

SPARKMAN & STEPHENS

DESIGN NO. 0097-c2

A NEW LOOK AT *BABE*

HISTORY

The development of the S&S 30 design began in 1935. The inspiration for this new design was drawn from Sparkman & Stephens Design No. 0097, a 30' wooden sloop built for the Miami-Nassau race that year. The design was cutting-edge for the time, with a plumb bow and "cut-off" stern, as described by Rod Stephens. A well-defined keel and generous sail plan made her a competitive sailing boat, with very simple accommodations and minimal live-aboard comforts.

The redesign stemmed from a question posed to Olin Stephens during an interview late in his life, "of all these beautiful boats, which would you redesign?" He chose *Babe*.

The Sparkman & Stephens design team worked with Olin on a modern redesign for *Babe* to be of wood construction in 2008 - the year of his 100th birthday. The simplicity and back-to-basics approach that Olin took on the *Babe* project was a rare characteristic in yacht design today, where complex systems, hotel quality comforts, and sky-rocketing build costs rule the roost. A return to the basic, reliable, beautiful, family daysailer and club racer is something for which every sailor in us is looking. We have taken the original concept developed with Olin in 2008 and adapted it for a production run. Modern FRP construction techniques, off-the-shelf hardware, and minimalist onboard systems, combined with an affordable price tag, are the primary objectives for this modern boat with a classic appeal.

A partnership was formed with Bluenose Yacht Sales in late 2011 to bring the *Babe* redesign to life. Final construction and design details were hammered out and construction began in Rhode Island. The first hull hit the water in the fall of 2012, and the fleet has been growing ever since.

"OF ALL THESE BEAUTIFUL BOATS,
WHICH ONE WOULD YOU REDESIGN?"

OLIN STEPHENS CHOSE

BABE

SPARKMAN & STEPHENS
DESIGN NO. 0097 (C.1935)

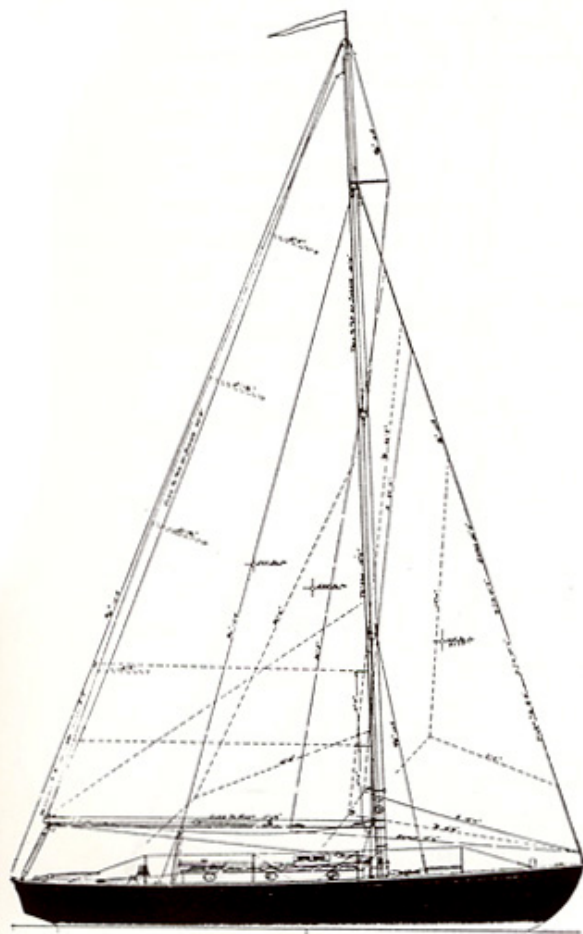


BLUENOSE YACHT SALES
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Babe - Design 97

LOA: 30' 6" DWL: 26' 1" Beam: 7' 10" Draft: 5' 4" Sail area: 543 sq. ft.

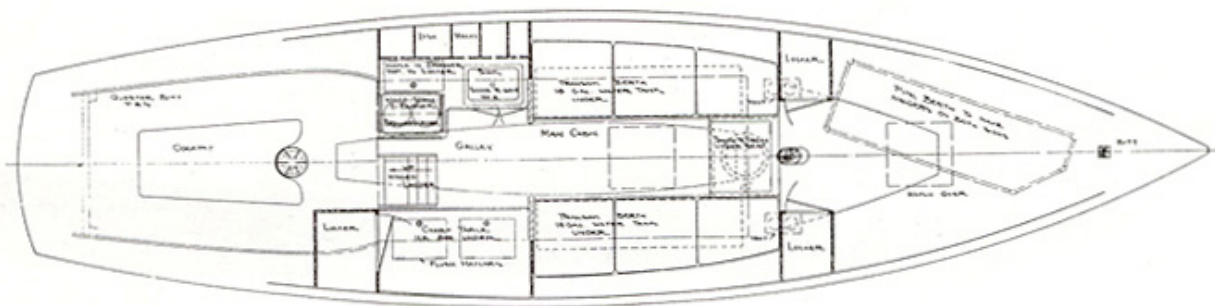


Another notable departure from the parade of *Dorada* direct descendants was the small, agile S&S sloop *Babe*. In many ways she represented a big step in the direction of the tall-rigged, light-displacement racers of the future. *Babe* displaced a mere 11,200 pounds, barely more than what was required by the then-operative Universal Rule.

Her impressively lofty sail plan was designed to "get the greatest driving power out of a moderate area." Indeed the whole idea of the boat was to move swiftly and win races—hence the "cutoff stern" (Rod Stephens's characterization) which sacrifices the usual beauty of an S&S hull for the benefit of the measurement rule of the day. Her relatively long waterline length was also an advantage.

Rod went on to say that she was a "very interesting little boat, fast for anyone who sailed her" with her racing record bearing out that assessment.

With accommodations a secondary matter, *Babe's* belowdecks plan is spare but practical, ice chest under a large chart table to starboard. The toilet is concealed beneath a seat between the two berths in the main cabin. Forward is a narrow pipe berth—but lots of room for sail bags.

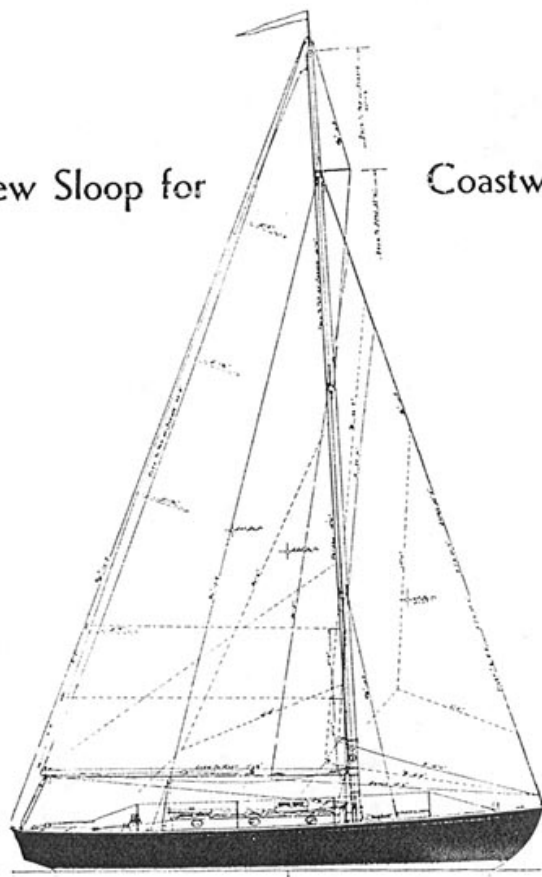


A New Sloop for Coastwise Racing

THIS YACHT was designed for Hugh M. Matheson of Miami, Florida, by Sparkman & Stephens of New York. The purpose underlying the design was to develop a fast boat under the rules governing the Miami-Nassau and the St. Petersburg-Habana Races and at the same time to produce a small seagoing craft that should be safe and handy. Accommodation was a secondary matter.

The lines, the designer states, show a boat of stable form and with fairly generous lateral plane, although this is cut away at the ends. Her displacement, 11,200 pounds, is only a little more than that required by the Universal Rule. Her length over all is 30' 6"; on the l.w.l., 25' 1"; beam is 7' 10½" and draft 5' 4".

The order for the boat has been placed with Chute and Bixby, of Huntington, L. I., and construction

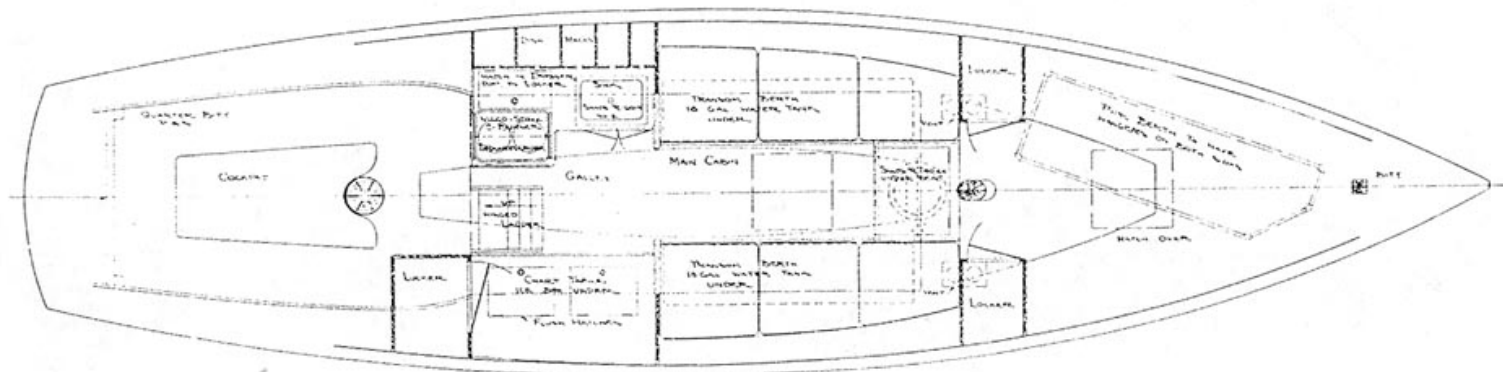


The rig is modern and the cabin plan simple

is now going forward, delivery being scheduled for this fall. The boat is to be planked with mahogany, Everdur bronze fastened.

Spars are hollow and the sail plan is tall and narrow, the total area of the working canvas being 525 square feet. This rig was chosen to get the greatest driving power out of a moderate area. It is all inboard and a permanent backstay is fitted. The mainsail is loose-footed. Standing rigging is of stainless steel wire rope and the three spreaders provided allow a narrow spread to the rigging which should make for ease in handling the Genoa jib.

The accommodation plan is conventional, with a roomy cockpit and a long, rather low cabin trunk. Below, the galley is aft, with stove and sink to port and ice box opposite. The cabin has a transom berth on each side with a toilet under a seat between. Forward is a pipe berth.



Olin Stephens's Last Project

Before his death at age 100, the co-founder of Sparkman & Stephens chose a 1935 sloop—one of the smallest of S&S's many ocean racer/cruiser designs—as the yacht he most wanted to update.

by Daniela T.H. Abbott

In 1935 Olin Stephens, the design half of a Manhattan design-and-brokerage firm started by Stephens and yacht broker Drake Sparkman six years earlier, drew up plans for a custom 30'6" (9.3m) ocean racer for the Miami-Nassau and St. Petersburg-Havana races. Named *Babe*, she was a forward-thinking boat for the time, with short overhangs and light displacement, just barely meeting the requirements of the Southern Ocean Racing Conference.

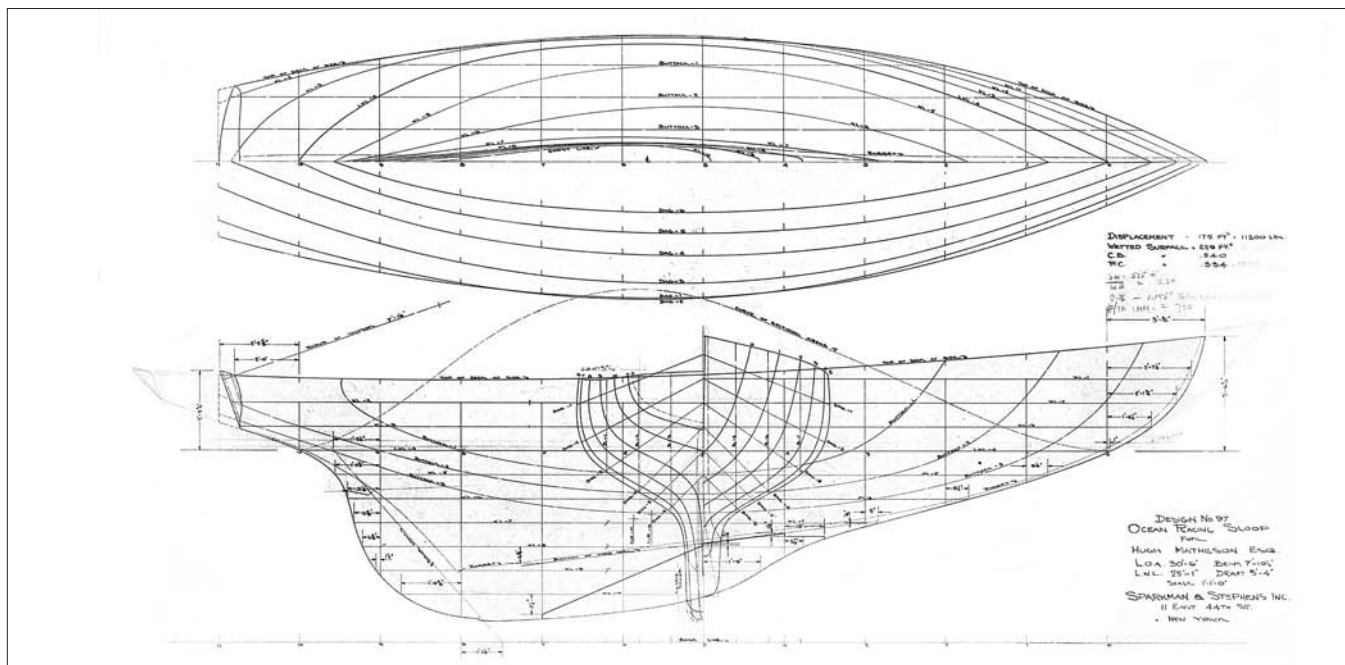
Accommodations were secondary: a simple galley, portable toilet between berths, and a single pipe

berth forward. Her large sail plan had a high-aspect ratio for that period, and the boomkin made an extra-long boom possible without a lengthy stern overhang.

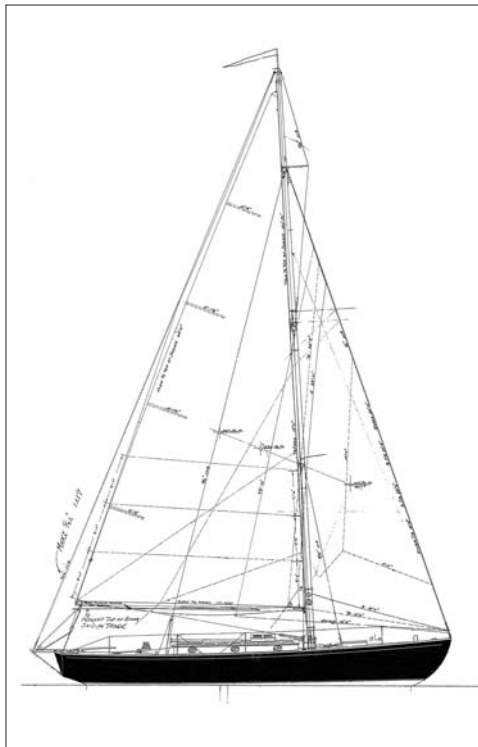
Listed by S&S as Design No. 97, *Babe* embodied trends that would later drive modern cruising and racing yachts. Her length overall was the minimum allowed for the ocean races in which she was to participate, making her an agile and responsive racer. To compensate for the lower stability of a small boat, the beam was made "almost one-third of her waterline length," wrote Stephens (in his book

Lines, mentioned below) "more than most larger boats" of the pre-WWII era. Her broad beam "gives her a shoaler hullform," he added, "so that her short keel is like a separate fin, minimizing wetted area"—a shape presaging today's wide canoe bodies with separate fin keels.

When drawing the hull-to-keel transition for *Babe*, Stephens recalled as inspiration the wing-to-body fairing of a Douglas DC-3. Applying developments in aircraft design to sailing yachts was certainly a novel concept in 1935, but one that has enhanced sailing's evolution.



S&S Design No. 97, *Babe* was drawn specifically to compete in races like the Miami-Nassau and St. Petersburg-Havana. Her 30'6" (9.3m) was the minimum size for such events.



Babe, left, was in some respects well ahead of her time, with short overhangs and a relatively high-aspect mainsail; the boomkin helped increase sail area. Nymph, far left, the recent revision of Babe, follows today's popular practice of combining recognizably traditional styling above the waterline, with a modern underbody and more efficient appendages. A D/L of 142 and a SA/D of 21 promise spirited performance. She is in every way a gentleman's daysailer.

Nymph

In 2002, long after his official retirement from S&S, and a career that spanned more than 50 years, Stephens wrote *Lines*—a limited-edition, large-format book in which he critiqued the original drawings of his favorite S&S designs from the period 1930 to 1980. (They amount to 49 in all; see “Sailboats From the Century Before,” *Professional BoatBuilder* No. 82, page 18, for a review.) The book includes *America's* Cup winners, ocean cruisers, fast racers, and large schooners. It was during the selection process for *Lines* that Stephens was asked by his good friend, and author of the preface, Knight Coolidge: “Of all these beautiful boats, which one would you redesign?” Stephens considered the question for a minute and then chose *Babe*, the smallest racer/cruiser in the collection.

The modern features of her hull and keel, her small size, simple accommodations, and ease of handling mark *Babe* as a perfect candidate for a makeover. Stephens thought the first changes to the original design should be to increase the mast height by 2' (61cm), eliminate the boomkin, deepen the draft to

6' 4" (1.9m), and decrease the displacement to under 10,000 lbs (4,530 kg). Those modifications conformed to current trends to which she already hinted, and maintained her comfortable handling qualities and seaworthiness.

Between 2002 and 2004 numerous inquiries at S&S showed there was serious interest in a redesign of an Olin Stephens favorite. But most sailors who wanted a 30' ocean cruiser were wary of the cost of a “new” design and a one-off build. Nothing came to fruition until this particular design caught the eye of a Maine boatyard owner in 2008.

Terry McClinch, of Boothbay Harbor Shipyard, became intrigued with the idea of *Babe* revisited, once Knight Coolidge had related his 2002 conversation with Stephens about redesigning a classic S&S yacht from the 1930s. McClinch was excited about the prospect of a new work by Olin Stephens, and decided to go forward with the project.

Stephens would work with S&S to complete the re-design, which was to be built plank-on-frame, with bronze hardware, painted nonskid deck, teak hatches, and fitted with a fin keel, bulb, spade rudder, and carbon rig

and contemporary sails—thus combining the appeal of traditional boatbuilding with modern developments for which *Babe* was so well suited initially.

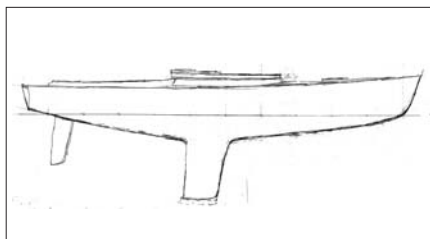
I joined S&S in April 2008, just as work was set to begin.

Bruce Johnson, the firm's chief designer and executive vice-president, assigned me to the project—a perfect opportunity to take a design from concept to completion.

We started with Olin Stephens's freehand sketch on a plain piece of paper, showing a rough outline of how he envisioned the new *Babe*. I began by drafting a boat that fit his parameters and had the look of the sketched profile, and sent him a set of plans for review. Olin—from here on I'll refer to him by his first name, since we worked so closely on this project—sat down with Coolidge, who took notes. Olin provided comments on and revisions to my

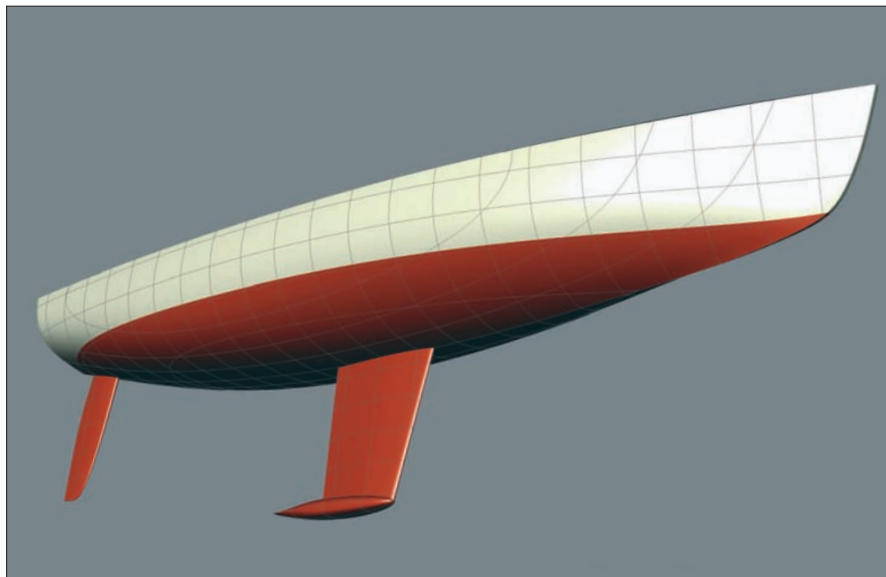
Nymph Particulars

LOA	32' 9" (10m)
LWL	30' 6" (9.3m)
Beam	7' 10" (2.4m)
Draft	6' 2" (1.9m)
Displacement	8,500 lbs (3,855.5 kg)
Sail Area	576 sq ft (53.5m ²)
D/L	142
SA/D	21
Aux. Power	14-hp Yanmar sail drive



Above—Here's the drawing that Olin Stephens sketched for his old firm, and S&S project manager Daniela Abbott in particular, indicating the general design approach for updating Babe.

Right—Nymph's freeboard was kept low, and the topsides given slight tumblehome. S&S lengthened the hull by about 2' (61cm).



drawings. During the next few months, I would send revised plans to Olin and he would reply with design notes; we went back and forth like that about five times, each step further developing and refining the design.

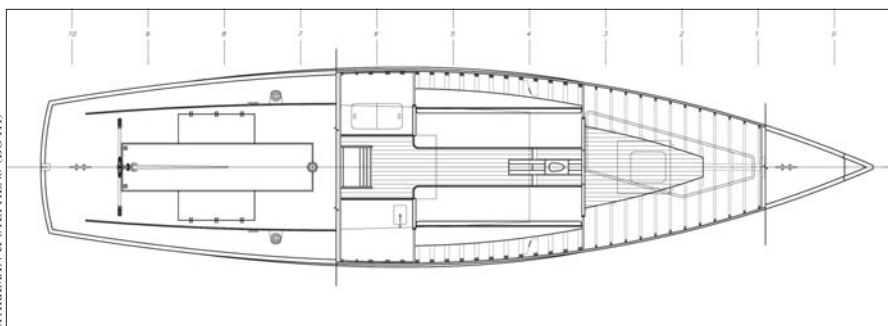
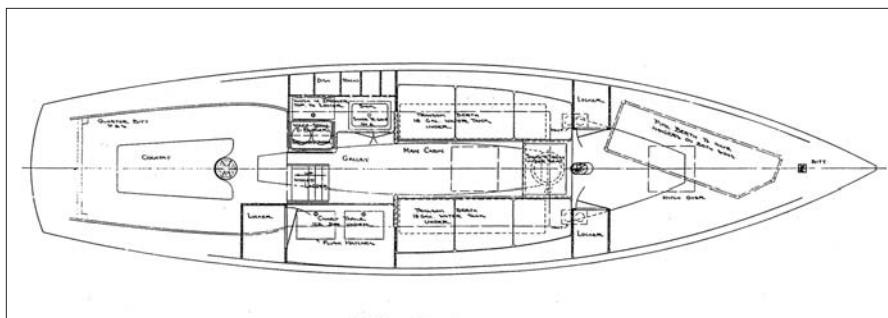
The original sketch showed a boat with very low freeboard, deep fin keel, and a sheerline that added graceful charm to her simplicity. Olin wanted to keep accommodations and outfitting down to the bare essentials.

By now the boat's purpose had changed: no longer a rugged small ocean racer, she was to be a simple, handsome daysailer with just enough room down below for an overnight. That shift allowed us to maximize sailing performance and good looks, at the expense of comfortable headroom below—a trade-off deemed worthwhile for the sailors the new design would target.

Our re-design was to have a new name as well: *Nymph*.

First, we tackled the trade-off between: the low freeboard of full-keel boats, and the shallow underbody required for a fin keel. Headroom would be sufficient only for seating down below or to use the portable toilet; and the deckhouse would have the same low profile as the original *Babe*. (On modern boats, raising the freeboard to increase headroom is all too easy, but it would rob *Nymph* of her classic appeal. True to the original design, the freeboard was fixed to those proportions.) The stem profile on *Nymph* is slightly more plumb than *Babe's*, and the “cut-off” stern of 1935 (Olin's original drawings show where the overhangs would be if faired to their logical extension) was pushed even further toward the larger transoms of later years. A subtle tumblehome was added to soften the effect of the abbreviated overhang. The result is a longer waterline for the same length, and exaggeration of *Babe's* contemporary features. Olin also kept the transom's hourglass shape, to entice the traditionalist yachtsman.

Second on the update list was weight. As stated, the displacement of the original design was very low for the time, just barely above the minimum allowed by the racing rule to which *Babe* was bound. For *Nymph*, Olin decided she should not be designed to rate well in any particular rule; instead, she should be enjoyed by the average club racer



Babe's accommodation plan, **top**, shows a pipe berth forward, transom berths amidships, and a small galley and chart table opposite. *Nymph's* spartan interior, **bottom**, is similar; as on *Babe*, there is no enclosed head, just a portable toilet.

or daysailing family, as well as by competitive one-design racing fleets. Displacement would be lowered to make the new boat more responsive and fun, and competitive against modern cruisers, but still safe and easy to control. Also, since construction was to be plank-on-frame, there were inherent limits to weight savings.

We planned out a modern-sized rig and roughed in the hull so we could determine how light the boat could possibly be built. Because construction details for plank-on-frame boats are no longer a regular task at S&S, we consulted a wide range of wooden boat scantling sources, including Herreshoff's *Rules for Wooden Yachts*, S&S's own guidelines

for Six-Meter yachts, the American Bureau of Shipping's *Offshore Racing Yacht Rules*, as well as little-known scantling rules from traditional wooden boat builders in Maine.

A tight spacing of lightly dimensioned white-oak frames—much the same construction as the Six-Meter yachts that Olin worked on at the start of his career—would achieve the lightest possible boat, and get *Nymph* to her target weight. At 9,000 lbs (4,077 kg), almost a ton less than *Babe*, she would have the sail area-to-displacement ratio of a modern cruiser/racer, and a displacement/length ratio to rival many midrange one-design classes.

Construction plans for the new design had two goals: first, keep the weight as light as possible; and second, make sure the concentrated loads developed by a fin keel (much shorter chord length than a full keel) be properly distributed through the rib-cage of the hull structure. We chose a bronze grid that would tie together the floors and maststep, and distribute loads to the longitudinal members. This way, more frames would absorb the load of the keel, allowing uniform frame sizes through the 'midship sections of the canoe body. Traditional construction techniques were incorporated, so the woodwork complements the design.

After S&S had a design that achieved all of Olin's guidelines and parameters, we compared how, in theory, *Nymph* would fare on the water. The sail plan, keel, and rudder were all designed to present-day parameters, and a full velocity-prediction program was done to match *Nymph* to her contemporary sailing rivals. *Nymph's* higher-aspect-ratio sails added 75 sq ft (7m²) to the basic sail plan, and the increased draft (6'2" vs. 5'4"/1.9m vs. 1.6m) would improve performance while staying within the comfort range of today's average sailor. These improvements made it clear that *Nymph's* classic style and wooden construction wouldn't dampen sailing performance.

Finally, Olin and S&S addressed the remaining major elements: interior arrangement and outfitting. We opted not to have an enclosed head; there was no headroom for it, and besides, *Babe* didn't have one either.

Plenty of sail storage and full-length berths were the principal requirements down below, all with simple, clean finish. A sink and icebox (or removable cooler) were the only elements deemed essential for the galley; no one would be preparing a roast aboard *Nymph*. The general arrangement would provide everything for a day of sailing and a night aboard.

One more feature of *Babe's* that Olin decided to incorporate was the pipe berth forward. With less displacement in the hull and a much shallower canoe body, the arrangement was just a little too tight, so Olin requested that we increase *Nymph's* overall length by 2' (61cm).

On deck, to keep *Nymph* as simple as possible, the portlights were removed from the deckhouse sides; instead, a pair of ports would be installed on the forward face. Deck cleats were reduced to two: one forward, one aft. Two primary winches and two halyard winches at the mainmast are required, but two more winches can be added for flying a spinnaker. No headsail furler will be installed; instead, traditional hanks. The mainsheet will have a simple bronze traveler bar, to reduce cockpit clutter. The cockpit coaming was drawn to run straight forward and become the deckhouse sides; it can all be fashioned from a single plank, minimizing complicated joints and curves.



S&S received Olin's final notes on *Nymph* in August 2008. In his review of the latest set of drawings, his first response was: "She ought to be a very good little boat." Indeed, we believe *Nymph* has the beauty and grace of the original S&S design, while incorporating the changes in yacht design and sailing performance that *Babe* foretold.

For me, designing *Nymph* under the guidance and knowing eye of Olin Stephens, observing the technical developments he clearly foresaw during his years as a young designer, and applying them to one of his own early designs—these were unique and memorable learning experiences.

Nymph, S&S Design No. 0097-c1, was a fine collaboration between a design firm and its founding father, and a fitting symbol of the company's work for the sailing community.

Olin Stephens died on September 13, 2008.

Boothbay Harbor Shipyard will build the first *Nymph* daysailer in 2009.

PBB

About the Author: A native of São Paulo, Brazil, Daniela Abbott earned a BS in Naval Architecture and Marine Engineering from Webb Institute, and an MSc in Maritime Engineering Sciences from the University of Southampton (England). Before joining Sparkman & Stephens, she worked in the commercial marine industry in Bristol, Rhode Island.