

SPECIAL REPORT: THE LATEST ON THE PANAMA CANAL

# BLUE WATER Sailing

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COVER STORY: *BWS* TESTS  
THE BRUCKMANN 50 MOTORSAILER





# **Bruckmann 50 motorsailer**



Photos by Onne van der Wal

## Combining the best of both worlds, this sensible boat will cruise on schedule

by Greg Jones

With the publication of our special section devoted to exploring the subject and design of motorsailers (*BWS* April 2005), our mailboxes, both traditional and of the e-variety, have been busy coping with correspondence on the topic.

One of the boats we mentioned in the article was the Bruckmann 50, a Mark Ellis design that drew on his experience with its smaller cousin, the Northeast 400. We recently had the chance to go out on the Bruckmann 50 for a few days, a cruise that was virtually a Damascene experience.

First, a definition of terms. The Bruckmann 50 is a motorsailer, the design having been approached with the goal of maximizing its performance under power and sail, and often both in concert. Doing this requires more than simply dropping a big engine into a sailboat, as the shape of a powerboat hull is different from that of a sailboat. This factor is discussed at length in the aforementioned *BWS* article and suffice it to say that Ellis' design fulfills those two rather dissimilar requirements to an amazing degree.

We sailed on *Bonaventure*, hull number two, owned by Dan Betty, a lifelong sailor whose first boat, an 18-foot mahogany sloop, sank at the slip the day it was launched, after a winter spent refurbishing it. He had bought the boat a month after getting married to his wife Pat, who shares her husband's love of boats.

"I sold it with the mast sticking up out of the water," recalls Betty, "and we bought an Ericson 27."

From the Ericson there proceeded several more boats, and with the arrival of their two daughters, they made the change to powerboats.

"I've been up and down the ICW probably 30 times," says Betty, recounting the adventures he and his family have had on their boats, but the noise and expense of a large powerboat finally persuaded them to return to sail. They bought a Mason 44, and while they liked the boat's seaworthiness, they were, "spoiled by the room," that a powerboat afforded, admits Betty.

They bought a Northeast 400, designed by Mark Ellis ("An underappreciated designer," says Betty), at the Annapolis Sailboat

# blue water boats



**A true motorsailer, the Bruckmann 50 has a huge saloon with great 360-degree views and an ample cockpit**

## Bruckmann 50

LOA	51' 2"
LWL	47' 1"
Beam	15' 5"
Draft	6' 0"
Displacement	44,000 lbs.
Ballast	16,000 lbs.
Sail area	1,250 sq. ft.
Engine	turbocharged 276 c.i. 150-horsepower John Deere diesel
Air draft	64'
Fuel	250 gals. (as tested, 400 gals.)
Water	200 gals.
SA/Displ.	16.05
Displ./L	188
Ballast ratio	36.4%
Hull speed	9.19 kts.
Hull and deck	single-piece Core-Cell w/ vinylester resin
Lbs./in. immersion	2,592
Base price	\$838,000
Designer	Mark Ellis

Bruckmann 50 sold by:  
Alden Yacht Brokerage and Design  
89 Commercial Wharf  
Boston, MA 02110  
617-227-9480  
[www.aldenboats.com](http://www.aldenboats.com)

Show in 1996, and six years of sailing *Si Bon III* refined exactly what they were looking for in a boat. The boat had to be fun, provide the comforts a family needs, and it had to sail well. Betty is, at heart, a sailor, but years of owning powerboats gave him an appreciation for the advantages inherent in a powerboat.

Those advantages were squarely in view as we left Falmouth Harbor on an overcast day with light, chilly winds. We were headed to Nantucket on *Bonaventure*, Betty's latest, possibly last, boat, the Bruckmann 50 he bought because *Si Bon III* needed a little more room. The wind was light and seemed to be slowly building, going from six knots at the harbor entrance to a steady 10 with gusts to 15 a few miles out. It was out of the northeast, with enough east in it to pinch us up to the edge, making way at five knots with the wind at 35 degrees apparent.

We pattered along like that for a short while, realizing that when the tide turned our SOG was going to drop to a walking pace. The short discussion we had about firing up the engine was further truncated when the wind dropped to five knots, gusting eight.

"We usually motorsail whenever the speed drops below eight knots," says Betty. "That lets us actually plan a trip, knowing when we will arrive."

The engine is a big, slow-revving John Deere 150-horsepower turbocharged diesel, the sort of engine seen

on fishing boats, “because those guys have to rely on their engines,” says Betty. The red line on the engine is just 2,600 rpm, and in practice we found around 1,800 rpm would deliver decent speed, 8.4 knots, with a fuel burn rate of 2.6 gallons per hour. If absolute range under power was the goal, throttling back to 1,000 rpm still produced 5.1 knots, burning .6 gph. We pushed the throttle all the way forward and watched the tach rev up to 2,575 rpm, giving us 9.7 knots with a fuel burn rate of 7.8 gph. That is hardly the sort of speed one would undertake on a long voyage, but it means you can call on the engine for some serious speed and power if necessary. Hitting an eight-knot tide rip would still allow you to make headway against it, for example.

The selection of the right prop is important on a motorsailer. It has to provide solid thrust when under power, both forward and reverse, but there will be long periods of time when the boat will be under sail. The prop may be asked to only provide a small assist, turning five knots under sail alone into eight knots motorsailing.

Betty has done a lot of fairly serious research on the prop for *Bonaventure*. He has tried fixed, feathering and folding props, discovering the benefits of each and has settled on a four-blade Varifold prop. “It’s the smoothest, quietest prop I’ve used,” he says.



**The engine room lies under the saloon floor (above). Under power alone, the boat can cruise transatlantic**



# blue water boats



**Finished in classic-yacht style, the 50 offers a cruising family all the comforts of home**



We took advantage of the lull in wind speed to do some full-throttle, full-lock turns. The aft steering station is a manual Whitlock unit, five turns from lock to lock. The inside steering station is hydraulic. With the hydraulic autopilot operating independently, there are three separate and redundant steering systems, with a manual tiller backup just in case you are having a really bad day on the water.

Standing at the aft station we cranked the wheel hard to port while motoring at nine knots (2,100 rpm, 4.1 gph), and after settling in to the turn we cut a circle with a diameter of 1.5 boat lengths, with no heeling or pressure on the wheel. After getting back on course and up to speed again we put the wheel hard to starboard and carved a circle of just one boat length in diameter.

The Bruckmann has a skeg-hung rudder the size of a pool table, and we were interested in how well we could hold a course in reverse and what sort of drive we would get from the Varifold prop. From six knots ahead we cut the throttle and then shifted into reverse. With no clunking sounds, no audible evidence whatsoever of the blades reversing pitch, we then powered up in reverse, churning up the water aft and slowing down to a full stop in a boat length. We then backed up at six knots, holding course with no significant pressure on the manual steering, and proceeded to carve first a 90-degree turn to port and then a 90-degree turn to starboard, all under full control.

The keel of the Bruckmann is a solid lead, 16,000-pound, semi-Scheel keel, with a moderate taper that is roughly as wide at the base as it is at the bottom. It held the boat nicely in reverse, and we found that when under sail it tracked perfectly, allowing hands-off course-holding once we got the rig trimmed. The boat draws six feet, enough to make the Bahamas a serious option for one's cruising desires while still giving good performance getting there.

*Bonaventure's* gear reflects Betty's desire for a boat with genuine transatlantic capabilities, whether under power or sail. Thus, he has installed two, 200-gallon fuel tanks, nearly double the "stock" version with 250 gallons. With eight knots of wind on the beam, we made 8.9 knots through the water with the engine ticking over at 1,500 rpm, for a long-legged fuel burn rate of 1.6 gph. This produces, with Betty's tanks, an ocean-straddling range of nearly 1,700 miles, with a 100-gallon reserve. If you are willing to arrive with empty tanks, the range is just over 2,200 miles.

If the wind never blows, 1,500 rpm will give you 7.35 knots, for a range of just over 1,800 miles, using the boat's full fuel capacity. One of the nice things about a slow-turning engine is the reduction in noise and vibration. The John Deere engine has hefty counterbalances on the crankshaft, nearly eliminating the vibration usually associated with diesel engines, and the noise from an engine turning at 1,500 rpm is noticeably quieter than one cranking away at rates twice that. We were able to carry on conversations at a normal level while at the inside steering station/saloon, and only with engine speeds in excess of 2,100 rpm did we find the engine noise begin to intrude on easy conversation.

From the large, comfortable cockpit, laid out like any well conceived offshore sailboat, the saloon's sole is on the same level as the cockpit's. A large sliding door opens up wide enough to pass. All the boat's major gear, from tanks to genset to galley furniture to the engine, was all installed after the boat was built. This is a strategy that might slow things down in the yard, but one that will be appreciated in later years. We have visited numerous production boatyards and watched the entire boat assembled before the deck was dropped on. Even if the drawings assure one that the engine can be removed, there is nothing to



The raised doghouse and cockpit are on one level while the galley and cabins are down two steps going forward



compare with the comfort in knowing it is proven fact.

There is no bridgedeck, making movement easy, but closer inspection of the doorframe revealed a wide slot on either side where a bridgedeck would be slotted in for offshore work. The top of the bridgedeck is above that of the cockpit seat level and while it would be a wet few minutes for any crew in the cockpit, the water would be largely confined to that area. The door can close with the bridgedeck in place, and in practice there would be little reason other than self-indulgent masochism to spend much time on deck in conditions that would warrant installing the bridgedeck.

From the saloon you are rewarded with a 360-degree view, even while seated. The large glass portlights (the one beside the wheel slides open) are made of tempered glass, and the frames are reinforced to ac-

## This is a boat that any sailor would be pleased to own and sail anywhere.

cept storm shutters. Opening hatches in the saloon deckhead allow you to keep an eye on sail trim and large, workboat-style windshield wipers are on each of the three forward portlights, which are topped with an overhanging “eyebrow” to reduce glare.

The starboard side of the saloon has a small built-in chair, and the steering station is forward of that. The Bruckmann 50 is a semi-custom boat. We looked at another version and the steering station had a small cabinet next to it and no chair. To port is the table with cushioned seats in a U around it. The seat is long enough to be used as a sea berth, with attachment points for lee cloths on the deckhead.

The engine room is directly below the saloon, with removable soleboards allowing full access. Stairs lead down to the galley to port and a room to starboard that has variously been built as a library, a “social room,” an office or a berth. On *Bonaventure* there is an L-shaped sofa, with the hull-side section set up as a sea berth. As this is a boat designed for a couple to cruise anywhere, two sea berths, one for use on each tack, is the kind of design forethought *BWS* appreciates.

Forward of the galley, to port, are the Lavac-equipped heads, with an enclosed shower between them. To starboard is a cabin with a berth that would be cozy but acceptable for two. We found it luxurious for one, and with a lee cloth it would make a third, excellent sea berth.

The main cabin has a large V-berth, almost a misnomer for what is in reality a queen-size bed that never tapers to the point of playing footsie. The location of the aft, starboard bulkhead is one of the many vari-

ables in the design. We looked at another Bruckmann 50 that had moved it forward to allow for great room in the midships cabin.

Later on, with the wind up, we put *Bonaventure* through her paces as a sailboat. We had been impressed with her performance on a day marked by light airs with equal parts of motorsailing and unassisted motoring and were eager to do some sailing. Here are some numbers: At 25 degrees of apparent wind at 14 knots we made 4.9 knots through the water. At 30 degrees apparent with 16 knots of apparent wind, we made 6.2 knots. At 40 degrees and 15.9 knots, we made 6.3 knots. At 45 degrees and 13 knots apparent, we made 5.8 knots. At 55 degrees and 19 knots apparent, we made 7.2 knots. With the wind building to 23 knots true, we made 10 knots at 55 degrees apparent. This was all done with a measure of ease that could become habit-forming.

The roller-furling, 110-percent headsail was self-tending, and the Leisure Furl boom-furling main made life even easier. We bent on the main using the Lewmar 58 electric winch and found that the best results came if we ran it up a little shy of full hoist initially, leaving small “puckers” on the luff. Then, after a few minutes of sailing, we would finish the set. Furling the main was easy, with no problems of the main rolling improperly provided the proper tension was kept on the halyard.

Things aboard were pretty stable when we were motoring, and it wasn't until we were under sail that we noticed the abundance of handholds. This should not be something one would note on a boat designed for offshore work, but we have learned that we can no longer assume that handholds are part of the design package.

We could go on with minutia on the winch sizes, windlass size and so on, but we think it will suffice to say that all deck gear is either Lewmar or Harken, more than adequate for the job, and the running rigging leads aft sensibly and logically. This is a boat designed to excel in all modes of propulsion. We were delighted at its ability to sail, perhaps the right word would be “amazed,” as we didn't expect a 44,000-pound 50-foot motorsailer to deliver the sort of performance we experienced.

This is a boat that any sailor would be pleased to own and sail anywhere. For those sailors thinking of easing their lot in life by going to a trawler, this is a boat that will save them from that fate. It motors as well, and as fast, as any trawler on the market, with greater fuel economy. When the wind is right, it will sail as well as any boat not designed as a racer, but the real joy might come on those days with less than 10 knots of wind when you will continue to make way at eight knots. We are convinced and think the Bruckmann 50 is a sign of things to come.



