



*East Greenlanders with Kayak (probably 1961)*

*Photo: Jette Bang Photos/Arctic Institute*

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# *In This Issue*

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This issue of *The Masik* includes articles giving the history of HRGF and SSTIKS. Dave Sides traces the growth of the Hudson River Greenland Festival as it went from being a one-day event to a weekend gathering with nearly 100 participants. Tim Mattson celebrates 10 years of the South Sound Traditional Inuit Kayaking Symposium, with a focus on the children's track.

Kayaker Bill Samson of Scotland has been building replicas of Eastern Arctic kayaks for some time now, and he surveys a striking variety of them in his article.

Sandy Noyes's interests in traditional paddling led him to commission a replica of an East Greenland kayak. So taken was he with its form and performance, he undertook an exploration into this particular kayak's provenance, acquiring period photographs in the process. The result is a unique and personal insight into one kayak.

Eliza Wicks-Arshack has been involved in the building of birch-bark canoes and has studied skin-on-frame watercraft from a variety of cultures. At the Delmarva Paddler's Retreat, she got to experience Qajaq USA members' take on Greenland culture, and she documents her experiences to good effect.

Although Simon Wall's first trip in a skin-on-frame kayak ended nearly before it began, it left a lasting impression, for a few decades later he began constructing a West Greenland kayak. In an article adapted from his build diary, he writes entertainingly about his struggles and successes.

In separate interviews, past president Greg Stamer and current president Ed Zachowski discuss where Qajaq USA has been, how the Greenland paddling scene has evolved since Qajaq USA's inception, and where it may go. In a related vein, board member Terry O'Malley reports on some of the events where Qajaq USA members shared their knowledge about traditional kayaking with a variety of people.

Interest in traditional kayaking often involves wanting to learn more about kayak building. Delmarva Paddler's Retreat regular Dave Niles is a long-time hand-tool collector, and in his article he discusses several hand tools, sharpening methods, and what to look for in used tools. Dave's article will pique your interest in hand tools and may have you reaching for one the next time you begin a project, rather than its power-tool equivalent.

Rounding out the issue is a review of a new DVD documenting the construction of a replica of a baidarka from Unalaska. Narrated by Bill Samson and filmed by Daphne Barbieri, it is a delightful introduction to Eastern Arctic kayaks and replica building.

## EDITOR'S LETTER

Before I even knew what a kayak was, much less a skin-on-frame version, I was a baseball fan. For about 25 years I followed the fortunes of the Baltimore Orioles, the closest thing Virginia had to a local team since the Senators departed after the 1971 season.

Former Orioles shortstop (later third baseman) Cal Ripken was called up to the majors in 1981 and by 1982 he was on the team to stay. More than any player I remember, he tinkered with his batting stance. In some ways the changes were radical—he went from holding the bat up high to resting it on his shoulder, nearly parallel to the ground. Some ballplayers altered their swing as a concession to the count, but it was almost unheard of for a player to remake his stance so completely over the course of a career.

For Ripken, the changes were a response to his aging body, a way out of a slump, or simply a means to improve his performance. What's important is that he achieved success with these alterations.

Using a Greenland paddle isn't the same as swinging a bat, but what it has in common with that activity is the variety of paddling styles out there. When I was in Greenland I shot some short videos of two Greenlanders paddling one leg of a race. Reviewing the video, I was struck by the differences in their strokes: one of the paddlers had a high stroke, the other's was low, and their cadences were different as well. But both were moving at the same pace.

At this year's HRGF, I listened as Maligiaq Padilla described his own stroke. He said he never moved his hands across the center line of the kayak and did very little torso rotation. Instead, he leaned forward with each stroke in a kind of abdominal crunch. He concluded by saying that there are many different ways to paddle.

It took me a long time to realize this. When I first started paddling, I wanted to know the "correct" way to paddle. But in doing so, I confused guidance and suggestion for gospel and prescription.

What I've learned since is to listen to my body and how it responds to different ways of angling and canting the paddle; what I'm still learning is to not be afraid to tinker with technique. It just might extend my paddling career.

Tom Milani  
July 2011

# PRESIDENT'S MESSAGE

It was a Sunday afternoon, at Delmarva 2010. I had heard the weather conditions had picked up considerably, so felt compelled to go down to the beach to see what was happening. Within sight of the beach was a single paddler, gracefully practicing his hand rolls in a skin-on-frame (SOF) replica; it was beautiful. Collectively, as an organization and community, we were delivering on the Qajaq USA (QUSA) mission in a practical way. It felt good.

The prospect for what lies ahead for this club and its diverse group of experienced members energizes me as I accept the role as president. Trying to fill the shoes of Greg Stamer, though, would seem too intimidating if it weren't for his continued involvement, and that of the entire board, which has recently expanded. Please be sure to visit the Board Bio section of the website to get to know your new board members and advisors.

Moving forward in good order will require an understanding of what the organization is, and for the sake of clarity, what it is not. Contemplating the mission statement might provide insight into what the founders of Qaannat Kattuffiat (QK) considered important. Their goal was ambitious: to pass on the torch of their history, and their technological contributions, the very underpinning of which held a spiritual quality, a tradition that had sustained generations of their people.

My view is that QUSA, in the truest sense, is a cultural organization. Our scope is broader than mentoring traditional techniques with water safety application to kayakers. Our responsibility is to illuminate a full spectrum of information as accurately as possible. And, just as important, to do it in a manner that is at all times respectful to the Greenlanders.

The Journal, MASIK, the forum, improving and expanding events, are all ongoing activities from which members benefit. New initiatives such as the QUSA asset inventory, which now includes several qajaqs, tuiliks and other gear, as well as a kayak trailer, are deployed at QUSA events. We would like to see these assets grow in the area in which events are held, and to add more events. The board has also has plans for ambitious new projects as well, creating new DVDs using the acquired John Heath video library, expansion of publications to include out-of-print materials, and expansion of the QUSA Store offerings, to mention a few.

So now I am asking for your help — that is, your memberships! Yes, we need everyone that is using the resources and feels connected with the mission to renew their membership, and as each is able, to see how else they can support QUSA. The event organizers of the Hudson River Greenland Festival (HRGF) have already stepped forward to donate a kayak. I will donate an SOF to add to the fleet. I encourage prolific builders to consider what they might do, such as donating their old SOF when completing a new building project. We are also looking for volunteers who would be willing to repair the donated boats (as necessary) and work on other things such as helping with public relations projects in their locales.

I look forward to hearing your suggestions about how we can improve the organization. Some messages have already been received. There is much that we can accomplish together. By building the bridges that help us accomplish our mission, we will ensure the sustainability and growth of QUSA, while making new friends and having fun. Thank you for your support.

Best Regards,  
Ed Zachowski



*Alison Sigethy helps Katinka De Ruiter nail a reverse sweep*

*Photo: Ray Whitt*

**Editor's note:** This article is adapted from a talk Dave Sides gave at this year's Hudson River Green-land Festival, held at Croton Point Park, Croton-on-Hudson, New York. For more information about the history of Croton-on-Hudson, see <http://brickcollecting.com/croton.htm>.

## *The HRGF Story*

**By Dave Sides**

Welcome to HRGF 2011! My co-conspirators for this event are Heather Lamon, Jack Gilman, and Wes Ostertag, the HRGF Team. Credit is also due to two other organizations that help to make all this possible: the Yonkers Paddling and Rowing Club and Qajaq USA.

I'd like to tell you a short story...about HRGF's roots, what we're about, why we're here, and where

we're going. Because I think the Hudson River Greenland Festival is here for a reason, and all of us can contribute to HRGF's legacy. The catch phrase I like to use is "Pay it forward," a nod to the 2000 movie with Kevin Spacey, Helen Hunt, and Haley Joel Osment. My interpretation of pay it forward is that we pass on what we know, we share our experiences, and we learn from each other.

## Our roots

We all owe a very large debt of gratitude to Wayne Gilchrest, the driving force behind HRGF, for his passion and determination to make the event a success. He started HRGF in 2003 at Norrie Point, up north on the Hudson, as a one-day event featuring Greenland kayaks, paddles, races, rolling, and ropes. Helping to make it happen were coworkers Mark Price and owner Eric Eckley of Hudson Valley Pack and Paddle. I have had the great pleasure in knowing them all.

HRGF at Norrie Point in May was a regular event for those on the Qajaq USA circuit for three years, including Greenland enthusiasts Cheri Perry, Turner Wilson, Dubside, and others. Sadly, Wayne moved away, and the Norrie Point venue underwent massive renovations in 2006. A small but determined team of Greenland converts stepped in and tried to keep the event going that year, but was unsuccessful in finding a venue and securing sponsorship.

More determined than ever in 2007, they moved 50 miles down river, put up their own money, crossed their fingers, and hoped people would come. Now, here we are, in this our fifth year of revival, and HRGF has grown from 43 to 90 people. We look forward to many more successful years.

## What we're about

We should pay homage to Qajaq USA for its ongoing support. Quoting from the mission statement: "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 US." Qajaq USA is an organization that really puts its money where its mouth is. Our membership fees go toward purchasing a fleet of skin-on-frame kayaks and gear for us to use and to sponsoring events, such as HRGF; SSTIKS (South Sound Traditional Inuit Kayaking Symposium); Qajaq Training Camp, also known as Michigan Training Camp; the Traditional Gathering, put on by the Northern Lights Qajaq Society; and the Delmarva Paddler's Retreat, where we can share and learn Greenlandic culture and skills. Let's all remember that when we use a skin-on-frame kayak or blue tuilik for the first time. I am very thankful to all who have shared with me over the years.

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*Showing us how it's done at HRGF*

*Photo by Ray Whitt*

## Why we're here

I think we are at Croton Point for a purpose. We should honor the history of this land, “Kenoten,” or “Wild Wind,” as Croton was named after the Indian sakim, or chief. Given this rich Native American history, it is not much of a stretch to compare our Indian ancestors with the Inuit of Greenland. Just as the American Indians hunted and fished this area for centuries, the Inuit of Greenland still hunt and fish their native land, sometimes using traditional kayaks. It is said that the Inuit keep one foot in the past, reflecting an awareness of their unique culture and heritage, family values, respect for past generations, and the traditions passed down by word of mouth. These are a people that are truly in touch with their remarkable environment. So, too, we take this time out of our busy lives, feel and sense the world around us, remember and value the past. HRGF is about sharing what we know, learning from each other, and passing along ancient Greenlandic traditions.

## History of the area

We are here on the mighty Hudson River, known as “Muhheakantuck” to the Lenape Native Americans. I think some key events in the chronology of life here at Kenoten are significant to HRGF.

Native Americans gathered oysters off Kenoten as early as 6,000 years ago and continued living on this point for centuries, with the Kitchawanks, part of the Mohican tribe, occupying a fortified village called “Navish” on a high flat at the neck of Croton Point. As you can imagine, with the arrival of white men, change was inevitable. Giovanni Verrazano arrived in 1524 and Henry Hudson in 1609.

The Kitchawanks sold Kenoten to a Dutchman, Cornelius Van Bursum, in 1682. The Van Cortlandt family, Dutch patroons (large landowners and an influential political dynasty), acquired Kenoten next, and it became the property of their son-in-law, Andreas Teller. “Teller’s Point,” as it came to be

known, became a fur trading post and a prominent site in the American War for Independence in the late 18th century. Many modern maps still make reference to Teller's Point.

The 19th century brought relentless commercial development to the area by Quakers Richard and William Underhill, who inherited the property from their father, who had bought it from Elijah Morgan and Robert McCord, both of whom had married Teller women. Richard farmed, with both orchards and award-winning vineyards, while William developed the brick industry, which grew the village of Croton. Bricks from this era can still be found at low tide with the initials "WAU" and the rather un-Quaker-like "IXL," or "I excel." The Underhill's brick barns can still be seen on the road



*Nate and Sarah Apgar have an unusual take on the Standard Roll  
Photo by Ray Whitt*

in to the campground as well as two vaulted brick wine cellars built into the hillside, visible along the exit road from the lodge.

As the 19th century came to a close, increasing competition, the depletion of clay to mold bricks, and the depression of 1893–95 brought about the demise of the Underhill's farming and brick-making businesses, so the entire property was lost to the banks in the early 1900s.

So starts a new era here, recreation. Around the turn of the century, Judge Decker organized the Croton Point Club, with 23 vacation bungalows along the beach, followed in 1923 by the Croton Point amusement park and children's camps Kitchawanc and Senasqua. In 1924 the Westchester Park Commission bought 500 acres, creating Croton Point Park, while reserving space for a landfill. Thankfully, the landfill has been closed and capped for many years, in large part because of the efforts of Clearwater and Pete Seeger, who have hosted the Hudson River Revival here to raise awareness of the Hudson River.

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## And finally, where we're going

- We respect our roots, honor those who came before, and thank all who help make HRGF a reality—we thank Qajaq USA, the Yonkers Paddling and Rowing Club, and all of you!
- We follow Clearwater's lead in a celebration of the Hudson River and the environment. Remember to recycle!
- And in closing, we respect the history, culture, and traditions of Greenland kayaking. Pass them on...pay it forward.



*Caribou kayak replica by Richard Best*

*Photo Bill Samson*

# *Where to now, for skin-on-frame kayaks?*

by Bill Samson

## **Background**

Skin-on-frame (SOF) kayaks have been around for a very long time. The earliest firm evidence we have of their existence comes from models found in Arctic regions dating from the first millennium AD and other probable evidence indicates they may have been in use as long ago as the second or third millennium BC (Arima 2004).

It is only in the last 150 years that kayaks have been regularly built with hard shells — from the clinker-built “Rob Roys” of John Macgregor in the late 19th century up to the plastic, GRP (glass-reinforced plastic), and carbon/Kevlar kayaks of the present day. These have been so successful as recreational, touring, and sporting craft that they now far outnumber SOF types.

It is worth remembering, however, that in living memory canvas-on-frame kayaks were the norm and continued to be right up until around 1960. Nevertheless, there is still a hard core of paddlers who, for a variety of reasons, still favor SOF kayaks.

This raises the question — “Why have SOF kayaks not disappeared completely, to be replaced by hard-shells?”



*Bristol Bay kayak replica by Bill Samson*

*Photo Bill Samson*

### **Modern skin-on-frame kayaks**

It must first be recognized that not all SOFs are alike. Some are built as replicas of early Arctic craft. Others, for reasons of nostalgia perhaps, are built in the style of the canvas-covered kayaks popular between the 1930s and the 1950s. Then we have the folding kayaks, which have been around since the early 20th century. These are made with a collapsible wood or aluminum frame inserted into a fabric skin (Altenhofer 1989).

It is perhaps easiest to deal with the folding kayaks. Although some are home-built, the majority are made commercially by companies like Klepper, Nautiraid, Feathercraft, Pouch, and others. They are still frequently used by travelers because they can be transported almost anywhere and carried as airline baggage if necessary. They first rose in popularity in Europe in the days when few people had access to a car, but were within easy reach of a railway station. They were carried as baggage on the train and wheeled on a trolley to the water where they could be assembled and launched. Their very portability still makes them the most convenient type of kayak for many kinds of trips. There is also the attraction of being able to take your kayak anywhere on any form of transport — whether or not you ever make full use of that possibility.

The remaining types of SOF are most often built by their owners for their own use. For example, there is still some interest in the mid-20th century rigid-framed/canvas-covered type like the PBK kayaks designed by Percy Blandford (Blandford 1962) and much used in the UK by Sea Scouts and other young people, particularly during the austerity years following World War II. These kayaks were within the reach of relatively poor youngsters and could be built from just about any wood that could be found. The absence of plywood for the frames was not a show-stopper, and many were built with frames pieced together from deal. Army-surplus canvas, particularly rubberized fabric, was often used for the skins. Several kayak builders who had their first paddling experiences in these kayaks are now, in their later years, building them again to see if they really are as they remembered.

A very different type of SOF is the replica or semi-replica of a traditional Arctic kayak. In the 1950s and 1960s some Western kayak builders were surveying original Arctic craft and building replicas of them. These replicas were often built (and many still are) with plywood frames rather than bent ones, but externally the hull shapes were typical of indigenous kayaks. Little by little, the traditional techniques of making them were adopted until, at the present date, many kayaks are being built that are for all practical purposes indistinguishable from native craft. Of course, even in Greenland, there has been a shift away from the use of animal hide to canvas and synthetics for the outer covering.

The vast majority of these replica kayaks have been based on Greenlandic models — quite a restricted repertoire in the early days, due to the lack of readily available surveys, but now a rich variety of types displaying the subtle differences between craft from different times and different parts of

Greenland and even within a single Greenland community. This process took a great leap forward recently with the publication of Harvey Golden's *Kayaks of Greenland* (Golden 2006), which contains detailed surveys and descriptions of over 100 different kayaks, demonstrating for the first time the range of models that have been built and are still being made in Greenland.



*1950s Percy Blandford (PBK10) kayak by Bill Samson  
Photo Bill Samson*

These Greenlandic models are particularly relevant to today's sea kayakers, because hard-shell kayaks have developed in parallel with the skin-on-frame models and are mostly based on Greenlandic types (Winning 2008). Paddling techniques are similar for SOF and hard-shell types, and indeed many hard-shell kayakers are now abandoning their spoon-bladed and wing paddles for Greenland paddles.

Hard-shell manufacturers have, for some time, been including a "Greenland" model in their cata-



*King Island replica by Harvey Golden*

*Photo Harvey Golden*

logue — the best known perhaps being the Anas Acuta, which can trace its origin to a kayak collected in Greenland by Ken Taylor in 1959 (Winning 2008). There is really very little to choose between using these hard-shells and SOFs for rolling and Greenland-style paddling.

## **SOF replicas**

### **General**

So, now that we are not restricted in our paddling aspirations by the availability of suitable hard-shell models, is there really any need to go on building SOF replicas? If you are primarily interested in paddling, the answer must surely be “no.” On the other hand, the experience of paddling a SOF has its attractions — romantic ones, of course, but also gaining a better understanding of how traditional kayaks feel, with their flexible skins and frames. I suggest that such people are conducting “action research” (Whitehead and Mcniff 2001) in learning, through practice, the unique properties of these kayaks.

Added to this interesting approach to kayaking, there is also — particularly in these times of renewed austerity — the great attraction of being able to build your own kayak for a fraction of the cost of owning a hard-shell. In addition, the kayak is tailor-made for your own body’s dimensions. The small cost of materials can be spread over a number of months. These are the same attractions that home-building of kayaks held in the post-World War II years, when manufactured kayaks were even further out of the reach of the ordinary person.

Greenland, though it is arguably the most important center for traditional kayaking with its unbroken

tradition of kayak building and paddling, is not the only part of the Arctic to have had SOF kayaks. Siberia, Alaska, and the islands between them, as well as Canada, have all supported important kayaking traditions over the past centuries.

The likely explanation for the slow take-up by today's paddlers of non-Greenlandic kayak types is that they are inevitably compared with Greenland kayaks, although they are mostly designed to be used in quite different ways. It is clearly not sensible to criticize non-Greenlandic kayaks because they are mostly poor for rolling and other Greenland-style maneuvers. It is rather like criticizing a Jet Ski for its poor sailing qualities. They need to be considered on their merits, and every type has evolved to become the appropriate kayak for the circumstances in which it is used.

## Alaska and Canada

Next to the Greenland type, probably the most frequently constructed traditional kayak, in modern times, is the Aleutian type — the baidarka (Dyson 1990). Like Greenland kayaks, these are long and slender, and propelled with a double-bladed paddle. They have a long waterline length and so are capable of high speeds. However, their peaked rear decks make them less than ideal for rolling, though some modern makers have changed the rear deck to a flat one, like a Greenland kayak. The weather around the Aleutian islands is often stormy, and the seas high, and the peaked deck sheds water quickly. The coaming is high above the waterline and reduces the risk of swamping. For modern paddlers the generous space below the deck allows a good amount of gear to be stowed — a distinct advantage over traditional Greenland SOFs for multiday trips. Interestingly, no hard-shell manufacturer has produced a near replica of a baidarka.

The wide-hulled Yup'ik kayaks (Zimmerly 1986 and 2000, Kelly 1996) from the west coast of Alaska, from the Pacific south of the Alaskan Peninsula, via Bristol Bay to the Yukon-Kuskokwim delta, were mostly propelled using a single-bladed paddle and commonly paddled from a kneeling, rather than a seated position. That is not to say that double-bladed paddles were unheard of, simply that there is a lot of evidence — partly in the form of photographs — that the use of a single-bladed paddle was the norm. In some respects the technique used has much in common with that used in the open birch-bark canoes. However, the peaked decks and sealable cockpit opening make them more seaworthy than open canoes. These kayaks were used for hunting and fishing, and their large internal volume allowed the catch to be carried inside the kayak rather than on the rear deck, as would be usual in Greenland. Today's paddlers might give some thought to using this type of kayak for extended expeditions, due to their immense capacity. They also reward time spent mastering the single-bladed paddle technique and kneeling position, which can draw a fair turn of speed from this kind of craft. They are not at their best when the paddler is seated on the bottom and using a double-bladed paddle. One sometimes hears disparaging comments about this type of “short, wide” kayak, but I believe they are misdirected. Usually I would interpret these criticisms as meaning “This is a very poor Greenland kayak,” when in fact they are entirely different craft that have evolved to be ideal for their tasks and environment — just as a square-rigged bark is different from a racing yacht, not inferior to it.

Moving north up the west coast of Alaska two more types become evident – the Norton Sound kayaks



*King Island kayak by Sean Gallagher and Bill Samson*

*Photo Bill Samson*

(Zimmerly 1986) and the King Island kayaks (Heath 1991). These have much in common, with the Norton Sound type tending to be a little longer and narrower than the King Island type. Both have round bilged (multichined) hulls, are more or less veed, have a peaked deck, and are mostly paddled from a seated position using a single blade, although double-bladed paddles were sometimes used, too. These are generally slimmer and faster than the large kayaks from further south and would lend themselves well to general sea kayaking where stowage of gear is an important consideration. The King Island kayaks in particular were used for regular passages from King Island (in the Bering Strait) to Nome in Alaska, with a 40-mile stretch of open ocean to be crossed before making landfall. Many examples of this type of kayak were bought for recreational use by people from the North American mainland, and many of them survive in collections. You might say that the King Island type was the first widely used recreational sea kayak. Indeed, several different hard-shell designs show King Island influences with their curved stems and truncated sterns.

Going around to the north coast of Alaska and Canada, kayaks tend to fall into three classes. There are the very slender, round bottomed kayaks with flat rear deck and foredeck peaked in way of the paddler's knees. They are tippy and fast, though probably better suited to inland and semi-protected waters than open ocean. Examples of this type are the kayaks of Point Barrow, Kotzebue Sound (Zimmerly 1984), Netsilik kayaks, Copper kayaks (Zimmerly 1985a), and Caribou kayaks (Steffens 2008, Arima 1975). The Caribou kayaks were used on inland lakes and rivers for hunting swimming caribou.

The elegant kayaks of the Mackenzie Delta (Zimmerly 1985b) were used at sea and on inland lakes for hunting everything from whales to caribou. They differ from the Kotzebue/Barrow type by having peaked decks, upswept stems and relatively high volume, though they are narrow and tippy.

Moving toward the east Arctic (Zimmerly 2001), there are the very long, fairly beamy, almost flat-bottomed kayaks, often with clipper bows, which are used in Baffin Island, Hudson Bay, and Labrador. These are very similar to the Polar Greenland types and tend to be very substantially built and are relatively heavy. They are propelled using very long, narrow double-bladed paddles.

## Conclusions

It is recognized that not all of these kinds of kayaks lend themselves to popular sea kayaking — but building and paddling them cannot help but improve our understanding of why they are as they are. All have evolved over the centuries to be nearly optimal for the local conditions of wind and waves and the uses to which they were put. I would suggest that no type should be dismissed out of hand as “inferior” without a better understanding of these matters — such insight comes from extensive practical experience. Members of the SOF community owe it to themselves to open their horizons to the wealth of kayak types out there. You never know, you might even discover something that’s truly rewarding. ■

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*Dr Bill Samson is a retired astronomer and has been involved in making kayaks for the past 10 years, his first being a Brinck baidarka. Since then, he has built a Greenland-style kayak, a Morris Recovery kayak, and most recently the Bristol Bay kayak. He worked with Inupiaq builder Sean Gallagher on the construction of a King Island kayak. He has also built a variety of stitch-and-glue kayaks and Percy Blandford’s PBK designs. He lives with his wife, Sheila, in Broughty Ferry, on the east coast of Scotland.*

# Qajaq Build Story—Part 1



Article and photos by Simon Wall

## Editor's note

*This article is adapted from a diary Simon Wall is keeping as he builds his first skin-on-frame kayak. Born in the UK, Simon had his first experience in a skin-on-frame boat when he and a friend took a short journey in a canvas-covered, wooden-framed two-person kayak that they'd patched up. The trip ended roughly 50 feet after it began, when their boat hit the handle of a submerged wheelbarrow, which ripped the canvas covering. Flash-forward some years, and Simon has moved to the U.S., married the girl of his dreams, and begun to spend some time on the water.*

## The start

This is the story of how I, a 47-year-old software demo guy with a full-time job, a devoted wife, five children, and a house to renovate ended up building a kayak in his garage on evenings and any spare time I could get.

In short I'm an average guy with a dream to build a kayak that I will paddle someday around Popponeset Bay on the Cape. So this is the story of where the dream took me, how I started to build my kayak and the fun, problems, the solutions, and experiences I had along the way.

## **The Build — or cutting long pieces of wood, to make even longer pieces of wood!**

Mr. Zimmerly wrote a very convincing and pleasing article on how to build an East Greenland kayak, and whenever my family went somewhere where a book or a magazine would be useful, I'd take out my rough looking print of the Zimmerly article and reread it and reread it over and over again. [Ed.: See "The East Arctic Kayak," by David Zimmerly in *Sea Kayaker* 18 (October 2001), pp. 6–19.

It is also available on Zimmerly's website:

[http://www.arctickayaks.com/PDF/Zimmerly/Sea%20Kayaker%202001/sea\\_kayaker\\_18.htm.](http://www.arctickayaks.com/PDF/Zimmerly/Sea%20Kayaker%202001/sea_kayaker_18.htm.)]

A few suggested books and classes as a possible way forward. Research told me that there were a few good books available, and after a lot of reading I plumped for Chris Cunningham's book on building a kayak. (Ed.: See *Building the Greenland Kayak: A Manual for Its Construction and Use* by Christopher Cunningham, Ragged Mountain Press, 2002.)

On the outset of this build I intended to build a hybrid boat. That means I want the old look and feel of a traditional-looking Greenland kayak, but I also wanted to use new methods for joining and construction wherever I could. I have also taken some liberties and changed a few things and ignored a few suggestions, all in the name of making the kayak my own. The one thing I have found in research and before my build is that every Greenland kayak is different — don't be frightened to try a few things out if you are confident enough. I plan to use glue wherever possible without sacrificing any of the kayak's flex or suppleness. For this reason all my deck beams are glued to the gunwales and not pegged. I have got a very strong but flexible deck. I intend to peg the ribs in place, but glue the dowels to hold them in.

## **Day One – May 30th, 2010**

The first thing I did for my kayak was to mount my chop saw on a wall-mounted bench on one side of my garage. I also then added support tables about three feet long on either side at the same height as the chop saw bed and then added further support trusses for long pieces of wood every three feet or so, or where a convenient upright was for the garage structure. The supports allowed me to lay out my wood on an even level surface for working.

So I measured my arm length, multiplied it by three, and came up with a finish kayak length of 19'. That's a little long in my mind, but I'm going to follow the plans and go with it. It also means I can use two 10' x 8" x .75" boards, rip them into 3.75" wide boards, scarf joint them, and come up with a little wiggle room at either end and still have a finished length the right size. So the first step was to go to Home Depot and select two boards of premier grade pine that were long enough, straight enough, and not dinged or banged about too much, and, most important, knot free. After sifting through 30 or more boards I had found just two that met my standards. I purchased them,



and my kayak bill had gone from \$0 to \$50.40 for the two boards.

The first operation was to cut the boards lengthwise on my table saw, giving me four 3.5" wide boards. The book suggests you match your wood for the gunwales so they flex the same. I marked my first board with a "1" on either side of the cut and my second board with a "2" on either side. Then, when I joined them together I'd have a 1 and a 2 to form a gunwale, and that way I would be sure to have an even spread of flex and strength, as I was using a piece of wood from each of the original boards.

### June 8th, 2010

The book shows the scarf joints being cut using a plane, all the boards lying together and scarfed across the width of the ends of the boards. That to me looks too hard. The chances of error seem too great, and then when the builder joins the boards, the method seems prone to introducing a kink in the finished glued gunwale — guaranteeing the straightness of the boards during gluing looks hard. So I used old logic and made a jig to cut my scarf joint across each board width.

The jig I made to cut the scarfs was clamped to both gunwale halves (1 and 2), and then I used a handsaw to cut through. Do them both at the same time, and if the angle is off a little it doesn't matter, as by doing both together, when you flip one over to form the joint they will be straight.

### June 13th, 2010

Here's where those supports came into their own, as I was able to glue and clamp the gunwales easily and also able to feel any overlap with my fingers to eliminate any kinks or misalignment of the finished boards. I did one gunwale blank at a time. After the gunwales were clamped at the joint, I then clamped them down to the work surface just to be doubly sure of perfect alignment.

The book now suggests we check the dried gunwale blanks for flex and that they should match, I laid mine out and had about 1/16" difference in the sag of each gunwale blank. According to the book, this is cause for celebration.

### June 14th, 2010

Time to cut the gunwales to their finished width, which for me is

2.5". I had to clamp the gunwales together and lay them out on the floor.

I did get a little confused marking out the gunwales, not realizing that the masak isn't numbered. I went back and figured out what the problem was: 1, 2, 3, 4, 5, 6, Masik, 7, 8, 9, 10. Simple when you can count in "Greenlandian kayak builder." Luckily I didn't cut anything either till I was happy all was right. The old adage of measure twice, cut once comes true yet again.

I then moved to marking the rib mortises. For this one, it's every six inches or so.

### **June 16th, 2010**

It was tool time. Reading forward in the book I saw that I needed a spokeshave or two. That was an excuse to go to the local woodworking shop and buy some new tools, so I bought a flat and a curved-bottom spokeshave, a 5/16" router bit for the rib mortises, and a funky ruler that has a zero in the middle for a very simple way of finding the center of something.

I spent a couple of days thinking about how to make a jig whilst away working in Seattle, and by the time I was home I had figured out the right way to make the jig and to make it work. The jig took me about 45 minutes to make.

On Father's Day I went out to the garage and cut the 58 rib mortises that I need for my kayak length. My diary entry says, "Finished cutting rib mortises, I'm going in for a BEER!"

Having completed cutting the mortise holes with my router, I then spent part of the next day cleaning them up by hand with a chisel. I left them intentionally undersized on the width (7/8" dimension) so that I would have some extra meat should I end up with tenons that were too small. In hindsight, that wasn't the best decision because I did not factor for the ribs swelling after being soaked. When I finally put the ribs in, I got to clean the mortises up all over again.

### **June 25th, 2010**

Next thing to do was to put the shape and chamfer into the ends of the gunwales. Chris Cunningham's book suggests you rough this with a saw and clean up with a chisel. I have a jigsaw, so that's what I used. I cut each gunwale close to the line and then cleaned it up with my belt sander, with the two gunwales clamped side by side to ensure that left and right sides were the same.

### **June 29th, 2010**

The next step was to cut the deck beam mortises at an angle of 73 degrees. I took a lot of time thinking about this and ended up having three goes at making a jig to work with my router.

### **June 30th, 2010**

An evening to myself: I cut all the deck beam mortises and cleaned them up with a chisel. I beveled the deck beams and even made another jig to do it with. A great evening!

Now I was faced with the first major decision — the width, or beam, of the kayak. The book suggests the width of my hips plus the width of a fist as the norm for seasoned Greenland kayakers. The hips



plus two fists gives a more stable kayak, so I went in the middle: hips plus fist plus two fingers. So that gave me a width/beam of 22". Looking at my kayak books there weren't many that are that wide, if any, but there also didn't seem to be many that were 19' long either.

The next step was to hold the gunwales together, add the midship spreader, and then measure for the quarter-length spreaders.



### July 24th, 2010

Rather than make the last template out of wood, I scribed out the dimensions on an old paint roller tin and cut it out with tin snips. It was quick, accurate, and worked very well.

So you can also see from the picture that I had been cutting the tenons, too. I set my table saw with the blade at 73 degrees and set the height to remove the wood under the tenon. I used the sliding table with the fence set at the gunwale angle and just sawed back and forth to remove the waste wood. It was quick, easy, and, most important, repeatable, and allowed me to be more accurate than I would have been by hand. I then trimmed all the tenons by hand using a hacksaw with a coarse blade to get a fine finish that needed minimal cleanup.



### July 30th, 2010

By now I had cut all the deck beams with the exception of the curved deck beams, numbers 5 and 6. These I had decided to laminate vertically out of 3/4" pine, which I just happened to have from a previous home improvement project.



Once the glue was dried, I was then able to shape the curved deck beams. I followed the guidelines in the book to the letter, and this is a case where I think I'll change what I do next time. I put an "S" curve on the top of the deck beams and a single curve on the bottom. I think this should be the other way round. I don't know if the book is wrong, but I had to smooth my underside later, once I took a test fit, and thin the sharper edge on the top of the beam to allow a wider fitting of the deck stringers if needed.



It's amazing just how close a dinner plate is for the right curve, and its Nordic heritage may be closer than we think.

I cut the shape of the curved deck beams with my jigsaw. I then

cleaned and blended all the cut surfaces with my belt sander. I have found that to be one of the most useful tools in the build so far.

All the deck beams were now finished.

### July 31st, 2010

This was my first big departure from the instructions of the book. I have read that there needs to be some flex in the boat when it's finished — and that makes a lot of sense — but I also felt that the horizontal integrity of the boat would be somewhat compromised by having the deck beams only pinned, so I planned on gluing mine into the gunwales.

I wanted to make sure it all went together well, so I put everything together dry just to make sure.

Now I had a little accident with the dry fit. In my excitement to get it all together I managed to force a tenon in too hard and split a gunwale. One thing that came out of this mishap was that gluing the deck beams in place would also allow me to glue the split gunwale all in one step.

So with the aid of two of our daughters, Emily and Charlotte, we glued one side and then the other, and clamped it all together. I had to put a bit of a squeeze on the lateral plane as one of the gunwales had slipped about 1/4" ahead of the other, but I got them back in line and then squeezed it all together. The night before I had made some edge protectors for the gunwales so that the cord in my Spanish windlasses didn't damage the gunwales, and they worked great. I held them in place with masking tape before putting the cords on and winding. I also clamped the middle of the gunwales level and flat to ensure that the ends and the middle were on the same plane.

After the glue had set and my gunwales and beams were permanently locked in place, I checked the alignment and centering of the beams along the kayak's length. The books states that if you are within 1/4" you have slipped up somewhere, but it's not bad and you can get it back. Within 1/8" and you are doing well, and anything under that is good. Well, I am extremely pleased to say mine was within 1/64". There's a lot of possibility of me screwing up the alignment later, but it's nice to start with a straight deck.

### August 2nd, 2010

Started to clean up the excess tenon material that was exposed on the outside of the gunwales. I had purchased a flush-cutting draw saw at Home Depot a few weeks earlier for \$20. That made my total tool spending for this project around \$110. I should have practiced with the draw saw a bit more, as I managed to get some scuff marks on the gunwales, but I sanded those out.

### August 3rd, 2010

The bow and stern ends of the kayak were pegged and glued. I trimmed the excess material off with the draw saw and sanded any rough patches that I left behind.

It was seriously time to start thinking about ribs, and I had been doing a little Internet research and



had found that the local SOF people all think the Chris Cunningham design builds a heavy boat. But I decided to keep with the design. The book also suggests white oak as *the* choice for ribs to be steamed. I reached out to our local hardwood dealer and they suggested ash for steaming — they also have more ash than oak and it's cheaper. So I decided to try ash. Later, I totally regretted choosing ash, but that's another story.

I also paid homage to the Greenland qajaq gods and tied the lower ends of the gunwales with artificial sinew. I decided not to tie the deck beams or peg them as they are already glued. I really hope gluing them turns out to be a good decision.

### August 12th, 2010

Time to start thinking about building a paddle. Using the guidelines in the book and also a few Internet sources I have come up with a paddle that's 92" long. I'll go down to Home Depot again and search for a suitable piece of red oak for the full length of the paddle and then laminate the blades on to it and use red oak for the armor or ash, depending on what I have left.

I also have started on the ribs. I went to the hardwood place and got two pieces of quarter-sawn ash, and I'll rip those to the required size for my ribs. Two 8'-plus pieces that are roughly 5" wide cost me \$36.

The rough edges meant I had to use my handsaw against a straight-edge before I could use my table saw and a fence. I set the fence to just over 3/8" and then ripped one board into about seven pieces, which I plan to use for all my ribs.

### August 16th, 2010

Thinking about my rib gauge — using my two hands side by side and measuring across my knuckles was 6.5" and 6" at the lower knuckles — so I went with 6.25" as my maximum length for the additional material on my ribs.

I did the only thing I could think of to check, and that was a test fitting of the kayak by making a couple of temporary stands and sitting in the boat. It's a step Mr. Cunningham shows in the book, so it had to be right.

As I was standing there looking at things and trying to figure it out,

I had a great idea. Using my hand planer I would use servo tape (strong double-sided tape) to stick two pieces of wood the right thickness to the bottom of my planer and I'd stick a fence at the end of the planer and I'd have a repeatable way of thinning the ends of all the ribs without having to take measurements.

The big issue here was that my planer has an adjustable foot at the front and it's set up to let you take off only a certain amount of wood at any one time. The issue is it's not enough to thin the ribs in one pass. So I took the front foot of the planer off and shaved about 1/16" off the stop, which allows me to make a cut at of at least 5/32" if I need to. Obviously, this was pushing the boundaries of the tool and I needed to go slow, but it worked really well.

I completed all 29 ribs.

The ribs were put into soak for 4–5 days. To celebrate this, I went out and bought a new jigsaw. The tool purchase price now topped \$340.

### **August 25th, 2010**

Cut the blank of my paddle and glued the first of the additional pieces to form the shaft.

### **August 26th, 2010**

I planed the paddle shaft blank to 1–1/4" square.

Went to Benny's and got a cheap pasta pot, which will become the boiler for the rib steamer. I cut a hole in the lid by drilling a lot of smaller holes and then put a grinding wheel in my router and ground it smooth to take a 1–1/4" PVC pipe to feed steam to the steam box.

The steam box will hold four ribs maximum, as I didn't have a lot of foam and I didn't want to have to buy a whole sheet for a small piece.

The steam box is held together with duct tape, which should keep the heat and steam in nicely.

### **August 31st, 2010**

The wood had soaked for 5 days and, according to the book, I was ready to go.

I put my first batch of four ribs into the steamer. Inside, I had put a bent copper wire so that the ribs were lifted up so steam could surround them. I had also made a steam outlet hole on the bottom of the door so that the steam could fill the steamer and exit at the bottom rather than the top, ensuring good saturation. My thought was that if steam was coming out of the hole then the box was full.

Fifteen minutes went by and the timer sounded. I took out rib 4, put it in the bending jig, pulled the strap tight, and pulled: crack. Hmmm, that's not so good. I tried again with rib 3, same result. Rib 2, same result. Rib 1, snap.

There's an English word, "bollocks," that summed up exactly how I felt. Everything had gone so well



to this point, and I had done as the book suggested, and everything had worked, so having something not do as the book said it should have done was baffling.

I took a deep breath, made four new ribs, and put them in to soak.

### September 7th, 2010

My diary entry just says, “Ribs, ribs, ribs.” I had got one good one done out of six failures, as the four I had remade had snapped again. I had also tried to do ribs 5 and 6. Rib 5 had worked, just like it should. Rib 6 split when I put it into the gunwales. My conclusion was that either my technique was bad or the wood was bad.

I posted a message in the Qajaq USA forums and got differing responses — giving different times for steam, soaking not needed. The only constant was that a lot of people kept saying white oak was the way to go. I did some searching on woodworking pages and forums and found that most people thought oak was easier to steam bend and would attain a much tighter radius. I also found that ash reportedly wasn’t able to bend as tightly as I needed it to.

I tried a piece of unsoaked ash in the steamer, too. That worked just like a soaked piece, inasmuch as it cracked, too.

Then a lucky break. My luthier friend Pete dropped by, and I started talking about my progress. Pete advised me he had had bad results with oak, but I should try it. He had made some guitar stands and used ash as it steamed really well and was his first choice, but he had found great variation in performance from different pieces of wood. In the excitement of the news, we looked at the progress so far and I jammed a broken rib into place and, in pulling it out, split the gunwale. I can’t write what I said at that point.

I also glued the wing pieces onto my paddle shaft so I could shape the paddle over the next few days.

### September 9th, 2010

So oak then. As soon as I got it home I started slicing it to rib thickness lengths and fully expected to redo all my ribs in oak. I then shaped ribs 1 through 4 and put them in to soak. I estimated they would be ready on Monday for steaming.

I also decided to start shaping the paddle, and with a careful eye rough-shaped it using my belt sander. The paddle is a combination of red oak and pine. My diary entry for the paddle suggests that I did this mostly free form.

### September 11th, 2010

Danish oiled my paddle after finish sanding it by hand. I had cut the shaft into an octagonal profile and then rounded the corners a little, but left enough of the octagon so I could still feel the original shape. It needs a couple more rubdowns and more Danish oil to finish it, but apart from that I'm going to say it's done.

### September 13th, 2010

On Monday my ribs had had nearly 3 days. Mr. Cunningham suggests 3–4 days for soaking, which meant mine would be ready the 14th for my first bend of oak. Fall was also coming, and I was realizing that I'm not really going to be in the water this year. I had realistically 6–8 weeks left of usable weather for a paddle, and I was not going to rush it. I wanted to get the ribs complete and the frame finished to a point where I could hang the frame from the garage roof.

Nearly forgot to add that I also rubbed down my paddle again.

### September 14th, 2010

Tuesday, oak-steaming time. Set up the steamer and had steam out of the box after 35 minutes. Put in the white oak for 18 minutes steam time. I used 18 minutes as using the 1 hour for 1" rule, the time for 5/16" thick wood is closer to 18 minutes than 15. Every oak rib split; they fell apart like rotisserie chicken being slowly pulled off the bone. I was so frustrated with this last blow that I could not even write in my build diary. I figured I must be doing something very wrong as it cannot be this hard. I e-mailed my friend Fred from the Walden Qajaq Society. He has been very helpful as have all the members of the society in offering advice and support as I have been building.

### September 15th, 2010

Another change of direction. My soaking tub had nearly three-fourths of the ribs still sitting in it. They were all made of ash, and it would have been stupid to at least not see if I could not learn something from trying to get these all to work. I could start timing things and see if I changed some of the warm-up times or steam times if things might not improve. I also noticed that the ash ribs no longer floated — they sat at the bottom of the soaking tub without weight on them. I thought this could be key.

Oh, man, did I ever luck out with that last statement. I had deduced, and then had confirmed by a new kayak-building friend, that there is no set time for soaking; it's all down to the wood. The day it doesn't float is the day it's ready to steam. I could have saved myself a lot of heartache and potentially \$45 on white oak if I had just thought about this more.

So this is a key point for anyone building a kayak: all wood is different and behaves differently; my two pieces of ash were different in the way they steamed. White oak was different again, and my



red oak that had been soaking for three weeks still was floating — would it ever be ready? I thought of standing it on end and letting capillary action draw the water up through the hollow grain to see if that changed things.

The second lesson is the steamer and setup. Everyone is different. I started off using hot water and waiting just for the steam to show, and I think you really need to have a minimum warm-up and run time before using it. I have a mark on the inside of my water boiler to give me 4 hours of steam, and I have found that if I use cold water it's boiling in 40 minutes and good to steam with after 60 minutes. I would suggest anyone starting out to try a few test pieces in their steamer first to make sure steaming times are right for bending before trying to bend your ribs. I'm guessing that's obvious as you read this, but for me, at the time when everything else was going so well, I couldn't see beyond my need to bend ribs. Like so many other things in life, I wanted to bend them *now*!

Back to my ribs then. I filled the boiler pot, turned on the hot plate, and set the time for 60 minutes. With 30 minutes to go I took ribs 9 and 10 out of the soaking tub, hand dried them lightly with a towel, and then checked them for size against the mortises. I used my flat bottom spokeshave to make a slight taper on the rib ends so they would slip into the mortises easier, and I cleaned out the mortises as well just so there was minimal chance of splitting the gunwales. When the 60 minute beeper went off I placed both ribs in the steamer, closed it up and set my timer for 18 minutes.

Eighteen minutes was up. I pulled rib 9 out of the steamer and it was hissing — never had this before. Put it into the bending jig and pulled the first bend and nothing, pulled the second bend and nothing again. Just so you know, nothing is *good* at this stage; that means no splintering or cracking sounds. I got rib 9 to the kayak and in it went; it even looked right. I went back to the steamer, took the end cap off, and pulled out a hissing rib 10. Same thing happened: it bent perfect and went straight in. Bloody marvelous!

### September 17th, 2010

In between work and family I managed to get out and recut some more ribs. Ribs 1 through 3 I made out of red oak, and I also cut some out of ash just to be safe. I cut replacements for 4 through 6 out of ash as well and got them in to soak.

## September 21st, 2010

Got more ash ribs in, with no failures apart from one rib, which had a knot in it and bent funny. Discussions with Fred via e-mail have revealed that he also uses the “soak till it don’t float” rule for soaking time, and he only steams one rib at a time. I have switched to a single-rib steam process, as I don’t have to worry about the second rib either steaming too long or going cold.

## September 22nd, 2010

Slow day at work meant I got an extended lunch hour. OK, make that a 54-hour lunch hour. I have finished steaming all my remaining ash ribs and, right now, this is what my kayak looks like.

Now I have the process down and feel much better about the ability to get success. I rejected some ribs that were not even or parallel to the others, so I took a brave step and rejected ribs 5, 6, 8, 15, 17, 19, and 29.

The next shot shows the replacement ribs just before I thinned the ends with my revised method. To thin the ends now I have made a marking gauge that allows me to mark the rib so that the blade of my planer cuts the right length for the thinned section if I allow the front of the planer to come to the mark. So basically it’s the length of the rib gauge plus the overhang of the front of my planer.

## October 3rd, 2010

Successfully steamed and bent ribs 15, 17, and 19. They went very well and have great shape. Not quite the same story with ribs 1, 2 and 3. Ribs 1 and 2 broke; rib 3 splintered, but I saved it by lashing it with sinew whilst hot. Once it’s dry I’ll push glue into the split and then sand it down. That is actually an approach I have taken to quite a few splintering ribs, and it seems to work very well.

I need to think hard about the way I’m doing the tight-radius ribs. I used red oak from Home Depot just to see if it worked, and once the gradual radius pulls, it’s fine; it’s the tight ones that are the trouble.

## October 4th, 2010

Thoughts on ribs have taken a large leap forward. The issue with the split is that the wood is being stretched on the outside of the rib and compressed on the inside way more than it can take. As a way of reducing this, I have come up with a two-part rib design. By using two thinner sections, the difference between outside and inside deformation is lessened, and I can glue them together once formed. So I have planed two 1/8” thick rib pieces for the second rib position. The inside piece is the right length, and the outer piece 1/4” longer to allow for wrapping around. I can trim it to size before gluing or after, if I wish.

## October 12th, 2010

On the subject of ribs, it looks like the two-part idea will work well as I steamed the inner today and it was like a thin piece of plastic. It bent very easily and with little effort. Steaming time was 11 minutes, and that was using ash.



Looking at kayak designs I have decided to also ditch ribs 1 and 29. Lots of people have commented on how that seems to be too many — the average being 25 — so I'm going to take out the first and last and have 27 .

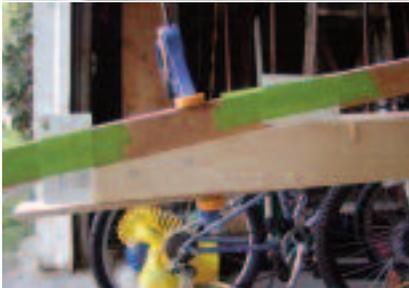
### October 14th, 2010

Glued both rib pieces together and held them in place with strong masking tape. Peeling off the masking tape revealed a good bond along the full length of the rib, and it even fits with minimal trimming.



### October 22nd, 2010

This is a big day, as I do believe that I have all the ribs in place and they are all acceptable. I laid a piece of long, thin wood over the ribs in the center of the kayak and checked for height and symmetry. I did find that a few ribs needed to be raised and some need to be planed a little to make the progression of shape through the hull smooth. So I ended up adding little riser pieces in the mortises of some of the ribs that I found to be lower than they should be.



I was thinking about gluing all my ribs in place, and I know that would restrict the kayak's ability to flex when the ribs are tied to the keelson and I'm riding over waves. So I followed Chris's instructions and made a drill stop and drilled my way through each end of 27 ribs and pegged them with 3/16" dowels, the ends of which I glued into the gunwales.



The next thing to think of was the keelson and the side stringers. I was able to use an 8' 3/4" pine board that I ripped to 3/4" x 3/4" with a fine-toothed blade on my table saw. I cut seven pieces and scarfed two pieces together to form one long piece.

### October 29th, 2010

Back from my business trip to Long Island, I decided to start on the stem (or end) plates. I followed the instruction of the book and made a template. I think the most important thing to do is to get the stem boards perpendicular to the planed edge of the gunwales. Worrying about fore-aft alignment isn't that critical as that can be tweaked even when the stem boards are in place, but not having them perpendicular and there's no way back when they are tied in place. So take your time and make sure you are all on the square.

Here are the finished stem pieces. Looking at Chris's pictures, I saw that there is a lot more difference in height between the bow and the stern. This did worry me a bit and I went back and rechecked my measurements, and according to me, I'm right. So I then looked at my historical pictures from a variety of Greenland kayak books, and they all vary. I think that is an important thing when building your own kayak. The designers of these boats have perfected the design to give you a craft to perform a specific function. But like all things, they are open to personal interpretation of the rules. So my thoughts right now are that my boat is good for me. The next one will be different, as I'm going to build one for my wife. But I have some design ideas that will be used to make hers easier to construct than mine: the use of glue, for example, in certain areas.

### October 30th, 2010

This is my final entry in the build diary for the first part of my build. It simply states, "Tied bow and stern stem pieces in place." With winter on the way in New England, my building hours were coming to an end in my unheated garage.

So for most of the coldest winter months my kayak will be hanging from the rafters of my garage. Here you can see it resting like a museum piece or a Viking long ship. I am very pleased with the way this is turning out. The next steps will be the keelson and then the side stringers. I have a piece of curved pine branch for the masik, and I'm going to use some of the oak rib stock for the hoop. With Christmas on the way I am asking for nylon cloth and epoxy resin. Come on, Santa, be good to me! ■



# *The Way of the Skinny Stick*

by Eliza Wicks-Arshack



*Delmarva Beach — looking toward bay*

*Photo: Dana Rutherford*

“Soon you will be converted to the way of the skinny stick,” I was told upon arrival at Camp Arrowhead for Delmarva 2010. I’d flown in the night before and was picked up at the Philadelphia International Airport at midnight by Brian Scarborough. He assured me I’d know which car was his based on the two long skin-on-frame kayaks atop it. I was soon to be immersed in a community of skin-on-frame enthusiasts, all of whom some way or another had been converted to the way of the skinny stick and never turned back.

I’d contacted Ed Zachowski several weeks prior in regard to a grant proposal I was writing to study traditional watercraft in modernity. I wanted to explore watercraft as not only a utilitarian tool but also as an art and cultural symbol. During the fall of 2009, I, along with my brother and three friends, spent several months in Lake Temagami, Ontario, building two birch-bark canoes, one 24-foot voyager and a second 12-footer. We attempted to maintain traditional integrity in the canoe-building process—from harvesting the materials to preparing and using them in construction of the two canoes. As an avid canoeist and whitewater kayaker, as well as a graduating sociologist, I am fascinated with the art of watercraft. The project would be an exploration of the confluence of my recreational passion for water travel and the art of boatbuilding and my academic study of culture and its development in modernity. I proposed to travel to five countries—India, Thailand, Polynesia, Peru, and Greenland—to learn from traditional watercraft builders.

The study of traditional watercraft provides insight into the relationship between cultural resilience and adaptation, resource management, and technological innovation. Watercraft that have passed the test of time carry with them traditions and technologies of the past as they evolve into the present. Polynesian voyaging canoes, for example, not only helped create the technology for catamarans but also symbolize the awesome navigational capability of ancient South Pacific sailors. Similarly, Greenlandic kayak builders, utilizing scarce materials in their environment, crafted utilitarian hunting and transportation tools, the technology of which is used in modern kayaks.

Delmarva was my first introduction to the art of the skin-on-frame kayak. And an art it is—the beauty and simplicity of the craft are remarkable. I arrived just as the skin-on-frame building class, taught by Brian Schulz of Cape Falcon Kayaks, was nearly complete. While materials used for building skin-on-frame watercraft have evolved with technology to increase their durability and accessibility—rather than sealskin, nylon cloth is used—technique and style have endured the test of time. The six students had spent the last week constructing personalized skin-on-frame kayaks and finished just in time to sport them at Delmarva 2010.



*Completed kayak and paddle*

*Photo: Dana Rutherford*

Camp Arrowhead, located on Delaware’s Rehoboth Bay on a beautiful 167-acre wooded reserve, hosted the 22nd annual Delmarva Paddler’s Retreat. The camp was equipped with a large dining hall, sleeping cabins, and a spectacular waterfront that would soon be dominated by dozens of Delmarva-bound kayaks. Participants began trickling in as Thursday came to an end—ready to teach and learn rolling and paddling techniques, to catch up with old friends and make new ones, and to have another wonderful Delmarva retreat. Greenlandic guests arrived from far away—Adam Hansen

made the journey from Qaqortoq, Greenland, and Maligiaq Padilla, of Sisimiut, Greenland, and Elizabeth Hensley arrived from Kotzebue, Alaska. The waterfront slowly became populated by incoming kayaks.

## Day 1—Friday

The few and brave awoke before the sun and in the rain for the 6:30 yoga class taught by Jasmin Rodriguez. The breakfast bell sounded at 7:30, and the dining hall quickly filled with hungry, eager paddlers. The silent auction and white elephant tables along the periphery of the dining hall accumulated donated goods, including Greenlandic carvings and a Kokatat drysuit, later to be auctioned to raise funds for Qajaq USA. After filling up on pancakes and coffee, everyone was welcomed to Delmarva 2010. People signed up for the first on-water mentoring session—with classes ranging from basic layback roll and strokes, to storm rolls and more advanced techniques.

Dana Rutherford led a tuilik-making class of six that began in the morning. She'd brought neoprene, sewing machines, and patterns for each member to fashion his or her own custom tuilik, and the sewers worked late into the night to have their new custom garments ready for the next day.



*Tuilik sewers in action*

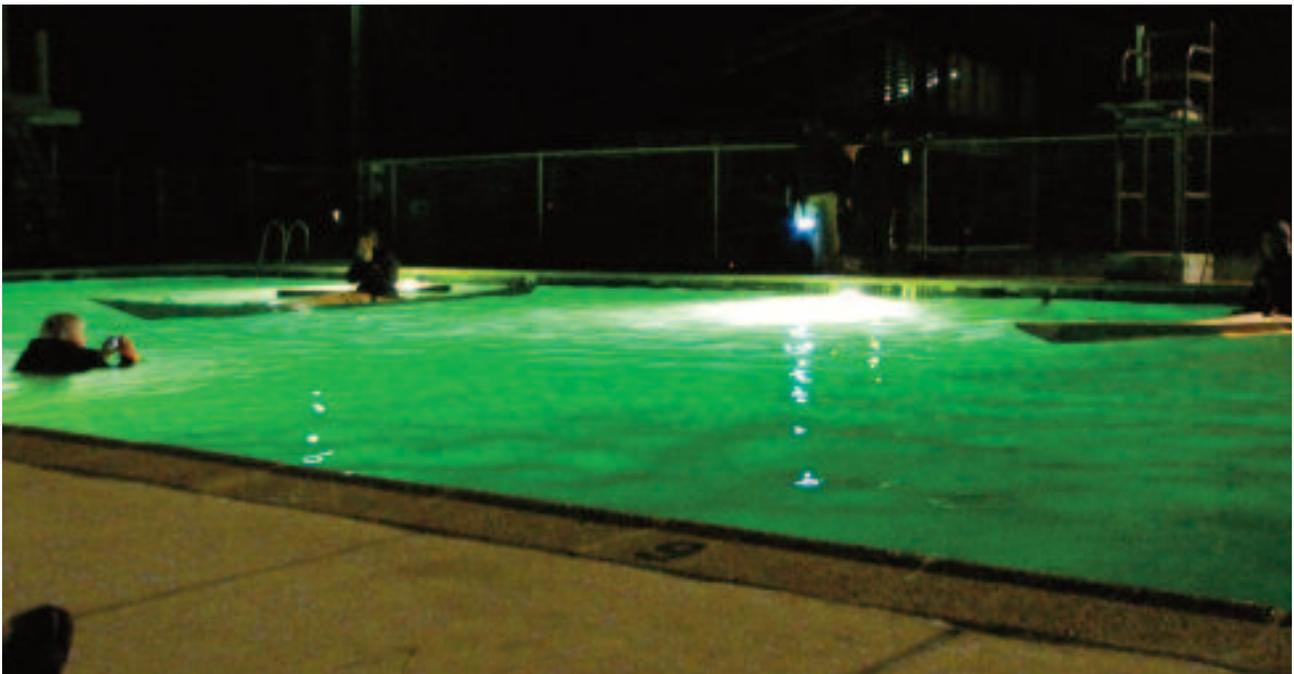
*Photo: Dana Rutherford*

By mid-morning, the few kayaks by the waterside had become a fleet. And as the winds died down and the whitecaps receded, the kayaks made their way into the water accompanied by tuilik-clad paddlers. I had never been in a Greenlandic skin-on-frame kayak. It is amazing how the kayak becomes part of you; you slip in, with the masik the brace and connection between you and your new appendage. The kayak allows you to gracefully interact with the water. As a whitewater kayaker, I was again told that I'd soon be converted to the way of the skinny stick. By noon, thanks to the experienced mentors, everyone acquired new skills—a hand roll, a norsaq roll, improved paddle strokes.

On-water mentoring continued after lunch, and the first session of Greenlandic rope gymnastics—

or allunaariaqattaarneq—began in the dining hall. The two ropes hung from a wooden structure several feet above the ground. Dubside, Dave Sides, and Heather Lamon gracefully demonstrated the various moves, calling out the names in their Greenlandic form—qajaasaarneq, “like rolling a kayak”; pakassumillugu, “riding and pulling”—spinning their body around the ropes. Outside, Pete Strand demonstrated skinning a kayak. He draped the nylon cloth over the wooden frame—a replica of a historic kayak—and after pinning it taut, he sewed it together. The six-o’clock dinner bell concluded the afternoon activities, and for the first time the dining hall was at capacity.

The first full day of Delmarva 2010 ended with a spectacular show of kayak dressage at the pool. Dennis “Jules” Bodnar and Kerry Pflugh began with a comical rendition of their first time in a Greenlandic kayak—laughter erupted as they clumsily flipped and awkwardly paddled. Jim Owen, followed by Maligiaq Padilla, each danced in the water, showcasing the beauty of the Greenlandic tradition and the elegance of various rolls. The show, without a doubt, excited people for the next two days, inspired them to learn to roll, to perfect their technique, and to hone the art of Greenlandic kayaking.



*Kayak dressage at night*

*Photo: Dana Rutherford*

## **Day 2—Saturday**

Early risers started the second day with another yoga session. Jasmin Rodriguez, who the day before had her first go at Greenlandic kayaking, had a newfound appreciation for the muscles needed for rolling and paddling and led an amazing session stretching and activating sore muscles.

After breakfast, mentoring sessions, rope gymnastics, and the kayak skinning demo ensued. The Camp Arrowhead waterfront again was speckled with the dozens of kayakers learning and teaching different techniques. The newly skinned kayak was coated in a golden stain, waterproofed, and

finished. The Apgar siblings practiced their rope skills, preparing for their lunchtime demonstration.

The noon bell beckoned kayakers back to dining hall for a feast of a lunch. As people ate, others perused the auction tables—bidding on the silent auction and scoping out desired live auction items. After people settled down with their food, Sarah and Nate Apgar competed against each other on the ropes. Dave Sides announced the moves and Dubside kept score, deducting points when a move was wrongly executed or skipped. Sarah was first up and put on quite a show, wowing the hall with the completion of several very difficult moves. Nate followed and also wowed the crowd, scoring nearly as high as his sister.

Everyone geared up and headed back to the waterfront for the last on-water mentoring session and to participate in the kayak games. I had my first try at harpoon throwing. It's quite a trick to throw a harpoon from a tippy kayak and not only stay upright but to get the harpoon anywhere near your target — let alone throwing a harpoon at a seal or whale and then hauling it back to shore to feed your family.

After dinner, Dubside showcased a short film of his on Greenlandic life and the annual kayak competitions. Dave Isbell gave a presentation on his expedition on Baffin Island, sharing pictures of the stunning scenery. Gorgeous art, carvings, paddles, and much more were auctioned off. And at the close of the silent auction—after winners collected their items—a transition was made from the dining hall to Cabin 3, where the party continued late into the night.

### Day 3—Sunday

The once calm waterfront was now streaked with whitecaps. Nonetheless, teams assembled for Palo's wedding, a race with four legs: first a sprinter, then a backwards paddler, then a kayaker towed a seal (due to the lack of dead seals, a person pretended to be one), and finally Palo kayaking away with his stolen wife seated on the back deck of the kayak. The two-time defending champions won the race, closely followed by the all-women team. The race was an exciting, fun end to the wonderful weekend retreat of Delmarva 2010.

The last of the items on the auction table was raffled off during lunch, and cabins were cleared out. Thanks were extended to the kitchen staff who made the weekend possible, as well as all the folks who organized the event. And I personally would like to thank Qajaq USA for granting me the opportunity to experience and participate in this wonderful event and to everyone who shared their knowledge on traditional Greenlandic kayaks with me. Qujanaq. ■

*Eliza Wicks-Arshack is a senior at Colorado College. She has been doing research on the tradition of kayaks in Greenland and is very interested in native watercraft. She spent a month and half in Northern Ontario doing an independant study about the role of birch-bark canoes in the Ojibwa community, specifically the Teme-Augama Anishnabai (the First Nation group in Temagami, ON). She attended Delmarva in 2010 as a guest of QajaqUSA.*



*Flags on display at Polarfest*

*Photo: Dana Rutherford*

## *Qajaq USA Public Relations*

by Terry O'Malley

*Following is a brief report of Public Relations activities for this past year.*

In March, 19 Qajaq USA members made the trek to represent the organization at the annual Paddlesport event in New Jersey. Staffing the display were Jules Bodnar, Chuck Ficca, Ann Sharp, Matt Moskal, Dave Sides, Heather Lamon, Fred Randall, Ed Lamon, Ed Zachowski, Tracy Coon, Nate Apgar, Sarah Apgar, Dan Segal, Judy Segal, Kevin Kehoe, Gary Grzybek, Rosanna Lovecchio, Milton Puryear, and Terry O'Malley. Stu and Pam Selkin, Al Gerhardt, and Ragnar and Jean Midskogen also stopped by, hung out, and helped. Unable to make it in person, Wes Ostertag sent his Illorsuit kayak as his proxy. At Paddlesport, the host's granddaughters also acted as associate members by demonstrating their prowess on the ropes, paddling kayaks resting on balance boards, and being carried processional-style through the crowd.



*Terry O'Malley helps Jules Bodnar work on his balance at Polarfest*

*Photo: Dana Rutherford*

Qajaq USA was given an expanded space and filled it with the Greenland ropes rig, multiple replica kayaks, reference materials, balance boards, and zealous devotees. Observed by O'Malley, "We were one of the most informative, and certainly the most entertaining, display there."

One of the highlights of the show was a find by Dan Segal. He discovered a young whitewater kayaker from Montana who was working in one of the accessories booths. After taking the young man through various maneuvers in his De Rijp while set atop on a very tippy balance board, Segal took his contact information to send out to the South Sound Traditional Inuit Kayak Symposium.

April saw members Fred and Sharon Randall, Tracy Coon, Ed Zachowski, and Terry O'Malley heading to Charleston, S.C., for the annual East Coast Canoe and Kayak Festival. Armed with a small armada of replicas, reference materials, and smiling faces, the members at the booth enjoyed many protracted conversations with event attendees. The new Qajaq USA brochure that Coon and O'Malley had been working on, with input from the board and publications committee, was completed and printed just in time for this event. Following on the interest shown at Paddlesport, Fred Randall did a presentation on the construction of the Goodnow kayak.

May was a particular high point. Through continued discussions between Peter Riley and Terry O'Malley, Qajaq USA was invited to take part in the Polarfest at the American Museum of Natural History. On hand for this event were Dan and Judy Segal, Jen Torres, Vernon Doucette, Fred Randall, Milton Puryear, Peter Riley, Tracy Coon, Chuck Ficca, Ann Sharp, Jules Bodnar, Dana Rutherford, Ed Zachowski, and Terry O'Malley. Although she was unable to attend due to a gallery showing in Washington, D.C., Alison Sigethy followed Ostertag's lead from Paddlesport and sent her sealskin tuilik, mittens, and boots as her proxy. The following day, the replicas, which had been displayed in the museum, were brought over to Pier 66 on the Hudson River for an on-water Greenland paddling and rolling technique demonstration performed by Puryear, Bodnar, Rutherford, and Randall with narrations by Dan Segal. Additional members partaking in this event were Judy Segal, Doucette, Gary Grzybek, Rosanne Lovecchio, and O'Malley.

In July, Qajaq USA members took part in the third annual City of Water Day on Governors Island in New York City. In attendance were Fred Randall with guest Nananda Coll, Milton Puryear, Matt Moskal, Pat Slaven, Terry O'Malley, Laura Ventura, Kevin Kehoe, Ed Zachowski, Tracy Coon with guest Eric Capers, Jules Bodnar, Wes and Kathy Tanaka, Peter Riley, Jack Gillman, and Gary Grzybek with Rosanne Lovecchio and their daughter Jess Grzybek. Also participating were Evan, Sarah, Nate, and Alie Apgar. The Apgars and Jess Grzybek went over by vehicle to set up and staff the downsized mobile ropes setup, while the remainder paddled down the East River or, in the case of Jack and Peter, the Hudson River. During the day, Qajaq USA put on two on-water demos. The first was in



*Young kayaker in newly skinned kayak*

*Photo: Dana Rutherford*

Buttermilk Channel at Governors Island. Demonstrating were Puryear, Bodnar, Gary Grzybek, and Lovecchio. Assisting them on the water were Kathy Tanaka, Capers, and O'Malley. Zachowski narrated from the seawall. Immediately following this demo was a brief stop and crew change at Pier



*Steve with his kayak frame*

*Photo: Jack Gilman*

101 on the island before the recomposed team of Puryear, Bodnar, Gary Grzybek, Ventura, Coon, Capers, and O'Malley headed over to the foot of the Brooklyn Bridge for the next demo at the newly commissioned Brooklyn Bridge Park.

Other summer events with Qajaq USA presence were June's Outdoor Expo in Freehold, N.J., and July's All Club Invitational in Brooklyn, N.Y., hosted by the Sebago Canoe Club. In the New Jersey event Jules Bodnar, Chuck Ficca, Ann Sharp, and Terry O'Malley managed to proselytize a bit about kayaks with three on display and an on-water demo performed by Bodnar, narrated by O'Malley. Representing Qajaq USA at the Brooklyn event were Milton Puryear and Terry O'Malley.

Traditional Greenland kayak equipment and techniques are enjoying a huge increase in popularity in the N.Y., N.J., and P.A., area at present.

In N.J., this is due, in part, to the fervor that members of the Jersey Shore Sea Kayak Association who participated at the Delmarva Paddler's Retreat last year bring to the table. After last year's retreat, the 14 JSSKA people who attended returned back to New Jersey and began a flurry of activity relating to skinboats and rolling. Throughout last winter, there were two groups of boat-builders working on Yost-style construction or traditional replicas. In early November, Ed Mann arranged for an in-water traditional skills session taught by Alison Sigethy. This was repeated in early August of this summer. In the fall, Dana Rutherford led a tuilik-making workshop. Following on the popularity of this workshop, Rutherford conducted one at Delmarva.



*At the shop (left) and setting ribs (right)*

*Photos: Jack Gilman*

Meanwhile, over on the other side of the Hudson River in Yonkers, N.Y., Jack Gillman and members of the Yonkers Paddling & Rowing Club, hosts of the Hudson River Greenland Festival, repeated their wintertime boat-building workshops.

Elsewhere in the country, Qajaq USA members are helping to introduce the general public to the organization and its mission. In late October, members Laura Ventura and Mark Kaufman headed up a presentation on traditional kayak building to familiarize boat-building aficionados with skin-on-frame replica construction. December also saw a Greenland skills workshop initiated by Jane Rosalind in South Carolina. Out on the West Coast, the Greenland Week Competition and other events led by our members continue to further the mission of Qajaq USA. ■

# *Tools for paddle making*

# *and kayak building*



Standard-angle block plane, 3/4 view. Photo: Tom Milani

by Dave Niles

*Author's note: With the exceptions of the pull saw and the Shinto rasp (Japan), the Kunz spokeshave (Germany), and the Record block plane (England), most of the tools mentioned in this article are made in the United States or Canada. These are the tools most accessible to me and with which I'm most familiar. But numerous tools for equivalent functions are made in other countries. Also, in very remote and poor areas workers make their own tools from scrap steel and wood, substituting resourcefulness, local knowledge, and skill for their inability to obtain new tools. Use what tools you can obtain locally within your budget, learn to learn to sharpen them and then take pride in using them skillfully.*

## **Introduction**

It has been suggested to me that I could offer Qajaq USA membership some information on hand tools by writing an article for *The Masik*. I don't pretend to have the final word on hand tools or be the expert of last resort. I'm going to focus on what I consider practical information on tool sharpening, the few tools to buy first, suggestions on what features to look for in those hand tools, some

advice on inspecting old tools, and a bit of safety information. My knowledge was gained the hard way through some knuckle-headed buying, some selling, and considerable experience using hand tools. Tool collecting is a recurring disease that I've had for quite a while; I'm on the road to recovery, although still experiencing occasional relapses.

For the record, power tools have their place. Band saws are wonderful for cutting irregular shapes and cutting out Greenland paddle blanks. Power jigsaws will also work for those tasks. Hand-held power planers are fast at flattening and shaping wood. Jointers can be used to reach the thickness taper of Greenland paddles as an alternative to a band saw. A table saw can quickly mill out initial paddle blanks, a keel, stringers, and gunwales. Completing a project with hand tools does take more time. If you are going into commercial production of wood items, "time is money," and the right power tools, used correctly, are considerably faster and therefore more cost efficient. However, it is also easier to make major mistakes with power tools; they are quite expensive; they can be very, very dangerous; and they are always extremely loud with the potential to damage hearing (always use hearing protection). If you're still not convinced on the desirability of using sharp hand tools for

*The finest dust particles are the most dangerous to our lungs and machine dust collectors are the worst at collecting the finest dust.*

noncommercial woodworking, consider the following point. Power tools create copious amounts of dust. Dust collection on machines reduces the airborne dust but doesn't eliminate it.

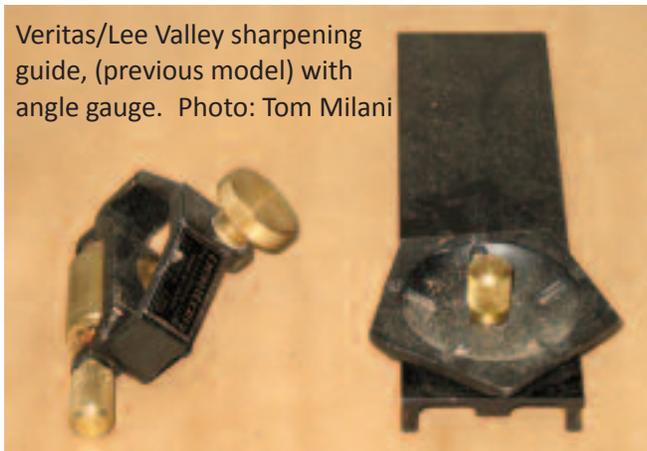
Extensive exposure to wood dust will damage your lungs. The finest dust particles are the most dangerous to our lungs and machine dust collectors are the worst at collecting the finest dust. The dust of many woods — especially our beloved western red cedar — has a high propensity to promote an allergic reaction. I'm allergic to western red cedar dust from spending time in the cedar-dust-laden air of wood-canvas canoe shops in the 1980s. Avoid the possibility of developing this allergic reaction by avoiding dust creating power-sanding machines as much as possible. Always wear a good dust mask when machining or sanding any wood, especially western red cedar and tropical hardwoods. Better yet, do as little sanding as possible — reach or get near the final surface of the wood with sharp hand tools. If you must still sand, do it outdoors while standing upwind and wearing a good dust mask or use a fan to blow the dust away from you (downwind). In indoor Greenland paddle-making classes, I usually leave the work area if power sanders are brought out. Even outdoors, I still wear a mask.

Each woodworker will have to decide where to draw the line between power and hand tools. In your home projects, my suggestion is to savor the quiet joy of using sharp hand tools.

Some final protective steps for those who still choose to sand: when you've finished sanding for the day, swab out your nose with a wet Q-Tip to get out the dust traces that slipped under your dust mask. Change clothing when you go inside at the end of the day, and wash your clothes because they are inevitably contaminated with wood dust. Take a shower to get the dust out of your hair and off your skin. Western red cedar is a great wood for our projects; just take every precaution to avoid its dust.

It is my assumption that the two most common woodworking projects for Qajaq USA members are Greenland paddles and skin-on-frame kayaks. I'm going to simplify my task by focusing on sharpening and the few tools most helpful in those projects: the block plane, the spokeshave, and the drawknife.

Before I delve into those three tools, there is one concept that has to be emphasized: The tool must be sharp (and properly adjusted) to work well. I repeat, the tool must be sharp! Redundancy: You must sharpen it!



Veritas/Lee Valley sharpening guide, (previous model) with angle gauge. Photo: Tom Milani

## Sharpening

A sharp edge comes from the intersection of a flat polished back surface and a sharpened bevel surface. Usually, tool blades are not initially flat on the back surface. A good edge cannot be formed if the back surface is uneven; if there are grind marks, rust, or pits on the blade back, they will cause a saw-like edge when you sharpen the bevel to meet the back. The first step in sharpening is to flatten the backside of the

blade, while also removing all pits and grind marks. If the blade back has been polished and is only slightly dull, resharpening with fine grit will be sufficient. Often, especially with a new tool or a flea market find, you will need to start with a coarse grit to flatten the back. Next, fine grit has to be used to remove the scratches from the coarse grit. Then the backside, for at least the .25" to .5" nearest the edge, must be polished to a mirror finish (reflective) on very fine grit. The whole backside of the blade doesn't need to be polished to form a sharp edge. This can be done by positioning the blade edge across the sharpening stone and placing a very thin machinist's rule under the far side from the edge. Stroke the blade on the stone 5–8 times. (Note: do not use this trick when flattening the backs of chisels.)

The final step is sharpening the bevel on the topside until it meets the polished back, forming a sharp edge. Ideally, this edge bevel should be about 25° for use on softwood and 30°–35° for hardwood. Don't over fixate on the edge bevel angle at this time; anything close will work on most of the woods we use. A slight wire edge will be formed on the backside when you have sharpened the edge down to the polished backside. When this wire edge is formed across the whole tool edge, you have the signal to stop working with that grit. You can feel this "wire edge" by running your finger gently on blade back moving towards the blade edge — don't run it across the edge or you will get a cut. You remove this wire edge by briefly polishing the back again: three to four swipes on fine grit will do this. One can finish off the edge by stropping it on a strip of leather glued to a flat surface and impregnated with stropping paste. (If you used a very fine abrasive in your final sharpening, the paste should be skipped when stropping.) To strop you draw the blade back an about 5–10 times on the leather (never forward).

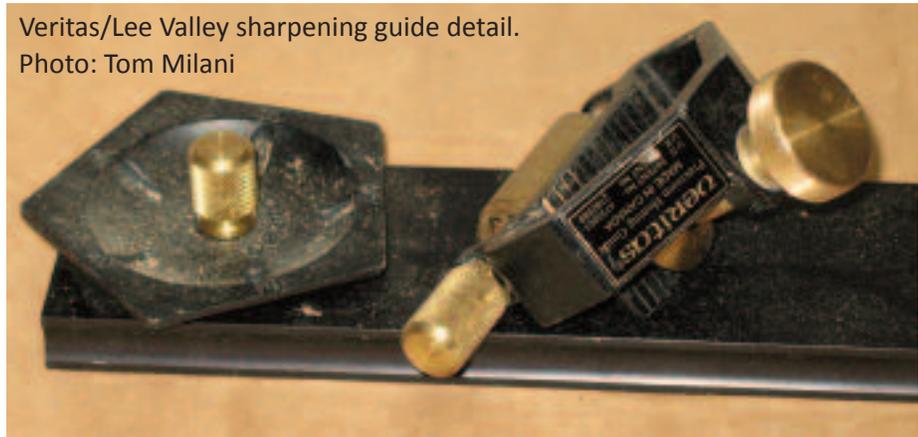
This step will give the best edge, but it is a bit excessive for the softwoods we encounter in making kayaks and paddles. I'm going to avoid discussing secondary bevels in this basic presentation.

A last, but important, step is to “ease” the blade edge at the corners a few degrees: push down on one corner for a few strokes while pulling the blade backwards and then do the same with the other corner. This makes the blade edge very slightly convex, so the corners of the edge don't dig in and leave lines on the wood surface.

## Sharpening guides

Experienced woodworkers develop a feel for sharpening without guides, and many do so as it's faster than using a guide. Beginners will be more successful using sharpening guides until they develop the skill to sharpen freehand. There are a number of sharpening

Veritas/Lee Valley sharpening guide detail.  
Photo: Tom Milani



guides on the market at varying prices. I favor the Lee Valley (USA)/Veritas (Canada) Mark II system. It's one of the more versatile sharpening system and unfortunately also one of the most expensive. (Note: The photos show the older model of the Veritas/Lee Valley sharpening guide.) For beginners learning to sharpen plane irons and chisels who aren't sure they will use them enough to justify the price of the Lee Valley/Veritas system, or for those who don't want to spend that sum of money, there are alternatives. A number of companies manufacture copies of the now out of production “Eclipse 36” side-clamping honing guide. The Eclipse 36 clones sell for \$10–\$15 and work well on bench plane blades and wider chisels. They work OK on block plane blades (the guide likes longer blades) and poorly on spokeshave blades. Inspect it for good machining as many of the knock-offs have poor machining covered by thick paint. They can be refined with careful filing.

In summary, while I personally favor the Lee Valley/Veritas Mark II system, my suggestion is to start with the much less expensive Eclipse-style side-gripping honing guides. Most guides — even the expensive Lee Valley/Veritas — have a hard time holding spokeshave blades because they are so short. I have found the Stanley 16-050 honing guide to be the best guide to use with spokeshave blades. At \$16.50 for the guide, including a small bottle of honing oil and a two-sided combination oilstone (not a high quality stone), it is also the “best buy” winner.

When you reinsert blades back into the tools, spokeshave blades are inserted with the bevel down. Block plane blades are used with the bevel up. An easy way to be sure you have inserted the blade correctly is to look for the manufacturer's logo. It should be visible on the top of the blade when looking down on the tool. If the logo is showing on the underside, it's in upside down — just turn the blade over and reinsert it.

## Sharpening materials

There are many materials and methods that can be used for sharpening, and they all work if used correctly. I'll present some of the most common. With each possible material one has to start with coarser grits and move to finer grits.

### “Scary Sharp”

If your budget is tight, spend your money on the best tools you can afford, and start sharpening by using progressive grades of wet/dry sanding paper adhered to plate glass, flat marble, or your table saw top (I don't like this option due to the possibility of sharpening grit getting into the saw mechanism and bearings). You can find extensive information about this method on the Internet: search on Google.com for “Scary Sharp” and you will find all you want to know. At a later time after buying the tools you initially need, you can buy a few sharpening stones when your savings have been replenished.

### Oilstones

High-quality oilstones are very expensive to buy new. One inexpensive alternative is to find old oilstones at flea markets. They are usually glazed over with oil and frequently dished in the center. Learn to see the difference between man-made combination oilstones, soft natural Arkansas oilstones (good), and the hard Arkansas stones (best). Usually, the man-made stones are combination stones, and you can see the different grit patterns of the two sides. Soft Arkansas stones, often called Washita stones, have a coarser surface than hard Arkansas stones. Hard Arkansas stones are translucent or black (after cleaning). If the stone isn't dished (check with a straightedge), you can remove the oil glazing the surface by boiling in lye or using oven cleaner. Boiling in lye is very, very dangerous, and my strong recommendation is to avoid doing so. Oven cleaner is diluted lye, and it's what I suggest using instead, observing the following precautions: only use oven cleaner outside and while wearing a chemical mask (fumes are toxic); also wear safety glasses, long-sleeve clothing, and rubber chemical-resistant gloves. Keep a hose nearby to be able to wash off any splatters, as oven cleaner can burn you. Spray the oven cleaner onto the oilstone and let it soak for a while. Then wipe it off the stone with paper towels after each application. It does take a few more applications, but using oven cleaner is much safer than boiling the stone in lye.

While not the absolute best oilstone you can buy, a Norton combination coarse/fine India oilstone is a quite serviceable option and inexpensive place to start (\$21.95). It has finer grit than the less expensive coarse gray combination oilstones in many box stores and is worth the few dollars more.



800/4000 grit waterstone.

Photo: Tom Milani

### Waterstones

Waterstones work quite well and cut considerably faster than oilstones. They are made to shed a paste (slurry), which helps in the sharpening, but as a result, they quickly dish in the middle with use. They must then be made flat again by coarse emery cloth on glass, a coarse diamond

stone, or the special truing stones made for that task. Waterstones need to be soaked in water for about a half hour before use and then kept wet with a spray bottle of water. Craftsmen who work inside and use them frequently overcome this by storing them in a plastic bucket filled with water. Wet waterstones must be protected from freezing, so those of us in northern climates with unheated shops cannot use this shortcut. During sharpening, waterstones must be kept wet.

My suggestion if you want to use waterstones to sharpen tools is to start by buying a 1000/4000 grit combination stone. There are many other different grits, but this combo stone will work for our use. Norton makes a good combo stone with either 1000/4000 or 1000/8000 grits for \$50–\$70. There are also many fine imported Japanese waterstones available.

### **Ceramic stones**

Newer on the market are ceramic sharpening stones. They are more expensive than waterstones, stay flatter longer, and are the best stone for sharpening the very hard steel in some expensive tool blades, such as Lie Nielsen or Lee Valley. They don't need to be presoaked like waterstones, but still need to be sprayed with water when in use. I have personally moved from waterstones to ceramic stones because waterstones annoy me with their tendency to dish in the center and because I have some tools with A-2 steel. A combination 1000/4000 ceramic stone would serve anyone well.

### **Diamond stones**

Diamond stones cut fast in the coarser grits and are very durable. I'm less pleased with their finest grits. If you are buying old tools at flea markets, add a coarse diamond stone (see below) to your sharpening kit for initial work. Use the diamond stone to true the edge or clean the back of blades before polishing (or use the Scary Sharp techniques).

### **Conclusion**

Scary Sharp is the least expensive method and works. It is best for lighter use as the cost of abrasive paper will build rapidly with heavy use. Old-timers with decades' old collections of hard Arkansas stones won't give them up for new stones. Waterstones have now become the stone of choice for many woodworkers. As frequently is the case, there is a trade-off between oil stones and waterstones. Waterstones cut faster and also require briefly spending time on reflattening them after most sharpening sessions. Oilstones rarely require spending time reflattening, but they cut more slowly. Ceramic stones are a newer and more expensive alternative to waterstones. Pick an approach to sharpening, and learn to be successful with that approach: they all work.

Until this point I've avoided mentioning power sharpeners because all the inexpensive ones do more damage than good in sharpening. There are some that have stones that turn at slow speeds and utilize continuous water supply to the turning stone to avoid overheating the tool edge. However, they cost from \$300 to \$700. You have to sharpen a lot of tools to justify that cost.

A final factor to consider — waterstones and ceramic stones don't like any oil contamination and will glaze over from it. You must decide to use oilstones or use waterstones/ceramic stones, but never

mix waterstones and oilstones when sharpening the same tool or you will gum up the surface of the waterstone/ceramic stone with oil residue. If the tool was sharpened with oil or stored with an oil coating, the oil film must be removed from the tool with a solvent before sharpening it with waterstones or ceramic stones.

*Stanley 9 1/2, standard-angle block plane, side view.*



*Photo: Woodcraft.com*

## Block planes

### Introduction

The first tool I'll discuss is the block plane.

A block plane is the most important tool for paddle-making and kayak-making. Spend money here first if your budget is very limited, as a block plane is also useful for general wood-working and numerous homeowner projects such

as trimming a door or drawer that's sticking. Flea markets are the least expensive way to get a quality block plane. Inspect it carefully for broken or missing parts. Some surface rust is usually present, but avoid planes with deep pitting on the plane sole and especially on the back of the blade. If you are unsure of how to inspect the tool, take someone knowledgeable with you on your first ventures into prowling flea markets for tools. Stanley made so many block planes, for so many decades, that they can always be found with a bit of searching and can be bought from old tool dealers. Stanley tools were best machined and finished in the early 1900s, remained good through the 1930s, and then started a slow but steady downward spiral, decade by decade, to their present sorry state. Stanley "Sweetheart Era" tools are generally considered their best quality period. The blade of "Sweetheart Era" Stanley tools has a heart stamped on it with SW inside as the Stanley Works logo. Sargent, Millers Falls, and Record also made good block planes, and are worth considering. Used Craftsman planes were made by whoever met their price point at that time, some were made by Stanley, some by Miller's Falls, and Sargent made later ones.

### Low-angle block planes

My suggestion is to find a used or buy a new adjustable-mouth low-angle block plane because it can work better in some difficult grain situations and does work better on end grain. You can open the mouth to take off more wood on each pass or close the mouth to take a thinner shaving or to deal with

difficult grain. The low-angle block plane blades are set in the plane at 12°. They are harder to find at flea markets and cost over twice as much as standard-angle block planes. The most common adjustable-mouth low-angle block plane is the Stanley 60 1/2. In your inspection, check that the cap lever is intact and works to lock the cap. Try the blade advance/retract adjustment mechanism (always



*Stanley 60 1/2 low-angle block plane*

*Photo: Woodcraft.com*

loosen the cap first). Then look at the bottom for excessive pitting or cracks. Look on the bottom at the back of the adjustable mouth for cracks at the outside back edge of the mouth, caused by someone cranking the cap on when it is set too tight. The “knuckle cap” Stanley block planes are my favorites of the many Stanley models for how they fit in the hand and the ease with which the cap locks down. But they are especially prone to mouth cracks from the cap being forced down when the attachment screw is set too tight. If the lever cap is hard to lock down by whatever method designed into that plane, stop and loosen the slotted screw that the cap fits over by 1/4–1/2 turn. Conversely, if the cap is too loose, turn the same screw in a bit. A new Stanley 60 1/2 low-angle block plane can be made to work, but you will have to spend an hour or two smoothing and flattening the more crudely machined bottom, polishing the blade back, and maybe truing the mouth. Unless you are going to use it frequently, it may not be worth your while to buy a better block plane than a Stanley 60 1/2.

Used Stanley adjustable-mouth low-angle block planes can be found for \$25–\$35 and if you are lucky, for less. A common upgrade for all Stanley planes is to replace the blade with a thicker after-market blade made with better steel such as a HOCK blade. This upgrade brings the better Stanley models close to Lie Nielsen performance at a fraction of the price of that product. If you find a used Record block plane at a good price, buy it and smooth the bottom. The Record adjustment screw has a lot of lash, but otherwise it’s well made and the blade is thicker (better) than Stanley’s. Old Sargent low-angle block planes are also good — they have a more durable cap lever than Stanley but a cruder mouth-adjustment mechanism. Miller Falls block planes are less common but also work well. Frequently, the mouth on old adjustable-mouth planes doesn’t move when you try to adjust it. Unscrew the knob and take the adjusting lever off. Insert a thin wood dowel in the hole. Gently tap the dowel with a hammer. After the bottom plate comes out, clean up the slot on the plane bottom and the sides of the adjustment plate, add a drop of oil, reassemble the plane, and it will move easily.

## Standard-angle block planes

Standard-angle block planes have the blade set in the plane at 20° and are easy to buy inexpensively at any large flea market. They will work fine for most kayak construction and paddle-making, but less well on end grain. They can work better with some difficult figured grain patterns. Should you want to consider a standard-angle block plane, look for a Stanley 9 1/2 (it has an adjustable mouth). There are some very old standard-angle block planes that, while lacking the adjustable mouth, work well because they were made with a very narrow mouth opening. Unless you’re a tool nut like me and are willing to pay the substantial price of a Lie Nielsen or Veritas, don’t buy a new standard-angle block plane. You can easily find a used standard-angle block plane of good quality for \$5–\$20. For two years I helped Don Beale’s paddle-making classes at Delmarva by bringing sharpened block planes for participants, and most were standard-angle block planes. The paddles came out fine and the cedar didn’t complain.

## New vs. used

If you’re without a block plane and in a rush to get started constructing a paddle or a skin-on-frame kayak, buy a new Stanley 60 1/2 and spend the time to refining the surfaces. While not in the same

league as a Lee Valley/Veritas or Lie Nielsen block plane, the 60 1/2 will work well after tuning. It has been the standby of U.S. tradesman for a number of generations. Stanley has just introduced a higher quality “Sweetheart” line made in Mexico to try to get back some of the high-end (more profitable) sales now going to Lie Nielsen and Lee Valley/Veritas. This new Stanley line has not yet met the high standards set by Lee Valley/Veritas or Lie Nielsen.

In the last few years there have been some block planes made in Asia appearing at tool stores at lower prices. Generally, they are copies of the Stanley 60 1/2 or the Record 60 1/2 (which is not being made anymore). I am not very familiar with most of them, but the few I’ve tried were of poorer quality than an old 60 1/2. A recent model has the look of Lie Nielsen planes, but I’m quite skeptical that they have achieved the same quality. Look carefully at the machining quality (often hidden by thick paint), fit of the parts, smoothness of the adjustments, and the flatness of the bottom.

At \$145, the Lee Valley/Veritas low-angle block plane is a very high-quality tool. It has the best blade adjustment mechanism of all block planes. The Lie Nielsen low-angle block plane has equally high quality, feels great in the hand, and is aesthetically superior. It sells for \$165. Both come with thick blades of very high-quality steel, are very well machined, have excellent adjustment features, and are worth the premium cost if you use them frequently or are a tool snob like me.

Stanley 151 spokeshave, top. Photo: Tom Milani



## Spokeshaves

A spokeshave is the next hand tool to get for kayak and paddle making. Like block planes, older ones have better machining than most new ones and are less expensive. When buying used spokeshaves, inspect for rust and check the adjustment mechanism if present (Stanley #151, #152, #53, #54.) Spokeshaves can be used with a push stroke or a pull stroke. For those who prefer the push stroke, the Stanley #151 has indents for comfortable thumb placement that are lacking on nearly every other spoke shave.

### Nomenclature: Stanley Model & Characteristics

- #51 Standard mouth, gull-wing handles
- #52 Standard mouth, straight handles
- #151 Standard mouth, gull-wing handles, blade adjustment screws
- #152 Standard mouth, straight handles, blade adjustment screws

#53 Adjustable mouth, gull-wing handles

#54 Adjustable mouth, straight handles

#55 Hollow mouth

Stanley 151 spokeshave, underside.  
Photo: Tom Milani



### Standard-mouth spokeshaves

Among the most common spokeshaves are the Stanley #51 and the Stanley #151. Since blade adjustment is usually a stressful process for beginners learning to use the spokeshave, they should start with a #151. The #151 has two adjustment screws added that fit into slots on the top of the blade for precise blade adjustment (depth and angle). Experienced users who have learned to adjust their spokeshave (or beginners who accept a short learning curve) can save money buying a #51, since the #151 and the #51 are exactly the same tool where the blade meets the wood. The #51 is always less expensive, new or used.

Both have “gull wing” handles — the handles rise up from the base like the wings on seagulls. This gives better clearance for your fingers when planing wide wood surfaces, but most current users don’t use spokeshaves for that task. The same feature, gull-wing handles, makes them prone to chatter if not well adjusted and used with just the right touch because your hands are higher above the wood surface. Placing very slight pressure on the front edge of the mouth while using gull-wing spokeshaves greatly reduces this tendency to chatter. There were some Stanley spokeshaves made with straight handles instead of gull-wing handles. I prefer the straight handles because they are less likely to chatter (hands are closer to wood surface), but they are much harder to find. The #152 is a #151 with straight handles, and a #52 is the #51 with straight handles. It is also possible to screw a wood insert under the handle of a gull-wing spokeshave, lowering your fingers to close to the position of a straight-handled spokeshave. Search in the *Wooden Boat* magazine index for an article by Harry Bryant showing how to do this.

### Adjustable-mouth spokeshaves

If you are going to do much spokeshave work on hardwoods, an adjustable-mouth spokeshave is useful. It has a screw on the front that when turned opens or closes the mouth. Stanley made the #53 (gull-wing handles) and #54 (straight handles), and they are somewhat easy to find, as most

people don't know what the adjustable-mouth feature is used for. I favor the # 54 adjustable-mouth spokeshave for its straight handles. As on a block plane with an adjustable mouth, you close the mouth to get a finer shaving or to reduce tear-out on difficult wood. You open the mouth to take off more wood with each pass. In your inspection, work the mouth adjustment to be sure it remains flat to the bottom while moving in and out. There is a spring at each corner of the adjustable mouth; be sure both are there. I favor using the #54 adjustable-mouth spokeshave for its straight handles. Adjustable-mouth spokeshave blades take a bit more skill to adjust, they are worth having for hardwoods. I adjust mine by setting the blade just a bit shallow of cutting depth and then use a lightweight brass hammer to gently tap the blade down just enough to cut.

## Other spokeshaves

Spokeshaves with a convex bottom can be used for working on the shoulders of a shouldered Greenland paddle, but I don't recommend buying one just for that use unless you are making a lot of paddles. The same shaping can be done with sandpaper wrapped around a wood dowel. The Stanley #55 hollow-mouth spokeshave can be helpful for forming paddle shafts. But you can achieve the same results using a block plane, followed by a spokeshave, and then a slit belt sander belt used on the shaft with the motion of someone buffing shoes (wearing your dust mask). Last, wrap a quarter sheet of 100 grit or 150 grit sandpaper around the shaft and slide it back and forth to remove the scratches from the belt. Repeat this sanding with finer grit.

In the heyday of hand tools there were many companies that manufactured spokeshaves beside Stanley, often in differing configurations and styles. If it is old and not damaged, it will probably work fine after the blade is sharpened properly in the sequence discussed in the sharpening section. Beginners shouldn't pay much for any old spokeshave other than an old Stanley #151/152, as old spokeshaves are common and the demand by the general public is low. New spokeshaves are also made in Germany and sold under the Kunz brand. They have been inexpensive, but prices are rising. They need an hour or two of work before they are usable because of poor machining, hidden by thick green paint. Avoid the new Stanley #151 made in England (poor machining); old American Stanley spokeshaves are better quality. If you live in England there are many fine old spokeshaves made by Preston, Record, and a number of other companies. The #151 clones made in India or Asia that I've seen are poor quality. Buy an old spokeshave; spend the time cleaning it up, and you will have a better tool for less money.

## Drawknives

You don't need a drawknife to make a kayak or paddle. Yet, skillfully used, it can take at least an hour off the time to make a paddle and is helpful in shaping many of the parts in kayak-building. They are very useful for quick rough shaping of wood. In skilled hands, a drawknife can also do fine shaping. Since working with Don Beal, and watching him correct a paddle shape in a minute or two using just a drawknife, I always use a drawknife while paddle-making. For working on kayaks and paddles I suggest a drawknife with a 6"– 10" blade width and prefer 6"– 8" width. There are

Drawknife, bevel up. Photo: Tom Milani



4"– 6" drawknives, called pattern-maker drawknives, favored by some users. They are quite useful for finer work, but for me, they lack the heft for coarser cuts. There are also many drawknives with 12"– 20" blades at flea markets. They are useful for peeling bark off logs and for timber-frame building, but wider than desirable for ease of use for paddle making or kayak-building. Keep looking to find a narrower blade width. Every farmer and carpenter had a few drawknives and they are not used much any more, so finding a used one is easy and inexpensive. The narrower blade width drawknives from just a few makers such as Wetherby, PS&W, Greenlee, and Swan command high prices — \$25–\$35. Just about all the other brands work fine and are less expensive.

### Inspecting drawknives

Condition is what's most important in used drawknives, and the condition of the blade is the really important factor to inspect. The most critical point to inspect is the back of the blade for deep pitting (like other blades it will need to be polished in sharpening). I bring a small piece of emery cloth with me to check whether the rust that is usually present is just surface rust that is easily cleaned off or hides deeper pitting. If there is substantial or deep pitting, reject it. It takes many, many hours to carefully smooth deep pits out of the back of the blade, and you can't get a true edge with pits still present. The edge will probably be dull and may have some very small chips. Reject it if there are large chips on the edge, as you would have to grind the edge back until it is flat all the way across to eliminating the large chip. This takes time, has to be carefully done to avoid damaging the temper out of the blade, and shortens the life of the tool because you have to grind so much steel off. The time needed to reestablish the bevel after grinding out a large chip is also substantial. Surface rust can be easily removed with emery cloth. If the blade has been sharpened on a power grinder there will be a wavy edge. It is possible that the temper has been compromised from the heat generated in grinding, and it will take quite a while to restore the bevel to uniformity. Don't buy a spokeshave if its back has been smoothed with a power grinder. Check to see that the harder steel used to form

the edge portion of the blade hasn't been sharpened most of the way back to the softer steel of the frame. I look for at least 1.25" of blade left, ideally more. Check drawknives for tight handles — if the handles are loose or cracked, bargain for a lower price. Then inject epoxy in the handles or cracks with an epoxy syringe to tighten them up.



## Using the drawknife

In one of those ongoing debates that people with too much time on their hands indulge in, there are two thoughts on how to orient the edge of the drawknife to the wood surface: bevel up or bevel down. Some skilled users can use them with the bevel in either orientation. I favor bevel down as that allows the user to bring the edge back to the surface of the wood by slightly rocking the blade on the bevel when the drawknife is digging in too deeply. Bevel up will remove wood faster, but has a propensity to dig in deeper and deeper while following grain patterns, ultimately damaging the project. Most of the hundred or so drawknives I have inspected at flea markets have had the handles bent. The people who used them (before workers had time enough to argue about the orientation of the bevel) bent the handles up for the drawknife to be more comfortable when used with the bevel down. I have yet to see one with the handles bent down to facilitate use with the bevel up.

I recently made two Aleutian paddles and used both orientations of the drawknife with an open mind. I found that bevel up will give a better straight cut in regular grained wood. Bevel down can hog off wood faster, and it works better with irregular grain and to change direction in the cut as the grain changes. Bevel down works better to make curved cuts.

Get a drawknife, sharpen it correctly, and practice learning to read the grain as you use it on scrap wood. Then get an inexpensive fir or spruce two-by-four with straight grain and practice by making a “quick and dirty” paddle. A rough paddle can be totally formed using just a drawknife, and this is a good exercise in learning drawknife control. Focus on learning to read the grain of the wood until you understand how the blade and the wood will interact. If the drawknife is digging in, try reversing

direction of your drawknife for a bit. It sounds complicated, but it soon becomes second nature. You will now have another valuable tool in your arsenal and will find yourself using it more and more frequently to rough out wood projects.

Contrary to common fears, the drawknife is actually safe while you are using it. We all start with fears that we will slice our stomachs with the blade as we pull it toward us, but during use, our arms will stop the drawknife naturally before it reaches our trunk. However, the drawknife is a very dangerous hand tool if you even briefly just lay it on your bench while doing something else. Soon you will be reaching for a different tool and brush the blade. It will give you a wicked slice (you did sharpen it, didn't you?). The solution to this danger is to have a blade guard and always install the blade guard over the edge whenever you stop using the drawknife. Leather drawknife guards are sold that fit some drawknives. Drawknife owners- can easily make their own guard to fit the drawknife they have. Some users like to slit surgical tubing and use that on the edge; I don't think tubing stays in place well enough. I bought a drawknife years ago that had the ideal guard for me. A previous owner took a .5" by 2"+ piece of scrap wood (even has a knot in it), cut it to a length slightly longer than the drawknife blade, stood it on edge and with a handsaw made a vertical cut of about an inch and then a slightly diagonal cut to meet the first vertical cut at the bottom of the vertical cut. This slot should snugly fit the blade of the drawknife. It's easier to do than explain, and if you mess up throw away the scrap of wood and try again — it's just scrap wood! When you have a guard that closely fits the blade, the last step is to drill a hole below the slot and run through some lace or cord to tie on the guard. Rawhide holds best but any cord or old shoelace will do. Slip this guard over the edge every time you place the drawknife down, even for a moment, and you are unlikely to ever be cut by it. Tie it on tightly when you are done for the day to also protect the edge you spent time sharpening.



*Three crooked knives (left) — two quite old ones from Nova Scotia, one ornately carved one from northern Maine. Photo: Dave Niles*

*Old traditional Northwest-style curved knife (right) with a 14" handle of some hardwood not common to the Northeast. I was able to buy it for \$2 because no one else knew what it was. Photo: Dave Niles*

## Crooked knives

In the Northeast, the native population developed the crooked knife as a one-handed drawknife and used it extensively in making birchbark canoes and many other woodcraft items. I have a few but have yet to really learn to use them.

In the Northwest the native population developed an alternative: the hooked knives with both short and long handles. As well as watercraft, the exquisite woodcarvings from the Pacific Northwest are made with this tool. The long-handled hooked knives can be used with one hand or two hands. They frequently have two edges on the blade, so it can be used with a pulling or pushing stroke in the

same area. I recently found an old Northwest carving knife at a flea market in Connecticut for \$2 (no idea how it made the trek) and have been using it to hollow out a pine root burl with swirling grain to make a drinking gourd. As I learn to use it, I'm very impressed with this simple tool.

## A word on other tools

There are a few other hand tools and equipment needed for Greenland paddle and kayak construction. A short handsaw is necessary, and the Japanese-style pull saws work best. If you need to buy one, get a pull saw with fine teeth (but not the finest, which are prone to breakage). They are now inexpensive and available at hardware stores. For measuring, a long tape measure is needed. I favor 20' or 25' tapes. A combination square will be needed at times — 12" is the most versatile, and an 8" or 6" works well for measuring on paddles — they don't have to be machinist quality. There are times where a rasp will help. Microplane brand rasps work fine on softwood and leave the smoothest surface. They are less desirable on hardwood, as with pressure the teeth bend in and lose their bite. The Shinto rasp (from Japan) removes wood fast and has both a coarse-cut and a fine-cut side. A Nickerson #50 pattern makers rasp is also a very good rasp. Other rasps you have at home may work, but those noted above will be faster and leave a smoother surface. Last, while I hate sanding, you may need sanding blocks — two wood cut-offs, 2.5"x 5" and about 1.5"– 2" thick, with thin foam glued on its bottom, will work with quarter sheets of abrasives. Don't forget the dust masks! ■

*Included among the numerous jobs I've had are school teacher, YMCA camp counselor and program director, and Youth Conservation Corps camp director. When I was still teaching I conducted two parent-child boat-building classes where each team built its own plywood pirogue. While still wearing my school-teacher shoes, I presented at eight professional state conventions. Boating interests have moved through canoeing, whitewater canoeing, wood canvas canoe collecting/restorations, construction of canoes in plywood and fiberglass, constructing kayaks, making, paddles and teaching canoe- and paddle-making classes.*

*Now, I just spend my time following the late Pete Culler's words of inspiration:*

*Any man who wants to can produce a good boat. It takes some study, some practice, and, of course, experience. The experience starts coming the minute you begin, and not one jot before. I sometimes hear the wail, "I have no experience." Start. Start anything, and the experience comes. Some say building a boat is one of man's nobler efforts. Maybe so, it's a lot of fun anyway. As one of my friends says, "It's only a boat; go ahead and build it." If the first effort is a bit lumpy, so what? There will be another much less lumpy later on.*

*—From Skiffs and Schooners by R.D. Culler*

# *Interview with new Qajaq USA President, Ed Zachowski*

by Tom Milani



*Ed at City of Water Day, Governors Island, New York City.*

*Photo: Rosanna Lovecchio*

*Editor's note: this interview was conducted by e-mail between Ed and Tom Milani during December 2010 and January 2011*

**MASIK: How long have you been kayaking? When did you take up the Greenland paddle, and what prompted you to try? How did you get involved with Qajaq USA?**

**ED ZACHOWSKI:** As a boy I grew up around the water and had many canoeing experiences, but I did not get into a kayak until 2003, when I migrated my daily office commute to the Manasquan River. A few upgrades later...lo and behold, a sale tag appeared on a Nigel Dennis Greenlander with ocean cockpit at the Jersey Paddler. I was enchanted by the lines of the craft and I immediately put a deposit on it. At the first opportunity I was on the water and found it to be quite tender. Someone mentioned trying a Greenland paddle, which I purchased on eBay. The seller told me

I could find information on Greenland technique on the Qajaq USA website. Scanning the site, I was astonished by the quality of the resources made available by a volunteer organization. Then Cheri Perry, with whom I eventually became involved in the Send Them to Greenland project, told me about the Delmarva Paddler's Retreat. In 2004 I began fundraising for Delmarva, where I discussed with Greg Stamer how I might pitch in to help the organization I had quickly become so fond of. From there I began work on Qajaq USA Public Relations, and the next year I succeeded Robin Snow as Delmarva Event Organizer.

**MASIK: You will be the second president of Qajaq USA. What do you see as the strengths and weaknesses of the organization? What are your immediate goals as president?**

**ED ZACHOWSKI:** The way I see it, the strengths of our organization lie in four areas. The people: an eclectic, energetic group, eager to share their knowledge. The assets: website, resources, and grass roots events. Our positioning: traditional skills have practical significance to the kayaking community, which is our opportunity for a utilitarian form of outreach. And last, our mission — its importance, and our community's heart toward that mission.

I am looking at a 2-year program to first tighten up procedures and processes and attend to our financial lifeblood, memberships. Membership dollars are key to providing the financial stability Qajaq USA needs to continue to provide the highest quality of resources and put them into the right places. Year one we will focus on membership, public relations, and events. Among other things, we are placing new systems online for processing memberships, including laminated membership cards and club pins. Year two we can focus on building up club assets in support of Qajaq USA events, working on video productions and general archival projects, and building deeper relations with Greenland.

**MASIK: Please tell members a little about your team and how people who want to help can get involved.**

**ED ZACHOWSKI:** I am fortunate to be able to say that the "old guard" has committed to stay on and continue to contribute in a substantial way. My appreciation goes out to emeritus president Greg Stamer, and all the Qajaq USA Board and Advisors: Dan Segal, Vernon Doucette, Harvey Golden, Richard Nonas, Ben Fuller, Tom Milani, Jennifer Torres, Nancy Thornton, and John Doornink. Without their support, fulfilling my role would be impossible, and I am humbled to have their endorsement for President. I would also like to thank Robin Snow and Alison Sigethy, and the host of volunteers, whose contributions to the Delmarva event have been extraordinary.

I am equally thrilled about the new team members we have in place. Terry O'Malley, Qajaq USA Public Relations Chair, has stepped up from Advisor to Board Member. We have a powerhouse of new advisors this year: Dave Sides, who has worked tirelessly contributing to the ropes segment of so many events and maintaining all the associated equipment; Dave Isbell, whose well-rounded

experience has benefited Delmarva as he teamed up with Alison Sigethy to work on mentoring; Tracy Coon, former JSSKA President (Jersey Shore Sea Kayaking Association) will be pitching in on membership; Helen Wilson, who has been promoting Qajaq USA in her travels; Fred Randall, who has turned his engineering skills toward enthusiastic building and has performed demonstrations at numerous events, not the least of which was a Goodnow replica project at the American Museum of Natural History; Alex Pak, founding organizer of the most recently added Qajaq USA Sanctioned Event, The Gathering; Jean-Dominique Sellier, a scholar in his own right, and our new Canadian liaison; and our good friend, John Pederson, as Greenland liaison.

As for how people can help—let me start by saying that it is my feeling that Qajaq USA has been too reserved in asking for memberships. For example, one of the best ways people could help would be to join. I know from personal experience the delight in finding Qajaq USA when it was exactly what I had been looking for. If every person who uses the forum were to join with us at even lowest membership level, it would be a boost to the organization to new levels. Everyone should keep in mind that Qajaq USA is composed of volunteers who can spend long hours working on projects, committees, administration, and events. All we ask is for a small membership fee, which is essential to continue our noncommercial enterprise.

**MASIK: If you would, look ahead 10 years. Where would you like to see Qajaq USA in terms of membership and events?**

**ED ZACHOWSKI:** I would like to see Qajaq USA in the best possible position to deliver on its mission. I see development in relations with Greenland, perhaps the formation of a Qajaq USA competition team to attend the championships; a library/archival project, beginning with the cataloging and organization of video materials recently acquired from the John Heath collection; additional Qajaq USA publications, including reproductions of out-of-print texts; the website expanded to include a greater number of videos on technique; a flowering of small Qajaq USA sanctioned events across the country, and the expansion of existing events to include additional workshops such as tuilik-making and mentoring-specific workshops; having improved resources for the continued publication of the *Journal* and the *Masik*, expanding readership to increased numbers of educational and private institutions; and expansion of the merchandise and online store operations.

I expect in 10 years membership will grow significantly beyond our 2-year goal. Qajaq USA will be the premier source for Greenland kayaking information. We will continue to evolve, an ever-growing community, engaged in open discussion on traditional methods from construction to on-water implementation. Most important is that we are always being appreciative of and respectful to Greenland and Qaannat Kattuffiat (the Greenland Kayak Association, of which Qajaq USA is a member), being a worthy advocate of the cultural and historical roots to our members and the broader kayaking community. ■



Maiden voyage  
Photo: © Sandy Noyes

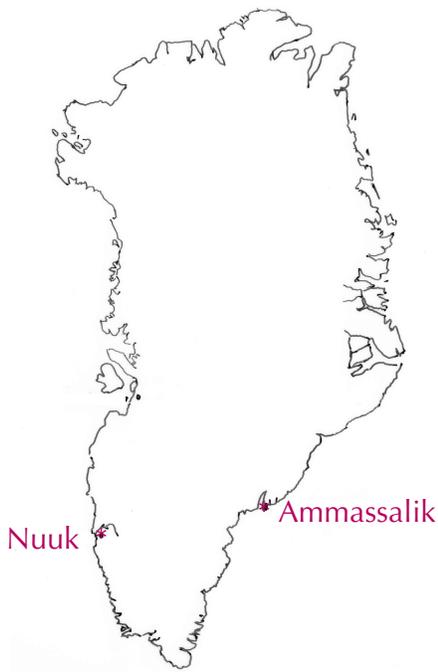
# *SAQQIT: Narrative of an East Greenland Kayak*

by Sandy Noyes

**Editor's note:** Sandy's article has two types of notes. The first are his comments on the text itself — often amplifications of a point or a link to a source of further information. These are numbered and appear at the bottom of the page. The second are the references from which the material is quoted or otherwise taken. These are in author-date format, and a complete reference list appears at the end. Greenlandic orthography has changed over time and varies by region. In this article, "Saqqit" is used for "kayak"; "Saqqisit" is the plural form.

*Compared with the west coast, [East Greenland] ... is much more wild and grand, to all appearances an inaccessible rocky shore with innumerable fjords down which the shiny white tongues of the inland ice make their way and scatter calf-ice and icebergs out over the sea....One must hurry from harbor to harbor" (Ostermann 1938, 8–9).*

*Among all explorers the coast became notorious for its ice, its storms and its desolation" (Ostermann 1938, 7).*



## Geography

Ammassalik is about one-quarter of the way up the east coast of Greenland from Cape Farewell and about 62 miles (99 km) south of the Arctic Circle.

Ammassalik's mountains are snowy, sharp-pointed, and saw-toothed; its sheltered bay looks like a high-altitude lake in the Montana Rockies. Three different fjords<sup>1</sup> meet the open sea where the town is located.

This is wilderness: there are no industrial fisheries here like on the west coast.<sup>2</sup> Fast, south-flowing polar sea currents keep the coastline relatively free of ice near shore, permitting kayaking almost all year round (Nooter 1991, 334).

Ammassalik was the setting where a certain style of kayak called the "Saqqit" flourished for some 60 years, starting in the 1890s.

"Actually, the word kayak does not occur in East Greenland. In

the East Greenland language a kayak is a sakkit. This is one of the many examples of the difference between official Greenland language (West Greenlandic) and the East-Greenland dialect" (Nooter 1991, 322).<sup>3</sup>

A number of skin-on-frame kayaks from Ammassalik were taken back to Europe after 1920 and donated to museums, among them one in the National Museum of Denmark, identified as "L.19.157" (also known as #86 in *Kayaks of Greenland*).

Last year, a replica of the L.19 was built for me in Maine. After watching construction with more than a little interest, I decided to write about the history, design, and handling of this one hunting craft. East Greenland was a region I had only the vaguest picture of.

1. One nickname for the Ammassalimiit is "people of the three fjords."

2. Ammassalik Island lies close by a headland, with the Sermilik icefjord on the west side and the Ammassalik fjord on the east. A little further east is the Sermiligak Fjord. The Helheim Glacier, flowing at a rate of 6.8 miles per year in 2005, calves 5% of all Greenland's icebergs into the Sermilik fjord's waters, and is another of Greenland's glaciers that has accelerated its retreat recently. See [http://www.eoearth.org/article/Helheim\\_glacier\\_greenland](http://www.eoearth.org/article/Helheim_glacier_greenland).

Angmagssalik was the old name for Ammassalik, and both names were inspired by the capelin (*ammassat*), a small fish of the smelt family that spawns locally en masse in early summer and is easily caught (see EastGreenland.com). In 1997 the name Ammassalik was replaced by Tasiilaq, which means "like a lake." The district is 243,000 square kilometers in area (about 94,000 sq. mi.), five times the area of Denmark, and is the largest municipality in Greenland. The 2010 Tasiilaq population is 1,930.

3. Note: other spellings are "carqit," "carquit" (French spelling), "carqin," and "sarqit." Nooter has used an older spelling, "sakkit." A kayaker was a "saqissoq" (Thalbitzer 1914, 221). The word "kayak" was changed probably before 1872. See Gessain (1968, 248). He explains that it was the death of a man called "Kayak" and the prohibition later about pronouncing his name, that first led to the word "carqit." Also: The Ammassalimiit continue to differentiate themselves with their language: "The east coast has a soft language sounding almost like French" (Chapman 1932, 83).



*East Greenlanders with Kayak (probably 1961)*

*Photo: Jette Bang Photos/Arctic Institute*

I found three studies specifically on the Saqqit (Nooter 1991, Gessain/Victor 1969, and Victor/Lamblin 1989). Using my replica, I wanted to find out how the Saqqit actually performs and get a feeling for why it was greatly favored by hunters after 1884. Perhaps I could put the readings together with my own observations and a useful contribution would come of it.

Since my hull is identical to the original in the museum, I thought it would perform exactly as the original did in 1932, the year it was donated. (My deck, however, was modified so I could get in the cockpit; “semi-replica” would be the better term.)

I was soon immersed in the sometimes harrowing accounts of the scientists and explorers who had become fascinated by this rugged and isolated part of the Arctic.

## Some history

The town of Ammassalik, where the original L.19 was built, was virtually unknown in Europe before 1884. This is a recent date, considering that West Greenland was colonized in 1721 and visited off and on before that from the year 982. In 1894, the first official Danish colony, called “The Trading and Mission Station of Ammassalik,” was established in East Greenland.

In historical photographs, you begin to get a sense of place. The look of the mountains, the three fjords, the protected bay, are part of Saqqit identity.

Ammassalik was a magnet to anthropologists and archeologists after 1884. It was unwesternized and unstudied, a living museum of traditional culture. It was like stepping into the prehistory of Greenland. Between 1914 and 1965, Danish, Dutch, French, and English teams conducted fieldwork there, sometimes overlapping.

Three Danes, a Dutchman, and an Englishman seem to epitomize the early 20th century expedition leaders:

- Gustav Holm (1849–1940), Danish naval officer and Arctic explorer, is credited with having “discovered” Ammassalik in 1884 while on a mapping expedition. He wintered over in the harbor.
- William Thalbitzer (1873–1958), professor of Eskimo Studies at University of Copenhagen, spent 18 months researching in Ammassalik with his wife, Ellen, starting in 1905. He studied the language and folklore of the Ammassalimiit.
- Therkel Mathiassen (1882–1967), Danish archeologist, spent 1931 and 1932 performing fieldwork in Ammassalik district.
- Gert Nooter (Gerrit Willem Nooter, 1930–1998), Dutch cultural anthropologist, conducted fieldwork in a nearby Ammassalik district settlement, Tinitequillaaq, on different visits between 1965 and 1986, at one point bringing his wife Noortje and his three boys. The village faces the north side of Ammassalik Island and is about 19 miles (30 km) overland from Ammassalik.
- British naturalist, adventurer, and author F. Spencer Chapman (1907–1971) was a talented writer of prose<sup>4</sup> who made two trips to Ammassalik, 1930–33, as part of an expedition investigating British Arctic air routes.<sup>5</sup>

4. “It is not with the dry pen of a scientist that the author writes, for he sees with the poet’s eye and records with an idealist’s enthusiasm,” Augustine Courthauld, *Introduction to Watson’s Last Expedition*.

5. Chapman should occupy a place close to the hearts of today’s kayakers, for he is the only European in the 1930s to become proficient at traditional seal hunting from the Saqqit, to faithfully practice rolling skills, *and* to write about it in detail. He published eight books during his lifetime, two on Ammassalik.

It was the distinguished archeologist Mathiassen who decided to purchase the L.19 in July 1932 while he was conducting fieldwork in the area. His interest was early history of the Ammassalimiit people, 18th century and before, and he excavated many old foundations in the district, publishing his account in 1933.

Before 1884, when the Holm expedition arrived, the Ammassalimiit had very limited knowledge of the outside world, although they had probably lived in the area for 400 years. Mathiassen's research led him to the "...assumption that Angmagssalik got its first Eskimo population in the latter part of the 14th century" (Mathiassen 1933, 60).

Old ways and culture, including delicate decorative carving, persisted in East Greenland much longer than in the colonized and more sophisticated West Greenland.

West Greenlanders used to refer to East Greenlanders as Tunumiut, "the people of the hinterlands" (Nooter 1991, 322). But Nooter also thought that West Greenlanders could profitably look to East Greenland as a place where historic customs and national identity might be found (Nooter 1991, 341). Even in 1986, Ammassalimiit were still considered a bit backward ("arriérées") by West Greenlanders, but there was also a sentiment of envy and admiration (JR-L 1986, 453).<sup>6</sup>

## Kayak design

The newer profile kayak, with its straight stem projections, had entirely replaced older designs having high stems and sterns by the time the colony was established in 1894, as Harvey Golden points out in his *Kayaks of Greenland* (Golden 2006, 349). The new design, with some modifications, had worked its way up from South Greenland.<sup>7</sup>

For me, again, the leading question is, why would Ammassalimiit hunters drop the traditional build so abruptly after 1884?

To arrive at a rationale, I'm taking clues from Nooter, H.C. Petersen, and Chapman, plus running experiments myself to come up with an educated guess. (As one kayak designer pointed out to me, sometimes it's just tradition that causes a certain design to be adopted, and it's hard to ascertain a practical cause.)

Nooter believed that the East Greenlanders developed the kayak to its "extreme" form with the Saqqit, and made "*kayaks of such excellence that they could not be improved further*" (Nooter 1991,

6. Also: The use of the kayak in East Greenland for subsistence almost died out by 1986. There were four left then in the settlement studied by Nooter and they were only being used to hunt narwhal (see pp. 322, 341). In West Greenland kayaks gradually disappeared during the 1920 to 1983 period, when they were mostly lost for an entire generation (see Heath 1). There were none left in Tasiilaq in 2011.

7. At the time of the Holm expedition in 1884 examples of "...the newer construction, which had come from the south, were already noticed. On the next visit there was not a single kayak of the old type to be seen. All the kaiaks had straight ends..." (Thalbitzer 1914, 384). See also Petersen (1986, 52).



*East Greenland kayak with hunting implements, 1937*

*Photo: Jette Bang Photos/Arctic Institute*

341; italics mine). Those words make a striking impression, coming from an anthropologist who studied in the Ammassalik district for 25 years.

By “extreme” did he mean “ultimate,” “most evolved”? If so, it’s tempting to agree. By the time of his writing, however, Nooter had become so involved with the community, even changing his name to the Greenlandic spelling, “Gerti,” (Buijs, 8) that he could have overestimated the Saqqit’s virtues.

But Chapman, writing in 1931–1932, was equally outspoken: “The kayak of the Angmagssalik Eskimo is not only a wonder of efficiency, but a veritable artistic triumph. It is the perfect canoe. Each detail has evolved till it has reached perfection” (Chapman 1932, 199)

Probably the design with straight stem projections was the better adaptation to the waters it was being used in, and brought home more meat. In terms of camouflage, it makes sense. If the hunter is paddling near Ammissalik, and is taking advantage of the ideal smooth water there, the more of



L.19 semi-replica

Photo: © Sandy Noyes

the hull that, pragmatically speaking, can be underwater, the better.<sup>8</sup> The “droop snoot” is barely visible as the Saqqit approaches you.

It’s not just for making a roll or static brace easier that my freeboard is 1/2 inch. For the seal, it means the hull coming toward it is harder to detect, especially when the kayak is rigged with a white camouflage sail, which the hunter crouches behind. In effect, you are in a specialized floating blind that looks like a block of ice when seen head on. And you have the advantage that the seal can’t see much more than 200 or 300 yards (Chapman 1932, 161).

If a crosswind is threatening to weathercock the kayak, which would blow the cover of the hunter’s approach by revealing the stern, this hull is going to be affected minimally because there is little surface for wind to push against. And in a storm, the wind is not likely to capsize the Saqqit. From *Kayaks of Greenland*: “It is however completely at home in high winds from any direction, scarcely being bothered by them at all” (p. 420).

According to H. C. Petersen, “the kayaker wastes his energies fighting against wind drift.”<sup>9</sup> Neutral

8. John Pedersen of Ilulissat, who has attended Delmarva Paddler’s Retreats as a mentor from Greenland, said about seal hunting: “We don’t like waves” (October 2009, personal communication). See his notes on hunting in *The Masik*, Spring/Summer, 2009, p. 40.

9. From Petersen 1986, p. 42. On p. 63 he tells the story of two boys out hunting, one in a kayak with upturned ends, one with a kayak with flat ends. The former kayak had capsized several times in a storm. “ ‘There you see,’ said the man who had built his friend’s kayak [the one with flat ends] ‘those ends are too exposed to the force of the storm.’ ”

handling in crosswind can be tested on a lake with short fetch. If the concave bow and stern make minimal noise underway, that can be tested on a lake, say, with an Anas Acuta nearby to compare. We know from John Pedersen that absolute silence is critical to success in approaching a seal near enough to shoot. If low decks being washed over by waves stabilize the hull in conditions, something I have read in blogs, that can be verified on water, too.<sup>10</sup>

Tracking and turning in my replica are excellent; turning by edging without use of the paddle is also effortless.

Rolling without the raised bow and stern of the West Greenland style appears to be enhanced. Forward-finishing rolls were considerably easier in the Saqqit than in my West Greenland skin-on-frame. However, there is not a lot of initial stability and hardly any secondary stability in the Saqqit, although you get used to this after an hour.<sup>11</sup> Almost as if to compensate for lack of stability, after capsize the hull can rise into balance brace position with hardly any pressure on the paddle.

Once seated, I could lie back on the aft deck comfortably and slide off into static brace. Upside down paddling (*pusilluni paarneq*) seemed relatively easy because of low depth to sheer.

If the length of waterline, narrow beam, weight, and hull shape make for a faster sprint when needed, that can be tested on water with a stopwatch. I have the impression from pool practice that this is a very fast kayak. Appropriately so, because a burst of speed is required after the seal is stunned by birdshot, to keep it from sinking or escaping.<sup>12</sup>

The flat hull bottom is easier to slide on ice compared with a V-bottom hull. According to Chapman, "It has to be flat bottomed because one often has to run out in it on to new ice, and wriggle across still in the kayak, taking to the water on the far side" (Chapman 1932, 202).

On thin ice you need to be able to walk with the kayak between your legs, so you can sit down immediately on it and get in if the ice gives way (Petersen 1986, 42).

This would be impractical with a beamy hull because your feet would be too far apart. It would be awkward with a V-bottom hull because it would tilt to one side. I tested the L.19 with this maneuver and it remained level, sliding along freely like an 18-foot ski.

10. For a discussion of a British-designed stitch and glue wood version of a Saqqit, including handling in waves, go to: <http://www.westcoastpaddler.com/community/viewtopic.php?t=2346>

11. Ostermann (1938, 47) describes types of amulets designed to ward off capsizing: a piece of seal liver wrapped in the head skin of a seal; tiny fish found in the water; seal foreflippers; or a fulmar seabird. Another amulet was a bone, slightly curved and with a rounded point. Fastened at the middle was a length of plaited sinew thread. If a young hunter was drifting out to sea in a gale, his mother could draw him in with a magic song (p. 148).

12. "Angmagssalik hunters usually stun...the seal with a shotgun and then harpoon it..."(Chapman 1932, 36). "A shotgun at thirty yards is most effective" (Chapman 1932, 233). "For smaller seals the Eskimos often used 16 bore shot guns with large shot. This stuns the animals and they can then be harpooned before they recover enough to escape" (Chapman 1932, online version, p. 9).



*Dead seals with East Greenland kayak in background, 1961. Photo: Jette Bang Photos/Arctic Institute*

A skeg is not used with the Saqqit. It is “unsuited for conditions here as it would...prevent hunters from sliding in their kayaks from an ice floe down into the water” (Chapman 1934, 281).

H. C. Petersen (1986) explains how hunting technology influenced design: “It was the use of rifles in the kayak, however, which resulted in the straight ends” (p. 63). But he doesn’t explain why it was so. The gun holster was introduced in 1884–85, and presumably a long, flat foredeck was best for supporting the holster, which often extends on the deck to within two feet of the bow.

The L.19 conforms to typical Saqqit dimensions, about 18' × 18" × 7-1/2" (549 cm × 46 cm × 19 cm). My replica is 18' 8-3/4" length (571 cm); 18'-3/4" (48 cm) beam at the masik; and 5-3/4" (15 cm) depth to sheer at the isserfik. My kayak weighs 38 pounds (17 kg); 15 kilograms, or just over 33 pounds, is typical Saqqit weight with no deck gear mounted (Nooter 1991, 322, 337).

Because of the kayak’s light weight, Ammassalimiit hunters were able to lash the Saqqit to their sleds or secure it to their motorboats to access distant hunting grounds. Fifteen kilos was manageable. I have successfully tested the motorboat method using a low homemade rack placed over the seats.<sup>13</sup> This way you can travel far before put-in.

13. Design and carpentry by John McWilliams of McClellanville, SC.

A Jette Bang photograph shows that there's no mistaking what the purpose of the Saqqit is. The image of the seals lying on the Umiak strips away any romantic or sentimental notions. It has shock value for those of us who have been separated from the processing of our meats.

Most of the community's diet was seal meat. And the seal had other essential uses, as Graah (1837) pointed out:

*Without the seal, indeed, the Greenlander could not exist; with it, he has all he stands in need of. Its flesh and blood furnish him with food, its skin with clothes, boat and tents, its blubber with light and fire, its sinews with thread, its entrails with windows and curtains, and its very bones serve to tip his darts and shoe the runners of his sledge (p. 118).*

All these features would indicate a superior hunting craft for use in the three fjords and the Ammassalik archipelago.

Whether the L.19 is a high-performance design good for sport is a completely different question. It already has the reputation of being a sloppy ride in waves.<sup>14</sup> Nor would it have any special advantages in competition. It might show off its true colors if there were a 100-meter dash event someday and a judging of stalking maneuvers. Would it win the beauty contest? It has such a different look from West Greenland kayaks it might not please the judges. It's really a hunting machine.

## Origins

There's a lacuna. The identity of the hero—the original builder—will never be known. There is no record of who the builder was or when the kayak was built; all the National Museum of Denmark records show is that Therkel Mathiassen made the purchase on 22 July 1932, while doing fieldwork in Ammassalik district (see NMD).

What we do know is that he had just finished an excavation at nearby Sivtsingaleq, Cape Dan, on 19 July 1932. That was three days before he purchased the L.19. Then he left Ammassalik on August 9 on the Expedition Ship "M.S. Th. Stauning" to join Knud Rasmussen's seventh Thule expedition. He had collected 6506 specimens to take back to the museum in Denmark, but his focus was on the 18th century and before, and he makes no mention of his kayak, which was built in the 1925 to 1932 period, one assumes. He has only this to say: "...the kayak is still the universal possession, but the cruciform kayak stand has now quite disappeared" (Mathiassen 1933, 8, 136).

The L.19 kayak itself will have to serve as the signature of its builder.

After 43 years in the care of the National Museum of Denmark, the L.19 attracted the interest of John Brand of the UK, a talented historian and draftsman who was a trained architect and a paddler.

14. See Golden (2006, 420). However, Gessain states that the "long type" of kayak (he must be referring to the Saqqit) was for the mouths of fjords, open pack ice, and high seas where swell is encountered (Gessain/Victor 1969, 160). And Chapman (1934, 277) states: "A narrow kayak is faster and much better in a choppy sea because it cuts through the waves." I will test with the replica to verify these claims. Both writers seem to have discounted the effect on the paddler of waves coming over the deck and hitting him.



*Author testing the kayak skinned in plastic wrap*

*Photo: Fred Randall*

In 1975 Brand and his wife Stella took measurements of the L.19's elements and a scale drawing was made up of its structure, like an architect's drawing for a house. (See *The Masik* interview with the Brand family in the 2008 issue.)

The Brand drawing offered builders the first opportunity to replicate the L.19. The Brands published their L.19 data in *The Little Kayak Book*, Vol. III, 1988. Brand made an interesting observation on the L.19's performance: "This is an intriguing kayak.... For the right weight paddler an [authentically shaped] replica would probably prove to be a more exciting performer than many East Greenland craft" (Heath 2004, 97).

However, there was a glitch: the L.19 was listed under a different museum number and as a donation by Mathiassen's colleague Knud Rasmussen. Noticing the discrepancy, Harvey Golden decided to re-survey the kayak in Copenhagen. The accession information was corrected. Golden completed his first L.19 replica build in 1995, the first Greenland replica of any kind that he made, and after that one fell into disrepair, he rebuilt it in 2003.

Eight years later, Fred Randall built a second replica, for the author, and made plans to build a third for himself. At the time of this writing, no other L.19 replicas have been made as far as is known.

### **Semi-replica takes shape**

As musical scores are brought alive by performers, so scale drawings are brought alive by fabricators/replicators. At least that was the case for me, watching the replica evolve in the shop, and noticing the enhancement that came from extra attention to detail, precise tool handling, and choice of materials.<sup>15</sup>

15. "So specialized is the construction that the good hunters prefer to get their kayaks made by one of half-a-dozen noted experts" (Chapman 1934, 277).

A western red cedar plank was butterflied into matching halves and turned into gunwales. Hand-made beams and ribs were assembled, and the form began to resemble the skeleton of a shark or a porpoise. Then it was given a chrysalis-like skin of plastic wrap for the test fit. Finally it acquired its epidermis of nylon, made semi-transparent by the finish coat.



Coaming

Photo: © Sandy Noyes

The process of building up sculptural form out of thin air and the effect of constant wood handling and shaping brings one closer to knowing the L.19's original form and feeling on an intuitive level, by touch. Reconstructing from a blueprint re-creates some of the design process, and a sense is given of the original builder's drive and creativity.

The frame included oak ribs, hackmatack beams, ash breastplates, all pegged, plus a hard southern red pine masak 4–1/4" (10.7 cm) wide. Oiling accentuated grain and beautiful varied colors were obtained.

## Culture

Ammassalik was "...Greenland's most exclusive, most complex, and most artistic community" (italics mine). These were Thalbitzer's closing words (p. 732) in 1914, in his monumental study of the district.<sup>16</sup>

The L.19 and other Saqqisit from the 1930s can be considered a distillation of that East Greenland culture going back in time. You are a participant in this history when you paddle one of the Saqqit replicas, whether or not you are aware this is happening.

If you agree with Nooter that hunting kayak design reached its apogee in the Saqqit and couldn't be improved upon further, that alone would be enough for it to occupy a niche in boat-building history.

It's a peculiarity of cultural history that the Saqqit gained full acceptance by the hunters of Ammassalik at the same time that the first Danish colony was formed in 1894 (see Golden 2006, 399). The

16. Thalbitzer discusses Ammassalimiit society and social norms in fine detail in his study, giving an idea of what the people who paddled the Saqqit were like, but Graah's 1837 description of East Greenlanders from 200 miles south is especially revealing: "Their intercourse with one another is marked with singular urbanity. They know nothing indeed, of empty compliments or polite grimaces...(p. 118). "They are, in a word, a gentle, civil, well-intentioned, and well-behaved set of people among whom one's life and property are perfectly secure, as long as one treats them with civility and does them no wrong or injury" (p. 122). Mathiassen (1933) endorses Graah's account: "There is hardly any reason for supposing that the Greenlanders among whom he [Graah] wintered at Marsivik differed very much in culture from the Angmagssalik at that time" (p. 112).

design concept came in the door at Ammassalik just as the old ways began to go out the door.

Mathiassen (1933) believed he was at the cultural tipping point in 1931 and 1932: “At the moment, an East-West mixed culture is prevailing; in the course of the next decade or so it will be entirely West Greenland” (p. 144). He explains that this is inevitable: “It is always sad to see an ancient, individual and fine culture perish... the steamroller of civilization has no respect for distinctive forms... when a once isolated culture is drawn into international intercourse it is bound to lose its individuality sooner or later” (p. 144).<sup>17</sup>

But the Saqqit never did lose its individuality.

The acquisition of L.19 by the National Museum of Denmark came from the peak stage of 20th century Saqqit ownership in the town: 136 kayaks were counted in Ammassalik in 1915; 162 were counted in 1935; 189 in 1944; and 161 in 1950 (R. Petersen 1984, 629). In summer of 1967 there were 115 kayaks in the district; in 1972 there were 70; and in 1979 there were 33 (JR-L, 291).

After 1950, Robert Gessain, French anthropologist, shows that there was a drop in the number of kayaks at the same time that population shot up. He discovered that the kayak-supported family only works when the hunter has to feed and clothe 3.5 people including himself. This ancient equilibrium had a renaissance between 1900 and 1910, but then got badly out of kilter after 1950—too few kayaks and far too many people: by 1967 there were only 115 kayaks in a population of 2300. You had to feed seven times the population of 1884 with the same number of seals brought in during 1884 (Gessain 1968, 263). The community presumably had to supplement its supplies with imports.

You could say that the Saqqit in East Greenland was an iconic form coming from the time that hunters, seals, and people’s needs were in delicate balance, but about to tip toward decline of hunter culture. Before 1950, the Saqqit was the one thing you couldn’t live without.

The Nooters noticed that hunting had become more of a leisure activity by 1986 (Buijs, 20). That was corroborated by anthropologist Joëlle Robert-Lamblin in 2007 (JR-L online). Christian Engelke, a kayak touring guide, told me in March 2011 that there were no kayaks now in Tasiilaq, not even fiberglass ones.

After seeing photographs of small flotillas of Ammassalik Saqqisit in the 1930s, for me it produces an elegiac feeling to know there are none left—forced out of existence by westernization like an extinct species of beautiful animal—not to mention the loss of prestige to the seal hunters. The Saqqit validated their standing in the community.<sup>18</sup>

17. Also: “The Angmagssalik culture must be regarded as a branch of the West Greenland culture which in former times has been separated from the stem, has later on received some contributions from it, but mostly has assumed a markedly local character owing to isolation and local development” (Mathiassen 1933, 126).

18. It was a belief of traditional seal hunters that an adult man without a kayak was a man in bad health (Gessain 1968, 253).



*Saqqisit on rack, Ammassalik, 1960–1968*

*Photo: Jette Bang Photos/Arctic Institute*

But it's important to look at context. According to Robert-Lamblin, the psychological effect of accelerated change was powerful: in a few decades the Ammassalimiit went from “stone age to atomic age.” In the 1960s kayaks mostly disappeared in Tasiilaq. People had turned to salaried jobs. By 1986 the younger generation in Ammassalik had actively turned away from the kayak for seal hunting. It was considered too dangerous and learning the necessary skills required a much too long apprenticeship. Instead, they embraced a new technology: small, easy-to-handle high-speed motorboats. Sometimes in summer they could be seen coming in with eight or nine seals on board, something the kayak could never compete with—even with the expense of purchase, maintenance, and fueling of the motorboat. In addition, reduced international demand for seal furs had resulted in lowered prices (JR-L 1986, 293–94). Global warming has also contributed to the demise of the Saqqit. Traveling to hunting grounds by dogsled with kayak strapped on is curtailed because of ice melt (JR-L online). This favors using the motorboat.

## Final thoughts

Summing up, now that we know what happened and can fit the pieces together, we can see the 1930s Saqqit in museum collections as precious examples of the evolution of 20th century hunting kayaks.

The Saqqit:

- Comes from the chronological tipping point after which West Greenland culture would prevail (Mathiassen). Part of the meaning of the Saqqit is that it comes from this period.
- Is a material culture indicator that rises and falls according to social change.
- Is the kayak's most irreducible form; nothing could be improved further (Nooter).
- Was the preferred design during the period in which ideal ancient equilibrium was achieved in the early 20th century: number of kayaks needed to fulfill human needs (1 kayak for each 3.5 people) (Gessain).
- Comes from the peak period of kayak ownership in the district (Gessain/Victor, and R. Petersen).
- Represents the period just before quality of craftsmanship began to deteriorate (Gessain/Victor 1969, 241).
- Is a paradigm of the third stage of design evolution in the district—straight stem projections and flat bottom—described by Gessain. “This is the situation we found in 1935” (p. 163) (The fourth stage consisted of the same deck but with a rounded bottom [p. 165]).
- Has complex aesthetic characteristics and overtones, as noted.
- The Saqqit's form follows function. My direct observations show that ends in the same plane as deck achieve camouflage, silence, and minimum reactivity to wind; flat bottom is for maneuvering on ice; length and beam are for speed. These and other factors overlap and interweave, producing a craft ideal for stalking and dispatching game in the Ammassalik climate and geography.

The Saqqit and its culture were casualties of the process of westernization. It had to be that way.<sup>19</sup>

Building 1930s East Greenland replicas takes on special meaning: they are a re-creation of a now extinct high form, and they offer us first-hand, unmediated experience about how the Saqqit handled 75 years ago. It's an inspiration to do what one can to revive the form in a modest way and honor it as something of significant value coming out of a late chapter in Arctic history.

Possibly the Eastlanders, as Graah calls them, will form their own kayak club in the 21st century, following the lead of their compatriots on the west coast.

I hope that the L.19, classic “kayak of the hinterlands,” and others like it, can continue with their reincarnations far into the future.

19. The process of enculturation has been described by Robert Gessain as “la civilization obligatoire” (cited by JR-L 1986, 458). One way to translate this is: “compulsory assimilation,” or “inevitable process of Westernization.” A French acquaintance of mine suggested this translation: “civilization is a one-way street.”

# ART ANALOGUES

Looking at the Saqqit in contexts other than material culture—the anthropologist’s term—and as an example of fine art craftsmanship, there are implied analogies to other high points in history of art such as Art Nouveau furniture and Ming Dynasty ceramics. It’s worth a passing thought, especially when you see photographs of East Greenland kayaks outfitted with their ornate deck fittings.

Art connoisseurs sometimes claim to be so moved by a masterpiece that it shifts their state of being momentarily. Does the Saqqit do this? I doubt it, just to look at it. But to sit in it? Most paddlers will tell you that a sunny day on the ocean in their kayak transforms their mood. The kayak can be synonymous with freedom. Propelling a sleek object through the water fast is viscerally thrilling.

In paddling a replica you can incorporate the feel of the hull into muscle memory, given time on the water in various conditions. This provides an experiential and subliminal understanding of handling characteristics of the original hull.

The slender tapered form can suggest primordial archetypes. The sculptor Constantin Brancusi developed the theme in his “Bird in Space” series in the 1920s. He sought for the content within form: the essence of flight and how it could be expressed via minimalist abstraction. You could say that the Saqqit is likewise a universal shape that can’t be reduced any further. To look at it you are gliding in water.

In a freely associative moment you might perceive, buried in the form, an image of the eternal feminine and also the elemental masculine. Implied in the sheer line of a kayak are the contours of a woman, and if the kayak is harpoon-equipped, the bow and arrow.

It’s a portal to the oceanic imagery of Melville,

with sea surface and subsurface and layers below with life processes visible:

*Far beneath this wondrous world upon the surface, another and still stranger world met our eyes as we gazed over the side. For, suspended in those watery vaults, floated the forms of the nursing mothers of the whales. ...Some of the subtlest secrets of the seas seemed divulged to us in this enchanted pond. We saw young Leviathan amours in the deep.*

— *Moby Dick*, “The Grand Armada”

The half-inch of freeboard makes exposure more intense, more sensuous. You can make silent approach to herons, turnstones, and phalaropes, migrations of dunlin; the ponies of Chincoteague; marshes, the littoral zone. You can anticipate frictionless cinematic glide along edges of a woodland lake.

There’s a sculptured quality about the Saqqit that reminds me of a sleek thoroughbred racer, or the Gannet seabird evolved for deep diving from heights, or a glider aerodynamically streamlined to minimize drag.

The Saqqit is basically a long, thin cylinder sliced in half lengthwise with tapered ends coming to points. That produces two identical kayak-like forms. Viewed from above, it is the figure at the intersection of two slightly overlapping ellipses.

The gunwale line mimics a gentle sea swell, an organic water form. Sheer line and waterline play off each other in counterpoint. Through the translucent skin you can make out what could be ribs of a breathing sea animal.

It’s also just a kayak. But it can be all of those things, depending on which lens you are looking through.

## SUPPLEMENTARY NOTE 7.12.2011

With kayaking season in full sway, I've had the opportunity to get to know the L.19 in different situations, and can report fresh data.



*The author paddling upside down.  
Photo: Bill Meier*

1. Its most noticeable characteristic is utter silence at all speeds and in all conditions.
2. In waves two feet and under, it is a fast, agile performer. The hull becomes harder to manage as waves increase beyond two feet.
3. It is apparent that stability has been sacrificed to achieve stealth. But there is a nice balance between turning and tracking.
4. Weathercocking is at a minimum if you maintain speed.
5. It has proved to be a fine rolling kayak.

When the concave bow encounters a wave, it cuts through it without making a slapping sound on the wave's backside, unlike most other hulls.

If I paddle forward into a choppy wave of over two feet, a few gallons of water will wash aft down the deck but no actual harm is done, although the effect can be startling at first. The bow will begin to pearl in following seas but recovers quickly.

Resting in beam seas requires constant bracing to avoid capsize, but, as with a bicycle, if you keep moving, you gain stability. I didn't notice any stabilizing effect of water running up on the deck.

Skepticism you might feel about the skill level of the original owner is quickly dispelled as soon as you take the L.19 out in open ocean!

On the other hand, the hull behaves so well in calm water, almost like a dancer, that I concluded it was designed specifically for Kong Oscars Havn (the harbor at Tasiilaq), which has a maximum fetch of 4½ miles in a northwest wind, with small bergs usually present to prevent wave formation.

After teaching rolling with it for three months in a pool, I can say the hull is very fluid in forward-finish rolls, along with many other maneuvers. With 5¾ inch depth to sheer and ½ inch freeboard, it is easy to paddle upside down, and it allows comfortable static brace with hands only.

An L.19 replica shouldn't be mistaken for a recreational craft. It's a reproduction of a highly efficient East Greenland hunter's implement from 1931, stripped of all superfluties. Its beauty is a by-product of its specialization.



*The finished kayak*

*Photo: © Sandy Noyes*

## Afterword

From a paddler's point of view, discovery of sources stirs up the hunter's instinct, and then one wonders what to think of them, how to rank them. It's easy for me: the voice of the native Greenlander trumps all others for authenticity and immediacy; there's a soul knowledge here that only someone from Greenland can offer. That would be H. C. Petersen. Next would come John Heath and Harvey Golden, two Americans whose dedication to kayak studies is unsurpassed. Nothing quite touches Golden's *Kayaks of Greenland* kayak analysis for encyclopedic thoroughness. Then Nooter, who speaks almost with a native voice. Then the charismatic Chapman, who gets himself out of nasty scrapes and lives to tell the tale, unlike his close friend Gino Watkins, who dies tragically in a kayak accident. Then Thalbitzer, Mathiassen, and Gessain, whose scientifically detached treatment can be off-putting for kayakers, but who are extremely capable and who do the fundamental groundwork of describing Ammassalik for the world. Joëlle Robert-Lamblin made repeated field trips to Tasiilaq between 1967 and 2007 and so has the last word among the East Greenland specialists. Her contributions are extraordinarily competent. Finally Graah, writing a century earlier, and enduring terrible deprivations, brings the Arctic sea environment alive for anyone thinking of open-water voyages. These are the sources that most stand out for me, admittedly a short list. But sleuthing in the library has its limitations; time on the water has the advantage. ■

*I am indebted to Vernon Doucette for introducing me to the East Greenland bibliography. Also many thanks to Jim Owen, Claudine Smith, Susan Hartung and Wendy Noyes for vetting the manuscript. Special thanks to Aviaja Lyberth, Aron Kuitse, and Adam Hansen, all of Greenland, for assistance with language issues. Thanks to Lisbeth Valgreen of Arktist Institut, Copenhagen, for permission to reproduce images from archives.*

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# *Interview: Greg Stamer, Past President of Qajaq USA*

by Tom Milani

*Editor's note: This interview was conducted by e-mail during May and June 2011*

**MASIK:** As you look back on your term as president, tell me how you've seen Qajaq USA change since its inception.

**GREG STAMER:** As Greenland-style paddling has moved closer to the mainstream, so has the "culture" of Qajaq USA. Originally, the core members were much more fascinated with Greenlandic culture and history. It was a small, close-knit group. While many members still have these interests, many more, while passionate about using a narrow paddle, are not as passionate about the culture and history. Part of our mission is to support the Greenland Kayak Association so we will continue to bring over Greenland paddlers and push the historical and cultural aspects of Greenland-style kayaking (while still enjoying the feel and performance of the "skinny stick"). Having said that, the increased diversity of our members is a good thing and indicates that Greenland-style paddling is active and growing.

One good byproduct of this growth is that rarely now is someone measured in terms of how "traditional" they are. This used to be something that I fretted about. While there are still paddlers who enjoy, say, throwing a harpoon, many more are equally fine to use a GP with their carbon

surf kayak, or with a glass sea kayak. This increased diversity brings new talents to Qajaq USA. As a community we need to retain an open and accepting attitude, something that we have done very well.

MASIK: How mainstream have Greenland paddles and skin-on-frame kayaks become? Do you think Greenland paddles will ever be offered by a large manufacturer? Many kayak manufacturers offer at least one “Greenland-inspired” model — do you see this trend continuing?

GREG STAMER: Compared to 15 years ago Greenland-style paddles are now actively flirting with “mainstream” status, while the popularity of skin-on-frame kayaks has grown at a much slower

*As Greenland-style kayaking grows in numbers, so will the offerings of commercial Greenland paddles. One of the barriers to Greenland-style kayaking is that very few kayak shops carry Greenland paddles and the paddles that are offered are often poor. What I often find in local shops are scores of mainstream paddles and only one or two Greenland sticks (if any at all).*

pace. While I don’t foresee that skin-on-frame kayaks will soon hit the “mainstream” in the same way as traditional paddles, we are already seeing specialty glass Greenland “rolling” kayaks being marketed. When you think about it, that is a huge leap forward.

Regarding commercial Greenland paddles, It’s largely a numbers game. As Greenland-style kayaking grows in numbers, so will the offerings of commercial Greenland paddles. One of the barriers to Greenland-style kayaking is that very few kayak shops carry Green-

land paddles and the paddles that are offered are often poor. What I often find in local shops are scores of mainstream paddles and only one or two Greenland sticks (if any at all). What is needed is a range of sizes of affordable paddles that is more readily available to retailers. This will happen in time as more and more people ask for them.

MASIK: At one point, people interested in Greenland-style kayaking had to make all their own gear. Now, nearly any piece of gear can be had from a commercial vendor or small business. What are your thoughts on this?

GREG STAMER: I think that it’s great. Choice is good, and it reflects on the growing popularity of Greenland-style paddling. People who still wish to experience the satisfaction of making their gear will continue to do so. People who would rather buy off the shelf now have that option. I started with a “store-bought” GP and was not satisfied with the fit, and began to make my own. That trend will continue. There are now a number of people making custom paddles for sale.

That is a good development. In the past you sometimes had to make your own paddle, even before you were sure that you would even enjoy using a Greenland-style blade. That was (and to a lesser degree still is) a huge barrier to trying Greenland-style kayaking.

**MASIK:** What accomplishments of Qajaq USA are you proudest of?

**GREG STAMER:** From the beginning we decided that it was our goal to “get the information out there.” We could have charged for this information, and we could have set up elaborate certification programs, but we decided that it wasn’t in the best interest of the sport. If you look at the level of Greenland-style kayaking in the USA today, compared with where it was 10 years ago, you will see what outstanding progress has been made.

When Qajaq USA was formed there was little information available outside of Greenland. People experimented and a wide variety of techniques were created — all without any direct influence from Greenland. Different “camps” sprouted up that pushed their ideas and sometimes resisted information from other sources. When I initially started teaching nationally what I had been taught in Greenland, I encountered a lot of hostility and even confrontation. You would not believe how controversial simply “canting” the blade was for a forward stroke, 10 years ago. By making it a priority to bring skilled Greenland paddlers to visit and teach, Qajaq USA has been an agent of change, and a great source of information. While there will always be regional differences (a good thing) there is now much more “cross-pollination” of techniques, not only among traditional paddlers outside of Greenland but with the “Euro” community as well.

**MASIK:** Tell us a little about your plans — what will your involvement with Qajaq USA be, and what kayaking trips would you like to take?

**GREG STAMER:** I enjoyed pouring my passion, time and talents into Qajaq USA for over 10 years. I can’t even imagine how many hours I have donated. Sometimes I laugh when I think that if I put that much love and time into a business, I would probably be wealthy by now! But it’s all about doing what you love to do. It’s now nice to step back and see equally passionate people taking over the reins. I plan to continue to being involved with Qajaq USA as a board member or advisor for many years to come.

For the last decade much of my attention has been focused on “exotic, faraway places.” I’m now taking the time to enjoy my “backyard” much more, appreciating things that are so frequently in view that I have ceased to notice them. I’m still planning some long “expedition-style” trips, but I no longer have the “addiction” that I must get away to some far-flung place. As the saying goes, “No matter where you go, there you are”!

I continue to paddle every week, and have been enjoying training and participating in local races. In addition to Greenland-style, I enjoy surf kayaking (with a GP), and racing (with a wing and a GP). I continue to enjoy kayak camping during the cooler months. ■



SSTIKS 2002

Photo by Ted Henry

# *The history of SSTIKS: a personal reflection*

by Tim Mattson

## **Introduction**

Even the sharpest memories grow dull over time. Our busy lives leave little time for reflection and as the years slip by, so do the details of past events. Hence, the details of the beginnings of SSTIKS — the South Sound Traditional Inuit Kayaking Symposium — are growing ever murkier with each passing year. And on the eve of this tenth SSTIKS, I want to make a sincere attempt to resist the memory-rot and put the history of SSTIKS down in writing.

For me, it all started way back in 2001 with the Puget Sound wooden kayak club. I was new to the area, having just moved to Olympia in the summer of 2000, and I needed people to paddle with. The wooden kayak club was welcoming as long as I, a committed fiberglass paddler with a wing paddle, agreed to compliment them frequently on their nice wooden boats. I don't remember the names of most of the people I met, but Mike and Tammy Hanks stand out.

I don't know who gave me my first Greenland paddle. I suspect it was one of the members of the wooden kayak club. I had tried a stick years ago when Steve Scherer loaned me one during a long trip in the San Juan Islands. My fist exposure didn't go well. I was a kayak racer and craved the hard bite of a wing paddle, so I went back to the wing.

The wing stroke is aggressive and hard on the body. After years of paddling with it, my elbows and shoulders were in trouble and I needed a more ergonomic paddle. So when I was given a Greenland paddle this time, I had a good reason to stick with it. I'll be honest. It took me a while to adapt to the Greenland paddle. Eventually, though, I came to love it. And even though I still use my wing paddle and my Euro-style paddles, I keep returning to my stick for day-to-day paddling.

## Beginnings

I had completely lost track of when the idea for SSTIKS first emerged. Mike Hanks recalls:

*... it all started as a conversation Tim Mattson and I had when paddling together. I thought it would be great if there was some sort of event for traditional-style kayaking. Tim informed me of the Delmarva Paddler's Retreat. It sounded great, but was too far away. I wanted something in the Pacific Northwest.*

The conversations continued at Wooden Boat Rendezvous in 2001 (run by Joe Greenly of Redfish kayaks) and moved online at Nick Schade's paddling message board. The details of how we moved from "conversation" to "action" are unclear. One fact, however, is crystal clear. While many of us sat around talking about the need for a Pacific Northwest kayaking symposium dedicated to Greenland-style paddling, it was Mike and Tammy Hanks who moved from talk to action and took on the task of leadership. Don Beale, Bob Kelim, Ben Stalley, I, and several others joined in and worked hard to support SSTIKS from the very beginning, but it's safe to say that without Mike and Tammy leading the charge, there would have never been a SSTIKS.

As for the name SSTIKS, both Bob Kelim and Mike Hanks credit Ben Stalley. He suggested calling the event the "Seattle Traditional Inuit Kayaking Symposium." Most of us involved with the event, however, didn't live in Seattle. We therefore added an extra "S" and choose the name "South Sound Traditional Inuit Kayaking Symposium," or SSTIKS.

The first SSTIKS was to be held 7–9 June 2002. We wanted a weekend event where we could drive in from across the Pacific Northwest, camp, and share knowledge of Greenland-style kayaking. For those new to the way of the stick, it may be hard to appreciate the world of traditional Inuit kayaking at that time. Little or no instruction in how to use a Greenland paddle was available. There were copies of "Rolling with Maligliaq," which we could study, and Greg Stamer and other Greenland paddling aficionados frequented Nick's online paddling community and shared information. We were for the most part, however, figuring out how to use the stick on our own.

After searching the major state parks of Washington, we closed on Twanoh State Park, which is famous for having the warmest saltwater beach in the state. Mike contacted the state park (Larry Otto



*Don Beale teaching paddle-making, SSTIKS 2002*

*Photo by Ted Henry*

was in charge of Twanoh at that time), and they were eager to welcome us. They had two conditions before they would let us hold the event. First, we had to have a motorized safety boat. In their minds, you clearly could not provide a safe environment for large numbers of kayakers without a boat for rescue operations. Second, we had to have insurance.

Don solved the boat problem. He had access to his family's fishing boat, and he pulled it all the way up from Silverton, Oregon. This was a serious pain, so we were quite pleased when after the state park people watched the first SSTIKS, they realized we could provide safety support from kayaks and dropped the requirement for a boat in subsequent years. Don was most relieved. The insurance was a bit tougher, but with some research I found that the American Canoe Association provides insurance for ACA-sanctioned events. As a certified ACA instructor, I was well plugged into the ACA. We had to create a paddling club (QajaqPNW), and then we could sanction the event and for a modest fee insure SSTIKS.

The core team came together in the winter and spring to plan SSTIKS. Mike remembers the core team as: Don Beale (OR), paddle-making workshop/safety team; Craig Beverly (WA), videographer; Mike Hanks (WA), event planner/contact/safety team; Tammy Hanks (WA), treasurer/Web mistress/registration/safety team; Ted Henry (WA), photographer; Bob Kelim (WA), co-planner/support staff/safety team; Tim Mattson (WA), kayak instruction/safety coordinator; Henry Romer (WA), safety team; Ben Stalley (WA), safety team

We jointly advertised the event with the Wooden Boat Rendezvous at kayak shops across the North-

west. We contacted Chris Cunningham of Sea Kayaker magazine, and he agreed to join us. Greg Stamer (president of the new organization, Qajaq USA) and Robin Snow (Director of the Delmarva Paddler's Retreat) flew in from the east coast. Harvey Golden agreed to drive up to SSTIKS from Portland. We lined up instructors, organized stroke and rolling instruction, and showed up at Twanoh State Park.

And we waited. We had no idea how many people we would get. There were advanced registrations, but we really didn't know if the event would bring in enough people to cover our costs or not. It turned out we had nothing to worry about. Seventy-six people showed up for SSTIKS in that first year. SSTIKS'02 started on Friday evening with a potluck dinner followed by an evening talk. On Saturday morning, we started a two-track format. In one track were Don and his paddle-carving class. The other track was the much larger paddling track. We did strokes in the morning and rolling in the afternoon. Then in the evening was a race followed by games.

## Evolution

Over the years the event has evolved. We realized right away that it wasn't fair that some people spent the entire weekend carving paddles without a chance to use them. So Don figured out how to rough cut blanks at home so people could finish carving their paddles in a day. Then we moved the paddle carving to Friday. The carvers, therefore, showed up a day early and with luck had new paddles to use all weekend. Of course, the travel mates of the carvers needed something to do, so we



*Walrus Pull demonstration, SSTIKS 2002*

*Photo by Ted Henry*

eventually added an afternoon program on Friday. That filled up quickly and we realized that there were plenty of people around Friday morning as well. So we moved to a full day Friday program, which is the format we have settled on for the long term.

We found that having an official presentation both Friday and Saturday night was too much. People wanted time to just hang out and talk. So we moved to a talk on Friday night alone. For Saturday night, we added an auction to raise money to help cover costs and pay for out-of-state visitors.

We also discovered in the first couple of years that by Sunday afternoon, people were tired. Often their paddling clothes were damp, and their interest in time on the water was lukewarm at best. So we moved to holding a series of dry-land activities for Sunday. This included Greenland rope gymnastics and boat-building demos. By mid-day, people were ready to go, so we decided to officially end SSTIKS with lunch on Sunday.

Speaking of lunch, one of the distinguishing features of SSTIKS is our food. For SSTIKS'02, Bob Kelim set up a barbeque grill for people to use on Saturday night. This worked out well. As Bob Kelim recalls:

*[In] 2003 I was going to bring my grills for a repeat of year one but noticed that Chinook Salmon from the Young's Bay terminal fishery were available for really, really cheap, and Larry Malchow of Long Fin Seafood in Chinook gave me a very good deal on it. Larry drowned in the early part of the troll season the following year, so I started getting fish from Sue at Ole Bob's in Illwaco. I was picky about the fish I served and the fisherman who caught it, still am.*

This started the tradition of a fish barbeque Saturday night, complemented by potluck extras.

Early on, we also noticed that people scattered at noon to get food. It was hard to get people back in time for afternoon sessions on the water. So in 2004 Tess Doornink organized lunches for SSTIKS attendees — at first just on Saturday, but from 2005 on, both Saturday and Sunday. The entire Doornink clan was involved with providing SSTIKS lunches, which they could more easily do because they live a modest distance from Twanoh.

## **The Kids' Track**

In 2005 we made a huge leap. Marcel Rodriguez launched a kids' track at SSTIKS. The idea was to take our family-friendly nature to the next level and create a playfully educational (or perhaps an educationally playful?) experience for kids to have fun while learning about kayaking. The kids' track has become a cornerstone of SSTIKS. The noise, chaos, and openness that the children bring to SSTIKS has been great. Over the years, Mark Whitaker, Mike Hanks, and others have run the kids' track as well, meaning it has taken on a long-term life of its own. Perhaps nothing about SSTIKS fills me with more pride than the success we've had passing a passion for paddling to new generations of stick paddlers.

The years have been kind to SSTIKS. Attendance has varied from a low of 67 in 2003 to a high of



*Harpooning, SSTIKS 2002*

*Photo by Ted Henry*

132 in 2007. That year was probably more than we could handle so we instituted a registration cap to keep attendance between 100 and 120. Also, by moving to a “pre-registration only” policy in 2008, Tammy no longer had to sit at the registration desk all day collecting forms and making badges.

Moving forward, we are actively bringing in new people to help organize SSTIKS. I’ve turned over the bulk of my organization duties (primarily safety and insurance) to others. Heidi Grant has taken over most of the registration duties. Karl Guntheroth has taken over safety. Jeanette Rogers has become our Web coordinator. These people (and others) have moved into leadership roles at SSTIKS. If we continue cycling in new people while others move on, we’ll always have a fresh crew to keep moving SSTIKS forward. And as I continue to move into the background, just teaching and doing less and less to organize, I can’t tell you how excited I am to see what we’ll have to talk about when we celebrate the 20th anniversary of SSTIKS. ■

*Tim Mattson works as a professional scientist (Ph.D. theoretical chemistry): “I love science. I have combined my twin addictions of kayaking and science to create a lecture series on the science of kayaking. I present these lectures at kayaking events around the Pacific Northwest.” He is certified as an ACA Open Water Instructor and as an ACA Instructor Trainer.*

#### *Editor’s Note*

*SSTIKS is one of five Qajaq USA sanctioned events held throughout the United States. The others are the Delmarva Paddler’s Retreat, held at Camp Arrowhead in Lewes Delaware; the Gathering, held this year at Lake Carlos State Park in Minnesota; the Hudson River Greenland Festival, now held at Croton Point Park, Croton-on-Hudson, New York; and Qajaq TC, also known as Michigan Training Camp, held at Camp Lookout, near Frankfort, Michigan. See [www.qajaqusa.org/QUSA/events.php](http://www.qajaqusa.org/QUSA/events.php) for more information.*



*Bill Samson paddling a baidarka he built in 2000*

# *Baidarka: The Building of an Aleutian Baidarka*

DVD Review by Tom Milani

Filmed and edited by Daphne Barbieri L.A.C.I.

Narrated by Bill Samson, Baidarka built 2009–2010

Approximately 64 minutes

Trailer available at <http://www.youtube.com/watch?v=8jMRyUzec1A>

Available from Daphne Barbieri, [daphnebarbieri@tiscali.co.uk](mailto:daphnebarbieri@tiscali.co.uk)

The DVD *Baidarka: The Building of an Aleutian Baidarka* isn't a how-to guide, with step-by-step instructions for building a replica baidarka, nor is it a history of the construction of those craft. Instead, it's a delightful introduction to the native watercraft widely in use at one time in Alaska.

The DVD begins with a short history of the baidarka, augmented by historical photographs and drawings. Narrator Bill Samson then describes the baidarka he is going to build. Collected in 1894, it is an Unalaska type. This particular baidarka was surveyed by Harvey Golden, who helpfully provided the drawings from which Bill lofted full-size plans. The film shows him drawing the bifurcated bow.

The baidarka is built with a mix of driftwood and purchased lumber. To ensure strength, Bill uses driftwood for the curved pieces. These are shaped on the bandsaw. The baidarka frame goes together without glue or hardware of any kind; all joints are held together by lashing or pegs. The ribs are white oak and steamed in a homemade steam box. Bill uses a bending jig to shape the ribs, which are later clamped to the keelson and gunwales, before being cut to their final lengths and inserted into mortises.

As construction of the frame progresses, Bill describes the form and function of many of the parts.

Bill follows the color scheme of the original, painting the framework blue and red. One detail nicely shown is how Bill ties knots. I have seen drawings of knots and read descriptions of them, but neither were as clear as what's in the film.

Also clear in the film are the first steps in skinning. Bill chose cotton canvas because he personally felt a natural fabric was "more in keeping with this type of craft." Sewing begins at the bow, around the bow pieces. Once that's done, the frame is tied securely to a tree and, in a series of pulls, the canvas stretched the length of the frame, and marked each time. When it can be stretched no longer, the canvas is released, and a pocket sewn at the last mark. I've read several descriptions of this in various books and on various websites, but again, none were as clear to me as the filmed version.

Deck lines—originally made of seal skin—take the form of jute rope straps preserved in linseed oil. Bill sews these directly onto the skin. To replicate the walrus whisker ornamentation traditionally used on the baidarka, monofilament line and colored wool are sewn along the center seam, toward the bow.

Launch occurs during a blustery fall day, and it's clear from his smile that Bill is happy with his craft.

Bill's skill in building, his able and concise narration, and the quality of the cinematography make this a valued contribution to skin-on-frame documentation. The soundtrack of native music adds another touch of authenticity to the project. The DVD won't teach you how to loft and build your own replica, but if you have any interest at all in the subject, it will inspire you to read—and do—more. ■

## *Acknowledgments*

Special thanks to *Masik* proofreaders Ginger Travis and Tracy Coon. Their timely efforts greatly improved the quality of this issue. I appreciate their thoroughness and good humor.

Alison Sigethy typeset and did the layout for the entire issue. Her tasteful design brings the photos and words to life, and she put the issue together quickly despite an extremely busy schedule.

Photographer Ray Whitt generously donated pictures he shot when he happened to be at Croton Point Park while HRGF was occurring. I'm grateful to Fred Feingold for facilitating this transfer.

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Last, I'd like to thank the authors for their contributions and feedback. Based on the amount of e-mail that was exchanged as this issue was being put together, it became obvious to me how seriously the authors took their work. Reading their articles, it is clear how much they care about traditional kayaking and how important it is for them to share their efforts.

Thanks, everyone.  
Tom Milani

# On the beach at the Hudson River Greenland Festival

Photo: Dana Rutherford

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*The Masik* welcomes contributions and queries. If you have an idea for an article, but aren't sure if it's right for *The Masik* or if you want to discuss it further before committing to writing, contact Tom Milani, the editor. He can be reached by e-mail ([tommilani@me.com](mailto:tommilani@me.com)) and by regular mail (1211 Duke Street, Alexandria, VA 22314).

If possible, articles should be prepared electronically and saved in Rich Text Format (.rtf). The less formatting done, the better (double-spaced text is fine). Photographs should not be embedded in the article. Instead, place a caption about where the photo should appear and send the individual photographs with the text. Photos should be as high resolution as possible and can be sent in .jpeg, .tif, or .raw format. ■

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