking Association), wishes for all Qajaq USA members to know that a delegation from Qaannat Kattuffiat, including president Jenseeraq Amundsen (“Jens”) and kayaking champion Maligiaq Padilla, will be in Montreal, July 30th to August 8th, 2004 for the [World Festival of Traditional Games and Sports](#). Jens is very much looking forward to meeting many members of Qajaq USA and the North American kayaking community. Please attend if you are able, and make the Greenlanders welcome by showing your support!

For information on events, please visit the Qajaq USA Commercial and Events forum at [http://www.qajaqusa.org/cgi-bin/GreenlandCommercialForum\\_config.pl/](http://www.qajaqusa.org/cgi-bin/GreenlandCommercialForum_config.pl/). Also visit the Qajaq USA events calendar at <http://www.qajaqusa.org/QUSA/events.html>.

### EVENTS CALENDAR cont.

#### GAMES OF THE WORLD

##### “World Festival of Traditional Games and Sports”

A non-commercial fest for traditional and native sport. It is expected that there will be over 1000 athletes at the Games and admission is free. A delegation from Qaannat Kattuffiat, including president Jenseeraq Amundsen and champion Maligiaq Padilla will be on hand to demonstrate Greenlandic rolling techniques, qajaq building and more.

Qaannat Kattuffiat Representation

**When:** July 30 - August 8, 2004  
**Where:** Parc Jean-Drapeau  
(Located in the middle of the St. Lawrence River, just 10 minutes from downtown Montreal.)

**Web:** [www.jeuxdumonde.ca/](http://www.jeuxdumonde.ca/)

#### QAJAQC TRAINING CAMP '04

Instruction Geared for Traditional “Greenland style” Paddling. Featured Instructors: Greg Stamer (more to be announced). Paddlemaking by Chuck Holst. Food & Lodging Available Onsite. Attendance is limited to 50 please reserve early!

Qajaq USA Event

**When:** August 27-29, 2004  
**Where:** Camp Lookout on Lower Herring Lake and Lake Michigan south of Frankfort, Michigan.  
**Web:** [www.waterholic.net/qajaqc](http://www.waterholic.net/qajaqc)

#### NATIVE WATERCRAFT & TRADITIONAL SKILLS GATHERING

Though the event includes a “holistic” approach to traditional skills, there will be an emphasis on native watercraft of the northern latitudes (and perhaps some dugout canoes) Other activities include fire by friction, flint knapping, shelter building, tracking, archery, and more.

Qajaq USA Event

**When:** September 3-5, 2004  
**Where:** Bad River Indian Reservation, Northern Wisconsin, on the remote shores of Lake Superior.  
**Web:** [nativeways.tripod.com/id24.htm](http://nativeways.tripod.com/id24.htm)

#### DELMARVA RETREAT 2004

One of the first all-Greenland events in the United States and the best known event of its type. This event is also known for bringing in guest instructors from Greenland.

Qajaq USA Event

**When:** October 1-3, 2004  
**Where:** Camp Arrowhead  
Rehoboth Bay  
Lewes, Delaware  
**Contact:** Robin Snow  
**Web:** [www.delmarvaretreat.com](http://www.delmarvaretreat.com)

the access and decided it was a go. The guys had just finished their new kayaks and really looked forward to playing in the bay. What a way to celebrate the first day of Spring!

Soon the ice drapes along the cliffs will be gone. The Gulf will welcome back the migrating great blue whales and beluga. Perhaps the Labrador Current may even direct a few icebergs this way. Spring run off will flush the rivers, adding nutrients to the sea. And the islands will again come alive with nesting sea birds (including my favorite, the colorful puffins).

My advice to enjoy winter paddling is to stay alert, fueled and hydrated. Your best friend is common sense. Remember, check your gear and always keep safety in mind.

### Dressing For Success

Without exception, we honored our tradition of practicing techniques some time before landing. That helped us to keep our skills sharp, just in case of a spill into the frigid waters. The first couple of dips are usually fine just the way we are dressed for the outing.

We wore a 2mm neoprene hood under our GORE-TEX® tuilik. Keeping the head warm and dry helps your stamina. Under the drysuit was a layer of insulating fleece that allowed moisture to wick away from the skin. Your core is important to protect in order to reduce the potential of cold shock. One of my comfort suggestions – happy feet is a happy paddler – is to layer a warm wicking sock under a GORE-TEX® liner, which then goes into the attached footies of the drysuit. I prefer to also wear a light neoprene bootie. The guys find that additional footwear is too confining in their kayak. Just be sure that nothing is constricted or you will get cold. The guys preferred to use a 2mm neoprene mitt for their hands. Doug made an extra long

version which minimizes water slopping in as they paddled, with no pressure points on the hand, and are easy to drain. Since I like to take pictures and need to keep some fingers available, I usually wear a neoprene gloves with a liner. If it gets windy, I add nylon pogies to help reduce the chill. Then it is just a matter of keeping things moving – circulate the blood, but not the water!

My other cold water tip is to prevent cold from reaching the inner ear – for that I add a dab of Vaseline to a cotton or paper wad which is inserted into the ear channel. Sometimes I rub on a thin layer of Vaseline on my face (I am not sure how that would suit “a hairy face”, but mine would feel great, as if I had a cleansing massage). A word of warning - beware and very careful - not to get any of that grease on the drysuit. The latex gaskets are susceptible to disintegration from petroleum product.

This year I tested a full face mask of fleece with a neoprene fuzz section by the mouth-nose. It worked well. I could roll around and then paddle and still be comfortable in modest winds and air temps between 10° and 20° F. I wore it over the tuilik just in case I wanted a quick retreat from the garment. If it was over the 2mm neoprene hood yet under the tuilik, it might stay a bit drier. Alas, I turned it over to my hubby for his land adventures to better protect his face from frost nip. So I never tried the alternatives.

Because the cold changes properties of water – aka freezes – some equipment needs to be treated a little different in those conditions. For example, latex gaskets get stiff if left to the elements. So consider getting dressed some place warm or you may need to warm up the material before it will stretch. Plastic also becomes stiff and brittle. Note that plastic type bags do not close well. Fabric dry bags work much better. I still recommend double bagging. Bungee is not reliable

to keep items stored on deck. Remember that icy coating will affect your grip. And beware that zippers may also ice up. One nice thing about rolling around is that the water is warm enough to keep zippers and buckles functional. Just keep in mind that the very cold air will freeze them, so “undo” quickly after you land. I learned that lesson early on when I had to thaw out before I could change! On the other hand, you could wait until the air temp is above 32° F.

### A Dangerous Activity

Cold weather paddling is a dangerous activity.

Throughout this article I commented about recognizing hazards and assessing risks. First, wet exit is not a viable option in these cold winter seas. A few other considerations – getting trapped in or under the ice, hypothermia, frostbite, cold saps energy and can lead to confusion, numbing effects coordination, and sudden immersions may cause cold shock. These conditions are life-threatening. Ultimately each kayaker is responsible for his/her safety. Three essentials to minimizing risks are

- 1- Dress appropriately and use the correct & working equipment.
- 2- Have reliable skill sets, practiced in the conditions you are paddling.
- 3- Knowledge of the environment (including recognizing & dealing with hazards).

Risk management must be based on good judgment. As with any time you paddle, checkpoint your status – physical & mental – are you ready for the fun or challenges?

More pictures can be seen at Valerie's photo album and slide show on the web. <http://www.wmcka.org/gallery/Minganie-Winter-Paddling>

Photos by Valerie Dillon, Nicolas Bertrand, and Andrew Coutts.

*Valerie N. Dillon*

*Paddling has been part of my life for over thirty years. I learned to appreciate the grace and power of Greenland style kayaking in the early 90s.*

*I trained as an earth scientist and also worked in disaster recovery. I enjoy teaching, sharing experiences in nature, and serving as a citizen scientist for the Illinois River Watch monitoring program.*

*My passion is traditional paddling. This led me to the joy of coaching, kayak-camping to explore an area, and trying various kayaks & paddles! Recently, I completed the program to become an ACA certified Coastal Kayaking Instructor and am now pursuing traditional endorsement. I am active with Chicago Area Sea Kayakers (CASKA), Prairie Coast Paddlers (PCP), West Michigan Coastal Kayakers (WMCKA), and am a new member of QAJAQ USA.*

*During the winter and summer, you can find me on, in or near the waters of the north shore of the Gulf of St. Lawrence. Fall and spring, the Great Lakes are my home*



# Self-Built Traditional Style Boats

## A Regular MASIK Feature

### An East Greenland Kayak

#### My first boat building experience

By Rich Weise

The idea of building an East Greenland kayak came from an article Harvey Golden wrote in the June 2000 SEA-KAYAKER.

The original kayak was collected by Dr Tinbergen at [Ammassalik](#), Greenland between 1932-1933, and is now on display in the popular scientific museum in the Netherlands, Museon in The Hague, (Its catalog number is 48057)

I decided to make a kayak based on the original because I liked the lines, and the overall size fit my wishes.

Since this was my first boat building experience, it was necessary to consult the popular building books in order to gain insight into methods and construction techniques. [The Greenland Kayaking Forum](#) also provided a huge amount of help and encouragement. The ribs and coaming are ash, the gunwales WRC, the masik is mahogany and the rest is soft white wood. I retained the 6" depth-to-sheer, but I deviated from the original by making the beam 1" wider and the depth-overall 1 1/2" greater. I also used 25 vs 34 degrees of gunwale flare and a chine breadth of 17" vs 13".

#### SHRINK WRAP TEST



This 30lb, 19 1/2' long by 20" wide kayak was completed in May of



2003 and has performed better than expected. Over the past summer and fall it has covered almost 300 miles on 28 trips. The longest was a 32 miler around Manhattan, which was more fun than on previous trips with a Nordkapp or an Anas Acuta, but with the same degree of discomfort. After a few miles in rear quartering winds of around 20 mph with 3'-4' swells and spilling waves the sweep strokes necessary to hold a course become tiring. Other than that I can find no other negative handling issues. Occasional submergence of the complete foredeck is somewhat alarming, but so far has not required frantic paddling to recover. On a couple occasions, forward motion was stalled because of the bow burying. This feels like driving into deep sand. But the hull quickly rises and you are paddling again. On the plus side it turns easily into 25 mph winds.

At some point I want to take the skin off, install a lower 3" wide masik, reduce the chine width to 15" and use a traditional stitching technique for attaching the skin. I

will use 8oz nylon fabric again and inexpensive oil-based polyurethane floor varnish. By reducing the chine breadth to 15" or less, the four-panel hull will become a six-panel hull because the lower edge of the gunwales will then be visible thru the skin. However, this isn't all bad because there will also be less sand and pebbles captured behind the gunwales. This minor overhaul is only in case I don't see a particularly appealing kayak to build in one of the books about skin boats by John Heath and Harvey Golden that are to be published in the near future!

More photos of this kayak can be found at Rich's on line album <http://community.webshots.com/user/richweise>.

*Rich Weise is in his 18th year of kayaking and uses Greenland paddles, having sold his Euros 8 years ago. He tries to get out and paddle every week of the year and is slowly (not by choice) improving his rolling and paddling skills. He has always loved the water and is a lifelong resident of Long Island, NY.*

# Building an Adjustable Rib Bending Jig

## An alternative to free-hand bending

By Brian Nystrom

### The Problem

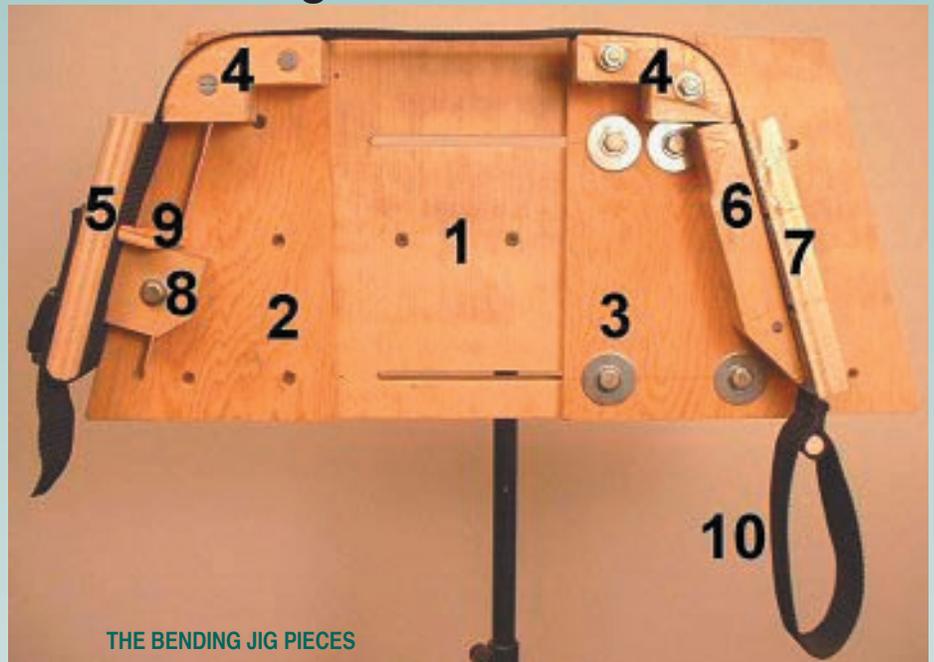
After building a couple of skin boats, I was not satisfied with the rib shape I obtained by free-hand bending. The corners of the ribs came out very rounded, which required the chine stringers to be placed close together in order to create clearance between the ribs and the skin. On my 20" wide boats, this resulted in chines only 13.5" apart, which had two effects I didn't like. First and foremost, it reduced the primary stability. Second, it created a "multi-chine" shape to the hull, which I found visually unappealing. Taller chine stringers were one possible answer, but that would make the boat heavier.

For my third boat, I decided to come up with a solution that would give me more control over the shape of the ribs. I was intrigued by Mark Starr's method of making forms for the ribs, which would produce the desired shape. However, I wasn't sure if I was going to like the design of the boat once it was finished (are we ever?), so the idea of making a set of forms that I might not use again did not seem like the ideal way for me to go. The wheels started turning and the next thing I knew, the basic design for an adjustable jig was swimming around in my head.

### The Project

First off, let me state that this was strictly a scrap-bin project. There was no specific reason for many of the basic dimensions of the jig; it was simply a matter of what materials I had in my scrap wood bins. I made no detailed drawings before I started piecing it together, but the accompanying photos should provide sufficient detail to make the construction easy. Much like with a skin boat, many of the pieces were cut to fit and the design evolved during construction and testing. As shown, the jig worked fine for a 19" beam boat with a 6½" depth to sheer. It would work for deeper boats that are an inch or so wider, but if your intended shape is wider than mine, I would suggest making the jig wider as well.

The jig is designed to be somewhat modular, so that radius blocks of various radii can be used to achieve the desired rib shape. The jig shown uses 1¾" radius blocks, which is probably as tight of a



THE BENDING JIG PIECES

bend as anyone might want to use. I may increase the radius somewhat on future projects.

I designed the jig around the use of ¼" x 1" rib stock, but as-is, it will accommodate rib widths up to 1½". If you are using thinner or thicker stock, you'll need to adjust the positioning of some of the components. This will become apparent as we get into the building process.

### What you need to build one

The jig can be constructed entirely of ½" or ¾" plywood. For parts that need to be thicker, simply stack 2-3 layers. My jig is built with a combination of ¾" nominal (11/16" actual) and 3/8" nominal (5/16" actual) plywood, not because it's the optimum, but because I had it on-hand. A block of 2 x 6 on the back allows the jig to be clamped in a Workmate, bench vice or to the edge of a bench. Laminated plywood would also work.

The jig is assembled with ¼"-20 bolts and drywall screws, not exactly state of the art in woodworking, but effective. The actual lengths of the fasteners will vary with the thickness of the material you use to build the jig, so you will need to determine them during assembly.

The backing strap is a 1 ½" nylon luggage strap. If you happen to have an old leather belt kicking around, it will work fine too. I made the strap adjustable,

which is convenient, but not absolutely necessary.

### The Pieces

**1. The back plate** is 20" wide by 9" tall. If your boat is going to be wider than 19" in beam, add an inch to the jig width for every inch over 19". The sides of the jig taper toward the top at a 17-degree angle, which matches the angle of the gunwales. This jig angle should work for gunwale angles up to 20 degrees or so, since the ribs spring back somewhat after bending.

There are three ¼" slots routed into the back plate, one for the adjustable stop and two parallel slots for the sliding right-side jig plate. The end stop slot is 1" in from the left edge and runs from within 1" of the bottom to within 2" of the top. As long as the slot is long enough to accommodate the range of length of your ribs, the length of the slot is not critical.

The bottom slot for the sliding jig plate is 1" up from the bottom edge. On my jig, the upper slot is 2½" down from the top edge, but positioning it 3-3½" down would better accommodate larger radius blocks. On my jig, the slots are routed to within 1" of the left jig plate and end 1½" from the right edge of the back plate.

**2. The fixed (left side) jig plate** is 6" wide at the bottom and tapers to match the side of the back plate. A matching slot for the adjustable stop is routed into it and is

screwed directly to the back plate. After using the jig, I would suggest reducing the width of the jig plates (both sides) to 5½" or even less, in order to make it possible to produce the narrow ribs near the bow and stern of the kayak. The limitation here is having enough room for the radius blocks at the top of the jig plates.

**3. The sliding (right side) jig plate** is the same size and shape as the fixed jig plate. There are four ¼" holes drilled in the plate, spaced to match the spacing of the slots in the back plate. These are for the bolts that secure the plate. The top really only needs one bolt, so you can eliminate one of the upper bolts if you wish. This three-bolt arrangement will work better if you have chosen to make the jig plates narrower than I did.

**4. The radius blocks** are identical pieces built up to a thickness of 1½". They consist of the curved portion, plus a small flat area at the top for clamping. The only difference between the left and right blocks is the manner in which they are attached to the jig. The left side block is bolted through fixed jig plate and back plate. The right side block is attached to the sliding jig plate only with flathead screws from the back side.

The blocks on the jig are 3 ½" wide x 1 ¾" tall on the radius end and 1" tall in the clamping area. The left radius block is mounted 5/16" in from the outside edge (the thickness of a rib plus the bending strap) in from the outside edge and ¼" down from the top edge of the fixed jig plate. The right radius block is mounted ¼" in and ¼" down from the edges of the sliding jig plate.

**5. The left side outer support block** supports the left end of the rib against the force of bending. It is screwed directly into the back plate and can be glued for extra strength. The dimensions of the one shown are 2 ½" x 6" x ¾". The bottom end is rounded to allow the bending strap to wrap smoothly around it.

**6. The right side inner clamping block** is mounted ¼" in from the outside edge of the sliding jig plate, using flathead screws, inserted from the back side and countersunk to sit flush with the surface of the jig plate, so it can slide smoothly. While the block shown has tapers to clear the adjusting bolts and washers, exercising a bit of care in the bolt hole placement will eliminate the need to do this and a rectangular piece would suffice. The

dimensions of the block in the picture are 1 ½" x 6" x 1", though again, these dimensions are flexible. I would suggest gluing this block in place in addition to using screws, for added strength.

**7. The right side outer clamping block** insures that the rib will be straight and flat on the end. The one shown is 1 ½" x 6" x ¾". It is attached to the bending strap. I chose to fix it in place just above the grab loop in the bending strap and adjust the strap length to position the clamping block correctly. An alternative would be to fix the other end and allow the clamping block to slide on the strap. The downside to this is that the position of the grab loop will vary, depending on the settings on the jig.

**8. The adjustable stop** sets the length of the left leg of the rib. It's a simple 2" x 2" x ¾" block with a hole to accept a ¼-20 bolt. The hole is drilled 1/16" off center in one dimension, in order to create clearance for the bending strap.

**9. The rib hook** is an optional piece. I use my jig mounted horizontally in a Workmate and found that I occasionally had a rib fall out of the jig while fooling with the bending strap. The hook captures the end of the rib and prevents this from happening. If the jig is used in a vertical position, the hook is unnecessary.

**10. The bending strap** supports the outside of the rib during bending and is critical to reducing splitting and feathering. The strap shown is 1 ½" x 1/16" nylon webbing that started out 54" long. I sewed a 6" grab loop in one end, plus a small secondary loop inside the main one. This secondary loop accepts a short dowel (in this case, from the handle of a foam paintbrush) which helps to keep the main loop open, making it easier to insert your hand in a hurry. The other end attaches to a ladderlock buckle that is mounted to the left side outer support block with webbing loop and screws. The buckle must be positioned far enough back from the edge of the support block to allow the strap to lock securely. In this case, the end of the tab on the buckle is even with the end of the support block. Setting it farther back will work as well or better, but I made my strap a bit short and had to move the buckle. I've added some extra length into the dimension given above, so you won't have that problem.

**11. The mounting block**



is used to secure the jig for use. Mine is a 12" long chunk of 2 x 6 mounted horizontally, but the configuration you use should be based on the method you plan to use to secure the jig. The system shown works for clamping it horizontally in a Workmate, or a bench vice, or vertically on the edge of a bench.

Assembling the Jig

Once you have cut out the pieces and routed the necessary slots, the jig goes together pretty quickly.

1. Screw the mounting block to the back plate using 3" flathead wood screws, countersunk.
2. Screw the left side outer support block to the back plate with wood screws. It can be glued for extra strength, if desired.
3. Screw the fixed (left side) jig plate to the back plate making sure that the slots for the adjustable stop line up.
4. Attach the left radius block to the back plate assembly with ¼-20 bolts or flathead screws, secured with nuts and lockwashers. Make sure to space it the correct distance from the top and outside edges of the fixed jig plate.
5. Attach the right radius block to the sliding (right side) jig plate using ¼-20 flathead screws inserted from the back and secured with nuts and lockwashers. Make sure to space it the correct distance from the top and outside edges of the jig plate.
6. Attach the right side inner clamping block to the sliding jig plate using flathead wood screws inserted from the back and countersunk. Make sure is set back from the outer edge by the proper distance (in this case ¼"). It can be glued for extra strength, if desired.
7. Attach the sliding jig plate assembly to the back plate assembly using ¼-

20 bolts through the slots in the back plate. Use fender washers under the bolt heads and under the wingnuts on the back.

8. Screw the (optional) rib hook to the adjustable stop, then install the assembly in its slot, using a 1/4-20 bolt with a fender washer and wingnut on the back side.
9. Attach the ladderlock buckle to the left side outer support block by driving screws through the webbing loop.
10. Attach the right side outer clamping block to the bending strap. I used clear packing tape for this.
11. Insert the short dowel into the secondary loop in the bending strap and then thread the strap around the jig and through the ladderlock buckle.

Your rib bending jig is now assembled!  
Kick back and have a cold one!

### Prepping The Jig

Before you can use the jig, there are three things you need to do.

1. Cover the wood surfaces that will contact the rib stock with clear packing tape to prevent water absorption and swelling.
2. Mark the corners of the jig. This is done by laying a straightedge across the top of the radius blocks and drawing lines underneath it at the corners of the jig. Insert a piece of rib stock into the left side of the jig and draw an intersecting line on the right side. Next, hold the piece of rib stock against the right side inner clamping block and radius block and draw an intersecting line on the left side. These intersection marks will be used in setting the jig and trimming ribs after bending.
3. Round off the top outer corners of the jig plates. This prevents the bending strap from snagging on them when bending a rib.

*Brian Nystrom is a resident of Nashua, New Hampshire who is often seen prowling the New England coastline in skinny boats. Bit by the "kayak bug" in '99, he became a convert to Greenland style a year later. After owning and paddling several (read: "way too many") commercial boats, he began building kayaks and has done three skin-on-frame boats to-date, plus numerous Greenland paddles. When not paddling, he's usually doing repairs, outfitting, or teaching them to local club members...or spending way too much time on paddling related web sites. Another hopeless "Mr. Fixit" type, he's constantly tinkering and searching for the illusive "better mousetrap".*

### Adjusting the Jig

#### 1. MEASURE THE RIB DEPTH.



Insert a straight, snug-fitting piece of rib stock in the mortise. If the fit is loose, insert a feeler gauge on the inside to tighten it. Clamp another piece (with a bevel on the end to match the gunwale angle) to the keel stringer and mark a line where the two pieces meet. Check both sides and average the marks.

#### 2. SET THE JIG DEPTH.



Insert the marked stick into the left side of the jig and adjust the stop block until the depth line you just marked is at the corner mark on the jig.

#### 2. MEASURE THE RIB WIDTH.



Measure the maximum width between the mortises, inside to inside. In the photo, the rib width is ~ 15 3/8"

#### 4. SET THE JIG WIDTH.



With the marked rib stock still in place, set the tape measure against it and slide the adjustable side out until it reaches the rib measurement you took. In the photo, the slide needs to be adjusted in ~1/8". Keep the tape parallel to the top of the jig, as shown.

#### 5. ADJUST THE STRAP.



Set it so the outer clamping block overlaps the gap between the radius block and the inner clamping block.

### Bending ribs

Once the jig is adjusted and your rib stock is steamed, bending a rib is quite simple. Remove the rib stock from the steamer and:

1. Lift the bending strap out of the way. Insert your hand in the grab loop and pull the strap to the left side of the jig.
2. Insert the rib stock into the left side of the jig, between the radius block and the bending strap. The rib stock will rest against the inside of the outer support block with the bending strap

between it and the block. Push the end tight against the adjustable stop.

3. Pull the bending strap across the top of the jig and down the right side, bending the rib. Keep the strap TIGHT so that it provides support for the outside of the rib stock. Doing so will dramatically reduce breakage and feathering.
4. Clamp the rib at the radius blocks and between the inner and outer clamping blocks. Refer to the photo of a rib clamped in the jig.

I found that letting a rib cool in the jig for ~3 minutes is sufficient for it to hold its shape with minimal springback. While the rib is cooling, use the marked rib stock to mark the cut off length on the right side of the rib, by lining up the mark on the stock with the corner mark on the jig.

When the rib has cooled sufficiently, remove it from the jig, trim the right end, then install it in the frame. With the relatively short cooling time, the rib will still be pliable enough to accommodate minor tweaking of its shape.

### Observations

- You may find that your rib stock creeps upward ~1/8" on the left side during the bending process. If so, trim a matching amount off the right side. I've found that the ribs are generally just a bit long as they come off the jig, so trimming off a bit is not a problem.

- If you prefer slightly longer ribs, you can compensate for any creep by adding 1/8" when setting the adjustable stop.
- Either method works; as long as you use it consistently.
- I like Bob Boucher's method of trimming ribs using garden shears. The Corona brand shears in the photo were ~\$10 at Home Depot and they worked better than several more expensive models I tested.
- If you start by bending the rib in the center of the boat, you may find that you have a few nearly identical ribs fore and aft, which can be bent without resetting the jig for each one.

### The Results

The two boats in the internal photos have the same depth to sheer and rocker, but the difference in rib shape is striking. The rounded ribs are typical of what occurs when bending ribs freehand or with a simple pre-bending jig. The ribs bent on the rib jig are much more square, though that will vary somewhat with the radius chosen for the radius blocks. The boat on the right in the exterior view is 3/4" narrower in beam than the boat on the left, but the squarer rib shape resulted in the chines being 2 1/2" wider at the cockpit. It's a more stable boat, despite the narrower beam. One caveat with square ribs is that they do increase the volume of

the boat, so you may want to reduce the beam to compensate, as I did.

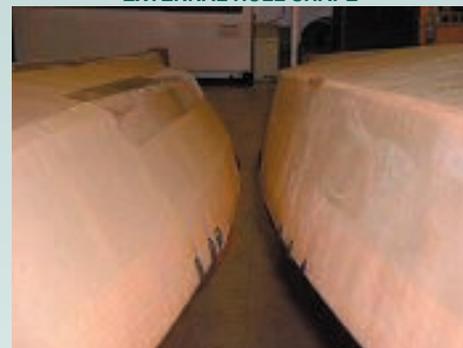
INTERNAL VIEW FREEHAND BENT



INTERNAL VIEW JIG BENT



EXTERNAL HULL SHAPE



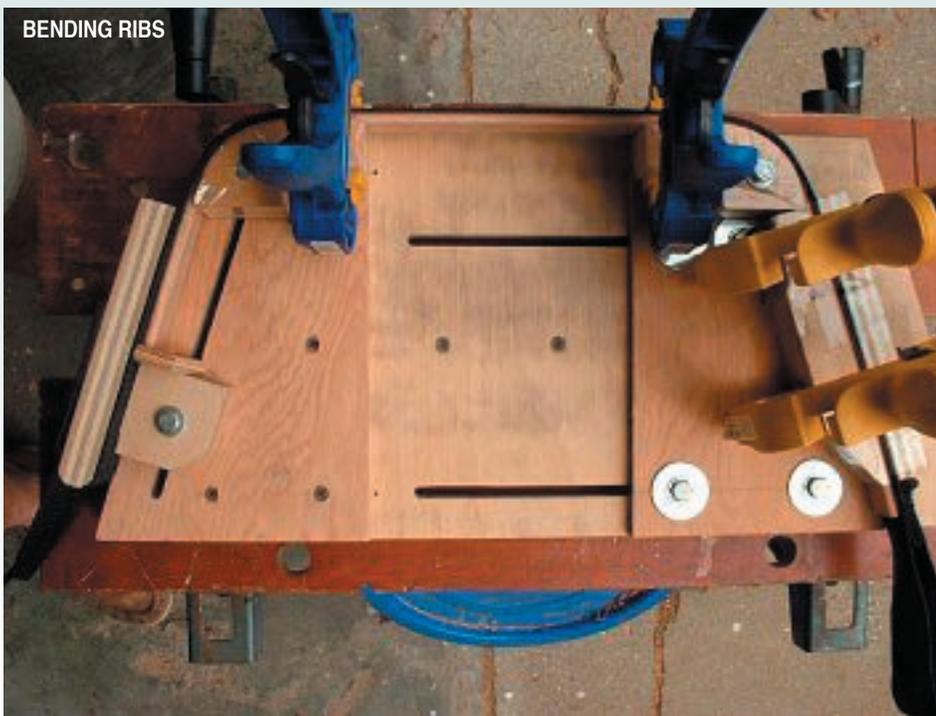
### Future Modifications

There is one significant change that I plan to make in a future version of the jig. The back plate will be made square and taller, so that I can install a pivoting clamping bar across the top of the jig. It will pivot at the left side of the jig and be secured on the right. The idea is to eliminate the need for clamps on the radius blocks, which will make the jig easier and faster to use. It will also allow the radius blocks and jig plates to be smaller, permitting them to move closer together to make narrower ribs.

If you build one of these and come up with any interesting observations or modifications, please let me know.

[brian.nystrom@att.net](mailto:brian.nystrom@att.net) More photos of Brian's work can be seen at <http://community.webshots.com/album/112980693POfEUe>

Happy bending!



# A Qajaq for Cheri

## Building a boat for a talented paddler

By Mark Starr

A short time ago, I received an e-mail from Bill Whitcomb, the builder of the famous black “stealth kayak” in which Cheri Perry was doing her straightjacket roll. Bill had volunteered to build a traditional skin-on-frame kayak for Cheri to take to this summer’s National Championships in Greenland, so that she would compete at the highest level of the competition. The beautiful boat she had been using would limit her to the International Class due to its stitch-and-glue construction method. Bill was wondering if I might be able to answer some questions for him regarding a skin-on-frame kayak, as he had not yet built a boat using this technique. I replied that I would be more than happy to help in any way I could, and casually mentioned the project to my boss. He liked the project and told me that we could build the boat at the museum as a token means of sponsoring Cheri’s effort. I sent another e-mail to Bill telling him this, and we agreed to work together to build Cheri’s new boat.

I was quite excited to be building a boat for such a talented paddler. Bill and Cheri would make a trip to the museum to discuss the exact boat we would build, bringing down the stealth boat as well as a boat built by Maligiaq Padilla. As we discussed the project, it became apparent that the goal was to reproduce Bill’s stealth boat using traditional construction methods. Cheri demonstrated the salient points of the boat’s design by sitting inside it and going through the motions of the straightjacket roll. The keys to her success seemed to lie in the low aft deck, the shallowness of the hull at the cockpit, and a coaming that was as short as I have ever seen. Any shorter and a tuilik or skirt would not fit between the cockpit rim and the deck. This very low coaming and aft deck allowed Cheri to sweep her body across the water and flat onto the deck. I noted that the skin-on-frame construction methods would not allow for some of the things that Bill had worked into his boat, but we all felt that we could build something very close.

One major concern for us was the rule that sets a minimum freeboard



requirement for kayaks used in the rolling competition. The boats that Greenlanders seemed to be favoring for the rolling section of the competition were very short and very low volume kayaks. The evolution of these tiny boats eventually resulted in a kayak whose back deck was essentially at the same level of the water. The judges decided to put an end to this practice by instituting a minimum freeboard requirement. It is this aspect of the kayak’s design that holds the most interest for me. It seems as though most of the boats used in the rolling section of the event are short and as low volume as they can be, perhaps thinking that the key to the most difficult rolls can be found there. Cheri, on the other hand, has been using a boat 18’6” long for all of her rolls, and making them look effortless to boot. As Bill and Cheri pointed out, the key for Cheri is the low back deck.

The normal problem with the low back deck is that there is obviously less freeboard. The freeboard rule helps keep the deck higher in competition kayaks. However, this is only a problem for heavy athletes in short boats. Bill and I had two things working in our favor. They were 1) Cheri, although a fine athlete, is anything but heavy. 2) The kayak, which would also be used for racing, did not need to be short to help her roll. This means that the volume required to float Cheri at the right freeboard could be easily distributed along the boat’s greater length. The longer hull, in theory, would also be faster for the racing sections of the competition. I will be interested to see if other competitors experiment with longer boats built for rolling where the deck’s height is kept to a minimum.

With most of the details for the construction of the boat worked out

between the three of us, Bill and Cheri drove home. Bill returned a week later and we began construction of the frame of the kayak. Using the stealth kayak as guide, we began by laying out the locations of the deck beams and the ribs. The locations of these features are important in a skin boat, as having a rib hit the paddler in the wrong place can make it tough for them to stay in the kayak for any length of time. All of these locations were marked out on the  $\frac{3}{4}$ ” x  $2\frac{1}{4}$ ” white cedar we used for the *apummat*. We decided to use white pine for the deck beams, and after locating the mortises for them, Bill began to cut the deck beams and their tenons as well as the corresponding mortises for them in the *apummat*. As Bill and Paul, a museum volunteer, worked on those, I milled stock for the other parts of the kayak. Having several people work on the same boat adds quite a bit of speed to the process, and the frame progressed quickly. By mid-afternoon the boat’s deck framing was completed and lashed tightly together. We then began to discuss the shape of the underwater profile of the kayak.

Unlike most other kayak builders, I often make a set of molds around which to bend the frames. Although it may take another hour and some extra material to accomplish this step, I feel that the effort pays off with several tangible benefits. The primary benefit is that you can see the exact final shape of the kayak’s hull before you bend a single rib. In addition, you have a good record of the shape you built. If you are building several boats of the same design, you can assure that they come out relatively the same using molds. We do this in our classes at the museum for what we call our “standard kayak”, a skin boat designed for the first-time

paddler. A final benefit is that, should you want to modify the design for a subsequent boat, you can work from the molds to get the new shape you want with some level of confidence. For Cheri's boat, which had many exacting requirements, molds proved worth the extra effort. Besides, these very tiny molds look great on my desk!

We began the mold making process by flipping the deck framing over onto horses. The next step was to block the keel up to its final height and lash it firmly into place. In this step, Bill sighted the keel against the bottom of his kayak as they lay side to side until he was happy with the amount of rocker and the overall shape. We then made 13 molds out of scrap wood that fit beneath the keel and the bottom of the *apummat*, and shaped them accordingly. After this long day's work, we could see the final shape the kayak would assume.

Bill left for a week long vacation, (I think he had planned this before, but I have noticed that people often want to go far away after spending more than a few hours with me) and while he was gone I took a few hours to steam bend the white oak ribs and lash the keel into position. This allowed Cheri to come back for a fitting of the *masik* and the *ajaaq seeqgartarfik*, as well as to allow us to check the rib placement throughout the section in which she sits. I had made a *masik* pattern with 3 inches of rise as a guess for her trial fitting. Cheri slid into the kayak frame and immediately declared the *masik* would have to be an inch lower. I cut a new pattern, and after trying it, she asked for another inch to be taken off. This did not leave much room between the keel and the *masik*, but another pattern was cut. With 5 ½ inches between the keel and the *masik* she was happy.

As it turned out, we also had to shift the location of several of the ribs, as we had forgotten that Cheri sits more than five inches forward of the deck beam at the aft end of the coaming. While we thought we had left enough room in critical areas, her shift forward in the kayak put two ribs into painful contact. These were removed and shifted to new locations.

*Mark Starr has been an avid kayaker for the past 12 years, and became interested in Greenland paddles and kayaks five years ago as they started to show up on the water in Connecticut. He works at Mystic Seaport Museum, where he teaches both kayak and paddle making classes.*

BILL SITTING IN FRAME



Bill returned from vacation and came back to the museum for a second long day of work. We located the chines on the hull, and Bill began the process of lashing them into position while I began preparing stock for the coaming. (Note that Bill was saddled with all of the demanding work!) We decided to use a beautiful piece of ash for the coaming and the spray skirt ring. Although we could cold bend the hoop itself, we steamed the spray skirt lip and left them to cool. Bill continued lashing everything into its final position as I made the *masik* and the *ajaaq seeqgartarfik*. After a quick final check of the framing, we got out the nylon covering we would use to skin the boat.

We wrapped the kayak in nylon and cut the seam down the centerline, and Bill began the long process of stitching it onto the hull. As he worked on this, I riveted the coaming together and drilled the holes used to sew it to the skin. By the end of the day, the aft deck was well on its way to completion and Bill was probably once again ready for another vacation from me, although he was kind enough not to mention it. I finished the sewing the next day, and had only the coaming to install to complete the work on the boat. Since it is only an hour's work, I told Bill not to bother to make the long drive up. Cheri was anxious to try the boat, and so we scheduled the first trial for the upcoming Monday. The kayak needed three coats of urethane and I was able to get them all on in one day. This left five days for the finish to cure fully before sea-trials. We were undecided about what type of deck rigging we would use, and so put off installing that until a later date.

I anxiously (O.K. – I nervously) awaited Cheri's trials on Monday. Would the kayak meet

her expectations, and would she be able to do her full repertoire of rolls in it? I shouldn't have been nervous because Bill's expertise with Cheri's boat and her abilities (Bill has also coached her with her paddling and rolling) really meant that we couldn't have been too far off the mark. Cheri arrived with Mark Hensel, another friend and paddling coach, and we set off on the river to see how the boat would perform. Cheri slid into the river and after one quick test roll, tossed her paddle away and began her dizzying array of acrobatics. We then paddled down river and back to fully test the boat, at least in calm conditions.

Ironically, the one roll Cheri could not do in the new boat was the one that she is most famous for—the straightjacket roll. I must admit this left me with a sick feeling in my stomach, even though she and Mark thought that it was just a matter of time before she got this as well. They both seemed to think that her other rolls were smoother in the new boat, and mentioned that in every boat she has tried there were a number of rolls she could not do in them. I still didn't feel better about it, and told her she would have to let me know when she got that roll so I could sleep at night again. Fortunately, she called me the other night to say she was doing the straightjacket roll on both sides, and that all was going well.

Building this kayak with Bill proved to be a great experience for me, as I enjoyed his company, but I also learned from his design experience as well. I have also had a great time talking and paddling with Cheri throughout the process. I am looking forward to hearing how Cheri does in Greenland this summer, and I encourage any of you who get the chance to watch her perform to take the time to do so!

For you kayak builders out there, here are the stats:

- LOA Length Over-All: 19'
- Max Beam: 19.5" (located at forward end of cockpit,)
- Depth from Keel to Deck at Aft End of Coaming: 4.5"
- Depth from Top of Keel to Bottom of *Masik*: 5.5"
- Skin: 12.8oz Twill Weave Nylon
- Finish: DuraTuff one-part Moisture Cured Urethane
- Weight 30lbs.

# Custom Neoprene Mitts

## A Simplified Procedure

By Shawn Baker

Neoprene mitts can turn a frigid day of winter paddling with blue fingers into a balmy experience with a tiny “sauna” on each hand! Before paddling with your mitts, ensure that you can perform a wet exit or any other safety operations—mitts do decrease your dexterity, but they can also prevent the loss of dexterity through numbness.

Trace your hand on a piece of paper. (Fig. 1 - blue line) Draw a second line  $\frac{3}{8}$ " (1cm) outside of your hand's profile, (Fig. 1 - black line) and beyond the length of your ring and index fingers. This line should intersect the blue line at your middle finger. Why? When you curl your fingers into a “C”, the tip of your middle finger is no longer, well, *longer!* Ignore your thumb's profile at this time.

The wider outline should run from the base of your index finger straight to the base of your thumb.



FIG. 1



Measure your wrist with a fabric measuring tape or a piece of string. One half of this dimension will be the width of the pattern (black line) at your wrist. My wrist circumference is 7". The black lines

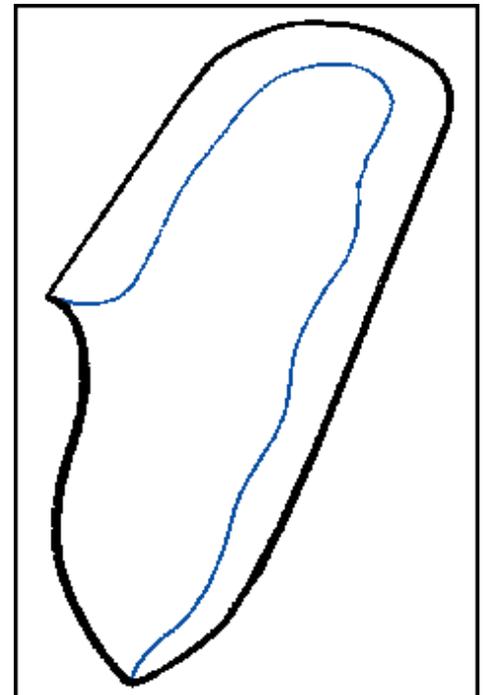
on my pattern are ( $7''/2 = 3.5''$ ) 3.5" apart at the wrist. The string should be neither tight nor loose. You want the neoprene cuff to be snug, not tight, not leaky.

### MEASURE YOUR WRIST



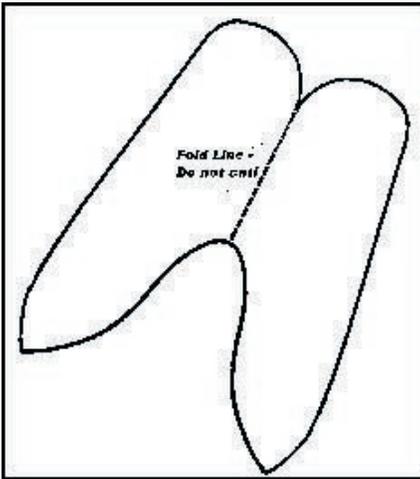
Now, trace your thumb outline onto a second sheet of paper (Fig. 2 – Blue line). Draw a  $\frac{3}{8}$ " outline around the thumb pattern, just as you did with the hand pattern. Start your outline from the base of your thumb and make a  $\frac{1}{4}$ " outline around the tip of your thumb.

FIG. 2



With a ruler, draw a line straight from the outline at the tip of your thumb to the highest part of the web of your thumb. The straight line will become a fold line (see Fig. 3) when you cut your neoprene. Sketch a reverse S-curve between the web and base of your thumb.

FIG. 3



Cut four hand pieces from the hand pattern. Flip the pattern so you get two “rights” and two “lefts”. If you want precurved mitts, cut each palm side 3/4” shorter. On the palm pieces, draw a 1” wide oval one half inch in from the seam. (Fig. 1 – red line) The oval will be as long as the s-curve on your thumb pattern. Cut two thumb pieces like Fig. 3.

Use Aquaseal or black neoprene cement to join the pieces.

Glue hand back and palm together along the sides. If you precurved the palm, glue the curve at the tips of your fingers first. Then glue the wrist. Stretch the shorter palm piece so it matches the longer back piece and glue the sides.

Fold the thumb piece at the fold line and glue thumb edges to one another. Glue thumb into oval. This is easiest if you glue an inch or so at a time.



**Use and enjoy your mitts!**

*Shawn Baker is an instructor, kayak builder, and Sisimuit QU-2005 hopeful. He hails from Kalispell, Montana.*

## QAJAQ USA Elections Are Coming!

**In June 2004 Qajaq USA will celebrate its second anniversary as a non-profit membership organization officially recognized by Qaannat Kattuffiat (The Greenland Kayaking Association).** During those past two years the operations of the club have been overseen by an appointed Board of Directors.

The original board was comprised of , Greg Stamer, Robin Snow, Cindy Cole, Rita Romeau, Vernon Doucette, Harvey Golden, Pavia Lumholt, David Braun and Keith Attenborough. Recently, Cindy and Rita have left the Board and Mike Hanks, has become a board member. However, the plan has always been to move from a self appointed group made up of the initial organizers to a Board of Directors elected by the membership.

The Board has made allowances for this process in the by-laws. These by-laws call for electing at most half the Board each year starting with the second year of club operation. This ensures a level of continuity while allowing opportunities for additional members to participate in setting the direction of the club. The primary purpose of the Board of Directors is to guide the policies and activities of the club in the fulfillment of the mission statement. More specifically, the board chooses the officers (President, Vice-President, Treasurer, and Secretary) from among the existing Board members, approves expenditures of club funds, oversees the activities of the various committees and publications, and endorses new initiatives. Board membership provides the opportunity for members to influence the future of this gathering of Greenland paddling devotees.

Elected members of the board will serve a two-year term and may be re-elected to a second consecutive term. The elections are timed to correspond with the club annual meeting at the Delmarva Paddlers Retreat. The Board will publish a notice of the annual meeting that will include a call for nominees at least 90 days in advance of the annual meeting, so you can expect to see that announcement at the start of July.

Once the notice is published, interested members can offer their name by notifying the Nominating Committee of the Board of Directors at [board@qajaqusa](mailto:board@qajaqusa). The Nominating Committee chooses the final slate of nominees for the election. All nominees need to be identified about 60 days in advance of the meeting, this year that will be around the start of August. A second notice of the annual meeting, including the slate of nominees, will be sent out 30 days prior to the election. This will occur about September 1st. At that time, members will be able to begin voting either electronically or by paper ballot. Each member can vote once for each vacancy. The votes will be counted at the annual meeting at the Delmarva Paddlers Retreat and the nominees with the highest numbers of votes submitted will be elected.

For this first election there will be at least four positions that will need to be filled. Now is the time to begin thinking about how you can contribute to the success of Qajaq USA by serving as a member of the Board of Directors.

If you have any questions on the upcoming elections, please forward them to the Board at [board@qajaqusa](mailto:board@qajaqusa).

# Notes from the Regions

Filed by: Shawn Baker  
QAJAQ USA Forum administrator  
and backup webmaster  
[shawn@qajaqusa.org](mailto:shawn@qajaqusa.org)

Northern Rockies Paddfest  
- May 22-23 - Wayfarer's State Park,  
Montana - **Shawn Baker** is planning  
a couple of Greenland-style kayaking  
demonstrations. Contact him if you'd  
like to help!

SSTIKS 2004 - June 11-13, 2004.  
Twanoh State Park, Washington.  
Kayak strokes and rolling instruction,  
paddle building, kayak building  
demonstrations, roll competition and  
salmon bake.

Filed by: Tony Schmitz  
QAJAQ USA member  
[apbschmitz@yahoo.com](mailto:apbschmitz@yahoo.com)

Qajaq USA member Dennis  
Asmussen and I will make a  
presentation at the May meeting of the  
Inland Sea Kayakers (it's a Minnesota  
paddling club) on Greenland style  
paddling and rolling techniques, and on  
making boats, paddles and tuiliks. We'll  
bring in rolling videos, some home-  
made boats, tuiliks and other gear, and  
probably offer a quick demo on bending  
ribs, since that's the step that seems to  
baffle a lot of people.

Filed by: Martin Nissen  
*Qajaq København / Qajaq Denmark*  
[mn@nordeco.dk](mailto:mn@nordeco.dk)

## A FEW NOTES FROM ACROSS THE ATLANTIC

### Qajaq Tasiilaq 2004

Members of Qajaq København  
have raised funds for the kayak  
project "Qajaq Tasiilaq 2004"

They will visit East Greenland  
the summer of 2004 and build East  
Greenland kayaks and paddles and  
exchange experience with the locals.  
They hope to help strengthen the local  
kayak club who has recently applied  
for membership of Qaannat Kattuffiat.  
A "kayaking week" will be held in

Tasiilaq / Ammassalik from the 5th  
- 15th of July. The kayaks and paddles  
will be left with the local kayak club in  
the hope that they will inspire for the  
building of more. Furthermore a book  
or rapport will be written of the East  
Greenland Kayak. [www.qajaq-kbh.dk/  
tasiilaq.html](http://www.qajaq-kbh.dk/tasiilaq.html)

### Kayak Project in Northwest Greenland 2005/2006

It is also the intention of some members  
of Qajaq København / Qajaq Denmark to  
raise funds for a study tour of Northwest  
Greenland (Thule / Qaanaq and the  
northern Upernavik district) in 2005/06.  
The hope is to further document and  
experience one of the last places on earth  
where traditional kayak hunting is still  
carried out (the narwhal hunting from  
kayak).

Help or information in connection  
with the projects is appreciated.

### H. C. Petersen

*An invaluable admirer of the Greenland kayak*

In January 2004, H. C. Petersen  
(B. 1925), the author of "Skinboats Of  
Greenland", was invited as an honorary  
member of Qajaq København and Qajaq  
Denmark in relation to his visit and speech  
in the club. As a brief introduction I wrote  
a few words about his works.

Through the last century, Hans  
Christian Petersen has personally  
experienced the development of Greenland  
from a kayak hunting community to  
a modern society where fishing is the  
primary industry. The speed with which  
the kayak disappeared in various parts  
of the country made H. C. Petersen  
devote himself to collecting knowledge  
and information about kayak techniques  
and types across the different districts of  
Greenland before it was too late. As the  
first principal of the folk high school of  
Sisimiut, he had the chance to meet fellow  
countrymen from all over Greenland  
who came to the school for short stays.  
Many of them were still practicing kayak  
hunting at home and some of the women  
were familiar with skinning the kayaks.  
He asked them about the present state of  
kayak development as well as their local  
native history. From these inquiries, H.  
C. Petersen realized that the approximate  
4000 year old history and evolution of  
kayaking in Greenland was in danger of

coming to an end. A deep admiration  
and respect for the kayak as the cultural  
heritage of his country made him want  
to document its use and development  
for the future. He was able, in a most  
gifted way, to present the essential parts  
of, what was such a vital necessity for  
the survival of the Inuit, the kayak.  
Over the following years, a long list of  
publications has come from the hand  
of H. C. Petersen. Among these, five  
should be pointed out as substantial  
contributions to the history of Greenland  
kayaking.

The first manuscript he authored  
was *Qajaq – Inoqarfinni Tamani*, but  
the publishers, Atuakkiorfik, were not in  
a hurry and it took 11 years before the  
book was brought to light in 1987.

The year before, in 1986, Petersen  
authored the English version of  
Skinboats of Greenland as part of the  
series "Ships and Boats of the North" by  
the Viking Ship Museum of Denmark,  
The Museum of Greenland and The  
National Museum of Denmark. The  
work was composed of two parts – one  
on the kayak and the other on the larger  
skinboat – the *umiaq*. In 1997, the  
work was published in Danish (Den  
store Kajakbog) and, as was the case  
with the English and the Greenland  
versions, it was not a direct translation.  
H. C. Petersen felt that his book must  
be written to the intended audience and,  
therefore, every edition is revised and  
enhanced according to the people for  
whom it is written.

As addenda to the work, and at the  
request of Hans Ebbesen, H. C. Petersen  
also published a collection of selected  
photographs from the great archives  
of The Arctic Institute under the name  
Skinboats in Greenland – in days of old  
(1987). The collection gives a valuable  
insight into the use of the kayak  
and *umiaq* after the introduction of  
photography to Greenland in the second  
half of the 19th century. Unfortunately,  
this photo collection is difficult to get  
hold of. However, for people interested  
in kayaking history, it is highly  
recommended.

In 1994, Petersen published a  
smaller book entitled *Qaannamik  
Pinnuaatit* with descriptions of  
kayak games, rope exercises and other  
customs related to kayaking. The book  
was greatly appreciated by Qaannat

Kattuffiat (the National Greenland Kayak Foundation), especially since the kayak games were a part of the annual National Greenland Kayaking Championships. The rope exercises were especially important for the kayak hunters in building up strength, balance, focus and stamina.

In *Instruction to Kayak Building* (3rd ed., 2001), Petersen presents various technical building solutions from different parts of the south and west coasts. For this reason, the kayak described there is not to be taken as an anthropological study - and neither should it be built strictly according to the book without some adjustments. Many builders have burnt their fingers following the manual to the word.

Being open minded and in touch with nature during his lifetime has given H. C. Petersen a deep insight into the rhythm of nature in the Arctic. He has traveled extensively throughout Greenland, both in the service of the Greenland Home Rule and the Inuit Circumpolar Conference, to evaluate the potential for a more sustainable livelihood among Inuit and the animals. This knowledge, along with his understanding and studies of climatic changes over the last century, formed the basis of his latest rapport for The Nordic Council of Ministers, *Fangsttyr og klimartymer i Grønland* (2002) (Prey-animals and Climatic Fluctuations in Greenland). In this report, Mr. Petersen puts forward his thesis on the connection between the cyclic climatic fluctuations and the varying distribution of prey-animals along the coasts of Greenland. He calls attention to the fact that the Gulf Stream, the part of the global climatic system which is of vital importance to hunting and fishing in Greenland, has a "pulse" of 100 and 1000 years respectively, resulting in a fall and rise in sea temperature. He proposes that it was exactly such a "warm pulse", climatic rhythm, in conjunction with technological and social developments, that made the kayak lose its significance as a means of hunting throughout the 1930s, 1940s and 1950s.

Ever since the founding of Qaannat Kattuffiat in the early 1980's, Petersen has been delighted to see the resurgence of Greenland kayaking, both within Greenland as well as abroad.

By request of members of Qajaq USA and Qajaq København, Mr. Petersen will work on a translation of *Qaannamik Pinnguaatit* into English and Danish. Currently, Mr. Petersen is working on a book on the *umiaq* that he is hoping to complete in 2004. When that is done, it is the hope of Mr. Petersen to be able to complete his works with a book on "Kayaks and people in Greenland" with an emphasis on the great kayak hunters, so called *piniartossuaq*, through time.

H. C. Petersen has contributed greatly to the renaissance of Greenland kayaking in various parts of the globe over the last decades. Qajaq København / Qajaq Denmark are, therefore, happy and proud to have H. C. Petersen as our honorary member. Mr. Petersen is aware of, and acknowledges, the work done by Qajaq USA in supporting Qaannat Kattuffiat and traditional kayaking in general.

Filed By: Mike Hanks  
Board Member

PNW Regional Advisor, SSTIKS event  
[mike@qajaqusa.org](mailto:mike@qajaqusa.org)

**Robert Morris** is offering a free week long workshop, building two Greenland frames. This is being offered through the Roundhouse community center in Vancouver from July 19-24th . There are eight spaces available. He will retain one frame and the other will go to a charitable auction for the community center.

On July 22 at 7 PM, Robert will be doing a lecture on the Kugaaruk project at the Roundhouse community center. If there is strong interest from the community, there is potential to bring an elder and translator down from Kugaaruk to build kayak(s) in Vancouver.

Robert has an advance DVD copy of Caribou Kayak, a video documentary made of the Kugaaruk kayak project. It will be released by the National Film Board.

Robert Morris (604) 618-7546  
1000 Parker Street  
Vancouver, BC  
Canada

[robert@brewerycreek.ca](mailto:robert@brewerycreek.ca)  
<http://brewerycreek.ca/pages/home.html>

**Skip Snaith** reports that The Native Corporation of Nunivak Island is setting up a remote science camp at the old village site of Nash Harbor. They will be offering a variety of activities, classes, wilderness paddling and investigations into Native Culture and knowledge.

[http://www.rockisland.com/~kyak/summer\\_camp.html](http://www.rockisland.com/~kyak/summer_camp.html)

**Christopher Cunningham** has been collaborating with a Seattle glass artist, Mary Van Cline, on a number of mixed media pieces. They opened a show in a New York City gallery in September of 2002 that included a full-size Greenland frame made of Aspen wood, a 1:5 scale model of an East Arctic kayak, and two King Island kayak paddles. With the shapes in traditional kayaks there is an easy transition between the utilitarian and the decorative.

Chris is scheduled to teach a Greenland kayak-building class in France. This will be his second teaching trip to France.

**Mark Wade** finished up the new boat for Kristen <http://community.webshots.com/user/marksharky> , and can report that he got this one 99% right (He reserves 1% as a good excuse to build another one)! It turned out great. Mark taught two classes at the Port Angeles Kayak Symposium over the weekend of 4-16 to 4-18: Origins of the Modern Kayak (overview of SOF types and the evolution line of the modern kayak) and a demonstration / discussion on building SOF's (steamed ribs, tools, reference materials and boats on hand). Bill and Beth Price came out and brought a new unskinned frame (looks great!) and Bill's heat-seal drybags to help out with the demo. They had a great time and even got some paddling in! <http://www.raftandkayak.com/ks5.html>. Mark will be up at the Ladysmith Paddlefest in Lady smith, B.C., over the weekend of May 14-16 for another demo / class on SOF's. He will be bringing up a baidarka, retrieval and two greenlands, along with the steam box and all the other "tools of the trade". He'll be doing the workshop / demo on that Sunday. <http://www.paddlefest.bc.ca/home.htm>. This is a GREAT event and

very fun...low key, relaxed and in an absolutely beautiful setting..oh yes, and it's FREE to participate! Additional things Mark has done see, one new paddle carved, an old paddle recarved, a new neoprene spray skirt, and a new rolling hand board carved.

**Mike and Tammy Hanks** finally completed Tammy's Greenland-style skin-on-frame kayak. It is 15'6" x 21.5". Tammy launched the kayak on Memorial Day at Thea's Park in Tacoma. Tammy is registered for Don Beale's paddle-building class at SSTIKS to make her first Greenland-style paddle for the boat.

## Feedback

### Mail from MASIK readers

Thanks for another fine issue!  
All of us in the traditional community appreciate your efforts!

Regards,  
Mark  
BeckMark@aol.com

The Masik keeps getting better and better.  
Congratulations on your hard work.

Best Regards  
Tom Yost  
tom\_yost@msn.com

Thanks for another great issue of the MASIK. I read each one cover to cover like I did years ago when a new issue of SEA-KAYAKER arrived in the mailbox. Please keep up the good work.

Cheers Rich Weise  
acuta@msn.com

Thanks to you for posting this and to all who devoted time to producing it. This is an excellent resource. I will read with particular interest the article on the Pup SOF for children. That's just the project I'm eyeing for my next.

Peter Lyons  
Peter.Lyons@trizetto.com

## 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](mailto:bobby@qajaqusa.org)



# QAJAQ USA

## Membership Application



We welcome members outside of the US, and overseas.  
Please print your information and send in form with payment.

Name: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Membership:**     New Member     Renewal

Please make check or money-order, in U.S. Funds, payable to **Qajaq USA, Inc.**

**Qajaq USA now accepts online payment by PayPal. If you would prefer to pay online via PayPal, please determine the amount using the membership form. Log on to PayPal: <https://www.paypal.com/> and send the funds to [paypal@qajaqusa.org](mailto:paypal@qajaqusa.org).**

Subscribing \$35     Supporting \$50     Sustaining \$100     Patron \$150

Corporate members please consider sustaining or patron membership. Sustaining and Patron members will be recognized in newsletter.

- Member Items:**
- Subscribing** (two logo stickers)
  - Supporting** (two logo stickers + embroidered patch)
  - Sustaining** (two logo stickers + embroidered patch + Qajaq USA T-shirt)
  - Patron** (Sustaining perks + Signed Kayak Survey Drawing by Harvey Golden)

Qajaq USA silk-screened cotton T-shirts are available for \$15 each. (One shirt is complementary with Sustaining and Patron memberships)

**T-Shirts:** Quantity/Size:    \_\_\_ Small    \_\_\_ Medium    \_\_\_ Large    \_\_\_ Xtra Large

**I'd Like to Help with:**     Events     Newsletter     Membership     Publicity

**I am Interested In:**     Kayak Building     Paddle Making     Rolling & Other skills     Instruction  
 Racing & Competition     Meeting Greenland-style paddlers in my area

**Please tell us about yourself.** Comments, other interests, or short bio.

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Thank You for your interest and support of Qajaq USA! [www.qajaqusa.org](http://www.qajaqusa.org)

**Please mail to:**  
**QAJAQ USA, P.O. Box 5851, Traverse City, MI 49696**