

Borealis XL

by Pygmy Boats

I designed the Borealis XL sea touring kayak for paddlers weighing 230 to 300-plus pounds. At 17' with a 25½" beam, 13" deck height, and an extra large 19"×36" cockpit, she has the stability and ease of entry larger paddlers need. I wanted the Borealis XL to have excellent stability and comfort for larger paddlers without sacrificing efficiency and performance. I am very pleased with the results. Given her greatly increased stability coupled with only a modest decrease in speed, she has quickly become popular with average sized folks who want a more stable boat and a roomier cockpit.

—John Lockwood, designer
Pygmy Boats

REVIEWERS

TW: 6' 1", 180-pound male. Day trips, wind calm, currents to 3 knots with rips. No cargo

TE: 6' 1", 200-pound male. Day trip, winds 15 to 18 knots, waves to 2½ feet. No cargo

MK: 6' 1", 210-pound male. Day trip, light breeze, occasional freighter wakes. 20 pounds of cargo .

Length overall	16' 11¾"
Beam	25⅝"
Volume	17.22 cu. ft.
Cockpit size	18¾" × 35¾"
Cockpit coaming height	
Forward	13¼"
Aft	9¼"
Height of seat	1¾"
Weight	54¾ lbs.

THE REVIEW

First Glance

The Borealis XL from Pygmy has lines that are "pleasingly deceptive; the kayak has the appearance of 'normal' size and yet its dimensions are significantly greater. The finish on this kayak, combined with its wood structure, creates a warm feeling. It's a comfortable boat that is easy on the eyes" (TW). "For a kayak large enough to accommodate larger paddlers, the Borealis is light enough for an easy solo carry" (MK). "The deck fittings are plastic padeyes bolted to the deck—not as unobtrusive as recessed fittings but I didn't get snagged on them while crawling over the deck" (TE). "Overall, the rigging was Spartan and could use the addition of a perimeter line for safety and some way to secure a spare paddle" (TW). As a kit boat, the deck rigging can be arranged to suit the builder.

Fit

"For my 34-inch inseam, the extra-large cockpit is heaven on earth. I could move both knees together in and out of the cockpit. Amazing. The width at the hips is easily adjustable with three closed-cell shims of various thicknesses. The foredeck is canted and doesn't interfere with high-angle paddle strokes" (MK). TE had "plenty of foot room for size-13 booties." "The cockpit opening is immense and allowed easy butt-before-legs entry. The tall foredeck



provided plenty of room for larger legs. I found the cockpit to be too large for me; I'd require quite a bit of additional fitting to create a snug fit for better control" (TW).

The Borealis XL had a "comfortable foam seat and a well-designed and comfortable back support that can be raised or lowered from outside the cockpit" (MK). TE found the seat "doesn't provide much support for my legs. After a couple of hours my rear was getting sore and my legs fatigued." The thigh braces are removable and come with different degrees of contour. "The less-aggressive thigh braces installed in this boat were a very good fit for me and proved effective in setting the boat on edge (MK). The foot braces "were solid and easily adjusted by pulling a toe on the forward side—easy to do with the spray deck in place" (TE).

Stability and Maneuverability

"The initial stability was substantial. Edging it just to confirm secondary stability was challenging" (TW). "The primary stability is very high. I could sit in the chop and the boat kept itself under me. Secondary stability is very high—a real wall to lean on when edging" (TE).

"In squirrely currents and calm conditions tracking was excellent without tendency to wander and yaw" (TW). "It kept a straight course at any speed, even when in a sprint" (TE). "The Borealis definitely did not spin on a dime but a small amount of edging combined with paddle sweeps generated comfortable steering and course correction" (TW). It "doesn't skid around for tight turns but for a big boat it has good maneuverability" (TE). "Even without the aid of a rudder or a skeg, the Borealis XL has very little tendency to weathercock" (MK). "It has exceptionally good balance in the

wind. Going into the waves, I never took any noticeable amount of water over the bow. The Borealis is a lot of boat to get moving to catch rides on wind waves, but it had no tendency to broach and I got some good surfing" (TE).

Speed

TW noted the Borealis XL's "light weight allowed quick acceleration but I felt like I really had to work hard to push it along at a good touring clip." TE "maintained 4½ knots at an easy pace, 5 knots at an exercise pace and sprinted to a peak of 5½ knots." "Despite the wide beam it was quite easy to push along at 4 knots. Though not lightning quick, it could sprint to 5 knots" (MK).

Rolling and Rescue

"With the extra-large cockpit, exiting this boat could not be much easier and reentering with a paddle float went quite well. For a large high-volume cruising boat, the Borealis XL was quite straightforward to perform a roll" (MK). "The pump and dump (without cargo) was a surprisingly easy lift. The position of the aft bulkhead close to the cockpit opening took care of draining the cockpit. For a cowboy scramble, the deck just aft of the cockpit was a bit high to make an easy lunge aboard. I moved aft of the hatch and got aboard much more easily. From there I'd scoot forward and drop seat first into the cockpit. Then it was easy to swing my feet in. For rolling the fit was a bit loose. I slipped a little out of the seat and back support, but still stayed in the boat, and both the layback and the C-to-C rolls worked OK. It took a bit of a heave to get the boat rolled around but it finished on its own as the stability pushed the boat upright. Reentry and roll worked well: I got upright with only a little bit of extra effort" (TE).

BEST FEATURES

- Room for big paddlers
- Stability

TO IMPROVE

- Seat comfort

Cruising

"Ample storage for long trips is a high point of the Borealis XL. Extra goodies and all the luxuries of home can fit in the grand compartments. Three webbing straps secure each hatch cover. The latch system for the webbing was secure and resisted unhooking at inopportune times and yet was easy to use" (TW). The glassed-in plywood bulkheads "leave little wasted cargo space in the cockpit. I found only a few drops in the forward compartment after rolling drills" (TE). For TW and MK both compartments remained dry.

The Bottom Line

The Borealis XL "is really the big guy's dream: a quality kit touring kayak that combines a grand size with great looks and good handling. Photographers may be attracted to the Borealis. The ample cockpit space provides plenty of room for a camera with a long lens while the stability and high foredeck create the perfect shooting platform" (TW). "For big paddlers the Borealis XL is going to be a good fit. The boat has plenty of room for the paddler and for cargo and brings very good performance to a large kayak" (TE). "For the build-it-yourself enthusiast, the Borealis XL will definitely fill a niche for the 250-pound-plus person. It is a pleasure to paddle, would seem to be a very friendly and reliable touring kayak and is a real eye catcher" (MK).

MANUFACTURER'S RESPONSE

I'm pleased *Sea Kayaker's* test paddlers found the Borealis XL's tracking and response to wind and waves to be excellent. These are paramount issues in coastal touring. I'm glad they found her beautiful, and liked the comfort of her extra large cockpit and extra footroom.

I knew *Sea Kayaker's* test paddlers would lean, brace, and roll the kayak. I tried to anticipate their need for a snug fit by providing them with three different widths of hip blocks, and both our standard and our super-sized keyhole cockpit knee braces. Also, since there is a wide variety of bottoms in the kayaking world, one shape of seat does not fit all. We included three seats. Our standard and our

extra-large air cushion seats will both contour to any shaped bottom when deflated until your behind settles the right amount into the seat. The molded foam seat fits some people but not all. I'm not sure which of these various alternatives your paddlers tried out, but comfort is an important factor in a sea touring kayak.

I appreciate *Sea Kayaker's* objective reviews and concrete hydrostatic data on the Borealis XL. I'm glad your reviewers said it "is really the big guy's dream" (TW) with "very good performance" (TE), and a "pleasure to paddle" (MK). Great, I wanted to design a boat that would appeal to big paddlers.

—John Lockwood, founder and designer, Pygmy Boats, Inc.

KAYAK REVIEWS

BOREALIS XL MANUFACTURING DATA

Designed: 2010

Standard construction: Kit. BS-1088 marine Okoume plywood pre-cut panels and cockpit coamings, a fully illustrated manual, epoxy, fiberglass tape and cloth and other supplies.

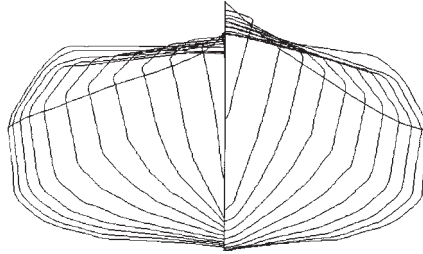
Standard Features: 2-part slung-back seat, Keepers adjustable footbraces

Weight: 43 pounds

Price: Full Kit, US \$995.
With Silver Tip Epoxy, US \$1,121

Availability: Direct from the manufacturer

Manufacturer: Pygmy Boats,
360-385-6143
info@pygmyboats.com
www.pygmyboats.com



SPEED VS. RESISTANCE

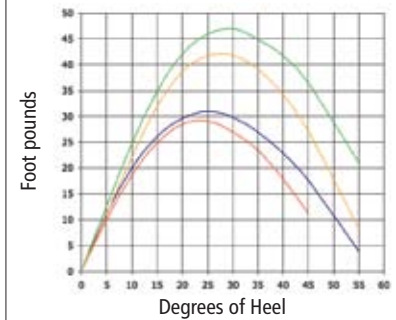
Resistance in pounds.

Speed	Winters/KAPER	Broze/Taylor
2 knots	0.99	1.00
3 knots	2.08	2.09
4 knots	3.92	4.06
4.5 knots	5.91	5.66
5 knots	8.98	9.06
6 knots	15.68	17.88

HYDROSTATICS

Waterline length	15' 3.5"
Waterline beam	25"
Draft	4.5"
Prismatic coefficient	0.48
Wetted surface in sq. ft.	23.32
Center of buoyancy	52%
(Hydrostatics calculated with a 250-pound load.)	

Righting/Heeling Moments (Fixed-weight)



Stability Curves*

- 150 lb. paddler, no cargo
- 200 lb. paddler, no cargo
- 150 lb. paddler, 100 lb. cargo
- 200 lb. paddler, 100 lb. cargo

*Formula revised December 2009. (not comparable with stability graphs generated prior to December 2009.)

TECH TALK

Readers interested in the full set of hydrostatics can find them posted on our website at www.seakayakermag.com along with additional data. An explanation of the terms and procedures used in the kayak test program is also available on the site.