

THE PURSUIT OF PLEASURE AT TWO GALLONS PER HOUR

Results of our design contest

Early this year, we announced a contest asking readers to design a visually appealing powerboat that's fun to operate while being efficient and safe for family outings on coastal or inland waters. The design parameters were:

- 16' 6" to 18' 6" overall length (stem to transom).
- 25 hp maximum power.
- Must burn less than 2 gph while maintaining a 15-knot cruising speed and carrying 650 lbs (about four adults).
- Trailerable weight (with engine) must be less than 2,700 lbs.

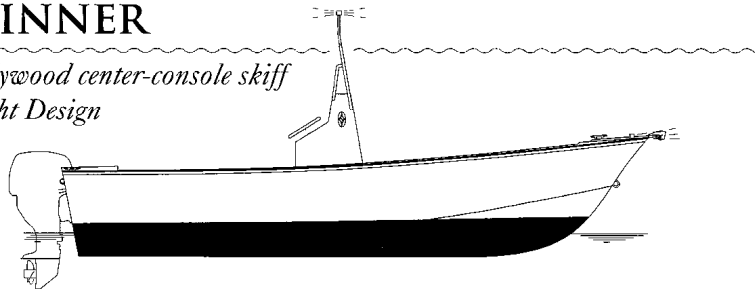
- Must be able to safely (if not comfortably) get home against a steady 15-knot breeze with higher gusts, and a 2' to 3' chop.

Well over 70 people responded to this challenge, with a wide variety of solutions. Our panel of judges looked favorably on any reduction in power or fuel consumption below the contest maximums. They also considered originality, aesthetics, onboard details, and appointments—as well as construction costs.

Here we present the overall winner, and an additional four notable entries. —Eds.

THE WINNER

*Marissa: A plywood center-console skiff
by B & B Yacht Design*



B & B Yacht Design of Vandemere, North Carolina, submitted the winning entry, an 18' center-console boat. While the designer, Graham Byrnes, notes that the boat has the conventional appearance of a center-console outboard skiff, the design comprises a suite of subtle traits that make it economical to build and operate.

Designer Byrnes resisted the temptation to "reinvent the wheel" in order to impress the judges, for, he noted, such radical thinking often fails commercially. "The center-console layout," he says, "has become extremely popular for a good reason: It's the most efficient layout for a small boat." The difference in this boat is in its performance at the middle speed range—the so-called "hump" between displacement and planing speeds. Too many boats, says the designer, spend their time at this speed with their bows pointed skyward, "like a rocket about to launch"—and they drag "an ocean of water behind them...until they achieve the plane." The speed range at which these boats are most inefficient—5–10 knots—is in fact the most desirable "economy cruising speed" for a family.

Marissa achieves her efficiencies with a fine half-entry angle: 21 degrees, rather than the more common 25–30 degrees. At 10 knots, Byrnes predicts a resistance of 76 lbs, as opposed to 115.76 lbs for a 25-degree half-entry. The boat's chine flats and generous flare offset the bow's loss of buoyancy. The chine flats also bring the boat onto plane more quickly than conventional squared-off chines. Byrnes arrived at Marissa's form through numerical calculation and empirical observation, for the hull is evolved from several of his previous designs.

In addition to being impressed with the boat's forecast performance, the judges were intrigued with the construction—and designer Byrnes's vision of the future of small-run boatbuilding. The hull is built on a plywood jig, which is notched together for quick and accurate setup—and easy breakdown and storage. For a small capital investment, a small to mid-sized shop can nimbly produce this sheet-plywood beauty.

B & B Yacht Designs, 196 Elm St., Vandemere, NC 28587; www.bandbyachtdesigns.com.

