

## New Generation of Research Boats

IF THERE'S SUCH A THING AS A GOOD OMEN, then being greeted by two rare Pacific bottlenose dolphins as *Derek M. Baylis* (*DMB*) left California's Moss Landing Harbor during our shakedown cruise has to be one. The *Baylis*, a 65-foot cat-rigged ketch designed by Thomas Wylie Design Group ([www.wyliecat.com](http://www.wyliecat.com)) and owned by Wyliecat, a partnership of Wylie and David R. Wahle, is the first of its kind to be used for marine research. "We saw a need for a more environmentally-sensitive craft for monitoring and research of our seas and the creatures in them," Wylie said.



The 22-foot cockpit features a titanium A-frame and a removable transom for deploying and lifting research gear.

The *DMB* is a collaboration between Wylie and Wahle, the builder of Tom's Wyliecats in Watsonville, California. Her name is a salute to their longtime mentor, octogenarian Derek Baylis, the former chief engineer for Barient who designed the first modern two-speed winches and created many of Monterey Bay Aquarium's systems.

The freestanding rig combines a tapered carbon-fiber mast with full-battened sails and a wishbone boom. "The key is the carbon mast, which flexes off in gusts, effectively spilling excess wind," said Wylie, "yet it retains its memory and immediately returns to its original position when the breeze eases." *DMB's* lack of standing rigging allows the sails to be eased farther forward than their rigged counterparts, and the cat rig means fewer lines and, thus, less crew. The wishbone boom creates a cradle, making dropping the sails as simple as relieving the halyard. On our shakedown, skipper Wahle was able to tack and jibe without assistance.

Displacing 35,000 pounds—12,000 of which are in the bulb keel—and carrying 1,530 square feet of sail, *DMB* is a nimble sailer. In 12 knots of breeze, the speedo hovers in the eight-knot range, and Tom estimates her high end at 18 to 20 knots in around 30 knots of breeze.

Fitted to U.S. Coast Guard specifications, with crashproof bulkheads forward and amidships, *DMB* can carry up to 49 passengers for day trips and 12 for extended trips. Her hull (Baltek endgrain balsa-core planks in a fiberglass sandwich), deck, wheelhouse, and bulkheads are bonded into a single structure. A

high-pressure, 67-gallon-per-minute fire-fighting system doubles as a seawater pump for cleaning gear and maintaining flow for aquatic life in tanks.

She is powered by a 100-horsepower turbo-diesel and keeps the batteries charged with a six-kilowatt generator. She carries 200 gallons of fuel, 100 of them in the keel, which gives her a 1,100-mile motoring range at 10 knots. Waste is limited to

gray water from showers and sinks by the use of portable toilets. The 22-foot open cockpit has a titanium A-frame for deploying and lifting research gear. Twin steering wheels elevated above the deck give the driver clear views over the cabin.

*DMB's* estimated \$1.5 million price tag might seem excessive. However, a comparable motor vessel would use 80 gallons per hour at 10 knots, whereas *DMB* burns two gph while motoring and nothing while under sail, so the overall operating cost tips dramatically in *DMB's* favor.

A sister ship is being built for West Marine's founder and chairman, Randy Repass, as a family cruiser for the South Pacific. But Tom Wylie is even more excited about future models taking students to sea, where they become enthralled by the whole sailing/research experience. "Putting 40 kids out on the water for a two-hour cruise on Monterey Bay provides more stimulation and motivation for young minds than textbooks," he said.

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