

GrandDESIGNS

In the USA, the kit-built Deer Isle Koster Boat was a continental collaboration between Bruce Elfstrom the designer, Clinton Chase the boatbuilder and Steve Stromborg and Celie Bauer, the amateurs who built the first kits.

Bruce Elfstrom, Lyme CT:

In winter, my dreams tend to go towards adventure and wooden boats. I had a simple goal: I wanted to get my kids Petra and Oaklea their own boats so they could have the fun and independence I had as a kid but with some safety as well.

Being of Scandinavian descent I had dabbled in the design of a couple of raid-like boats but I was and am a total amateur. However, I understood the characteristics of a boat that make

it great. I also understood that a boat should be beautiful, too.

Despite searching, I could not find a boat on the market with the right characteristics: a "swallows-and-amazons" type boat; decked over, safe, beamy, fast hull but still sails in light wind; trail-able and lightweight enough to drag up a beach alone, row-able, large enough for my kids to sail for the rest of their lives as tall adults with a friend or solo, shallow draft and able to sit level on the mudflats off Deer Isle, Maine. It should have a kick-up rudder, centreboard with NACA foil shape for performance, a very simple sail plan that could still be tweaked for fun, glued lap ply for dry storage, affordable construction and be, above all, beautiful. Anything beautiful was expensive and heavy; anything that was light and sailed fast was ugly, ugly, ugly. What's with that?

Being stubborn and a "just do it" kind of guy, I sat down with a napkin and pencil on Deer Isle, Maine. Four months later the Deer Isle Koster was born, on paper. When asked, "What is she?" I would answer: "She's a Danish Jolle that had carnal relations with a Swedish Koster, smashed into a Beetle Cat and fused with my lightweight raid-boat designs". I called her the KDI for short and turned to Eric Friberg of North Fjord Boats over 3000 miles away in Washington State to build two boats for us.

They were delivered in late July, 2010. After rigging, insert two girls; add wind. Off they went! I followed in my Cornish Shrimper under power. I watched as they sailed away from me in 10 knots of wind, stable, calm and without event. Yes, they sailed away from me. Away from me in 14' (4.3m) boats; me under full 5-6 knot throttle; me scared to have them so far away; me on the radio yelling for them to slow down and wait for me; and me positively beaming! Boats can still be beautiful and high performance!

Later, beer in hand and feet on the hearth, I realized that these boats needed to be made available in a kit form so others could build their own KDI. The world will be a better place, I thought. In Fall 2010, I called my friend Clint Chase in Portland, Maine who had recently started a boat kit business specializing in beautiful boats like the KDI. As they say, "the rest is history".

Clint Chase, Portland ME:

When Bruce approached me, I was consumed by a number of other projects in my catalogue and wanted to see what the interest level would be before beginning the involved kitting process. It takes hundreds of hours to get a boat kitted:



documenting lines, 3D CAD modelling, 2D drafting, producing CNC cutting files and manual writing – not to mention the prototyping, sea trials and feedback from them to close up the design loop. With the 2 original boats to study, some sketches, and a table of offsets, the kitting project began in earnest.

The KDI's shapely hull makes a challenge of lining off the sheer and laps of this glued clinker hull. After the offsets were input into Rhino CAD and the first 3D curves created, the first step was to revert the hull back to a round-bilged form. Only after the hull sections were carefully faired in Rhino was the hull relined for 9 strakes. The inside and outside surfaces of the planks are modelled as well as the actual $\frac{3}{4}$ " (18mm) laps between planks. Through the process, Bruce helped scrutinize certain details like the spring of the sheer to seal the KDI's distinctive, beautiful shape.

Another challenge which took time to sort out was the very quick curvature of the hull beginning just aft of midships, fairing into the sternpost. The shape of the hull was relaxed somewhat to help new boatbuilders more easily bend planks and other longitudinal timbers. Still, the sheer clamp – or inwale – needs to be laminated or steamed to take the bend. Once the clamp and inner keel is in place, the entire hull is planked with $\frac{1}{4}$ " (6mm) okoume plywood over CNC-cut stem and sternposts and $\frac{3}{8}$ " (9mm) bulkheads with no temporary moulds required. When the hull is turned over, the hull is structurally complete save for decks and seats which are included in the kit.

The airtight, sealed compartments fore and aft and along the side seats were retained in the kit version. NACA shaped foils for the centreboard and rudder are made with templates that come with the kit allowing the builder to accurately shape the foils by hand. When I sailed the KDI with Bruce, I was struck by how close-winded the KDI sailed. This is largely to do with the efficient foils. Bruce and I, both over 6' (1.8m), could comfortably sit in the boat with room to spare for gear or kiddos to tag along. Indeed the KDI feels like a big little boat.

Three rig choices come with the KDI: a 102 square foot (9.5m²) balance lug, a standing lug sloop and a balance lug sloop. The Bauers' KDI will fly the balance lug for simplicity. That big lugsail will drive the hull very nicely in light airs and powerfully when off the wind. The boat may not point as high on the wind as the lug sloops, which will be superb performers once the builder learns her ways. Off the wind a vang may help control twist in the main. And like any lug rig, it takes a couple seasons to learn the many subtle adjustments needed to make the rig work well. For instance, a lugsail is sensitive to where the halyard ties off to the yard and downhaul tension when on the wind. Eventually she'll sail like any modern sloop. With some sacrifice in performance and helm balance, the jib could be dropped to sail under lug alone. And when the wind dies, the boat glides along under 8½' to 9' (2.6m) oars which stow nicely along the floorboards.

Steve Stromborg, Seattle WA:

My first boatbuilding project was a 14' (4.3m) flat-bottomed skiff with a spritsail. After a season of sailing her, it was time look for a more challenging craft, one with better performance

and seaworthy enough to venture into greater Puget Sound. When I saw the KDI. I was immediately attracted to her classic lines, a partial deck to stash stuff out of the weather and room for two adults was enticing. When Clint Chase announced he would be producing a kit I jumped at the opportunity, pestering him until one day a small crate containing what would become the first production KDI launched was delivered.

For a neophyte boatbuilder, a kit like this is a great way to go. There will be plenty of challenges in putting all the parts together, lots of work with planes, saws and sandpaper to build skills towards future projects without also wondering if you've lined the hull off properly. It is comforting to know, as you wrestle a reluctant plank around the moulds and into place on the aft stem that the shape of the plank is correct and you just have to figure out the right way to get it in place. Start to finish, building *Kayli Marie* took about 7 months; this included making birdsmouth spars and sewing together a lugsail kit in my living room.

Sailing *Kayli Marie* as a standing lug sloop has been great fun. Winds in this area are best described as variable; a day on the water here can see everything from significant whitecaps to flat calm over the course of a few hours. With all sails up she scoots along on a zephyr and I've learned to put the first reef in early. For those times when the wind has packed it in completely I find she rows well too. With the jib furled the sail and yards are tucked under the foredeck and along the starboard bench, the oars are deployed and she shows a nice combination of tracking and agility.

Celie Bauer, Portland ME:

After my brother built an Oughtred Elf with my dad when I was a kid and my sister built a Nutshell Pram a few years later, I knew I had a lot to live up to. I needed to find a boat big enough to challenge the Elf and cute enough to challenge the Nutshell and I found it. As soon as I saw the KDI I knew it was the perfect boat for me. The kit made it even better because I'm a senior in high school and I don't have a lot of time on my hands. With Clint's kit I've been learning new skills and putting a lot of energy into her, without the boat taking every minute of my day to build. My friends come over to help my dad and me build and we've all been discussing paint ideas. I'm really excited to have a boat big enough to carry several teenagers so I can cruise around Casco Bay with my friends.





DEER ISLE KOSTER BOAT
 LOA: 14" (4.3m)
 Beam: 5'3" (1.6m)
 Draft – c/b raised: 5¼" (133mm)
 c/b lowered: 3' (0.91m)
 Weight: 200 lbs (91kg)
 Sail area: 102 square feet (9.5m²)

KDI KIT BUILDERS

UK: John Hesp
 Tel: +44 (0)1643 862889
 john@hesp.co.uk

FRANCE: Icarai
 Tel: +33 (0)2 33 41 38 91
 nvivier@icarai.fr

AUSTRALIA: Denman Marine
 Tel: +61 413 765 984
 andrew@denmanmarine.com.au

USA & CANADA:
 Clint Chase Boatbuilder, LLC
 25 Deblois Street
 Portland, ME 04103, USA
 Tel: +1 207 602 9587
 boatkits@gmail.com
 www.ClintChaseBoatbuilder.com

