



BRISTOL, R. I.

CHRONICLE

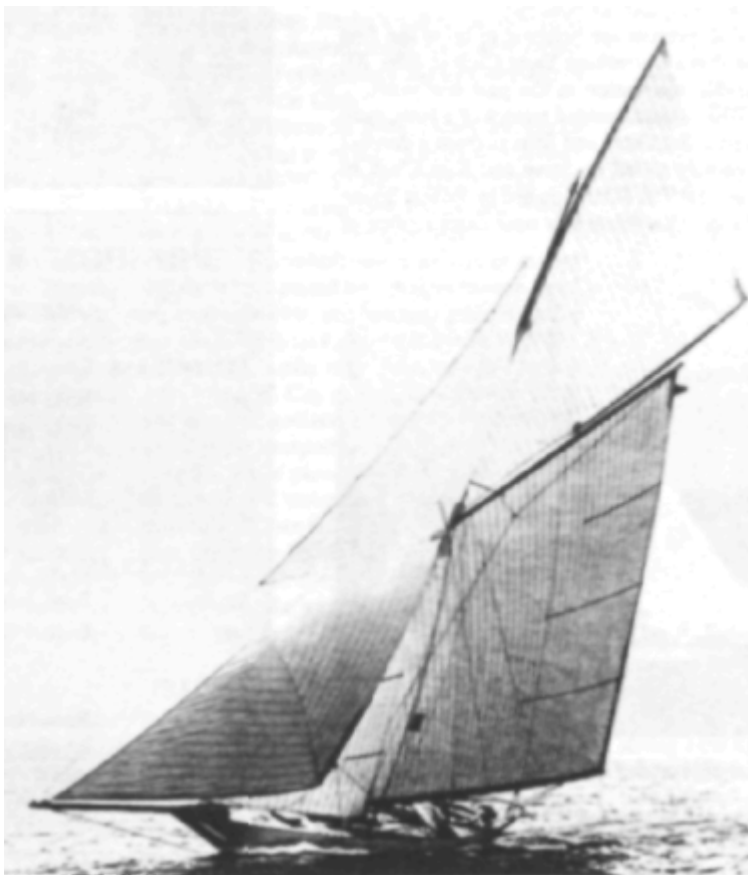
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GLORIANA ALONE IN HER CLASS

by Carlton J. Pinheiro
Written to mark the
centennial of GLORIANA,
1891-1991

In 1891, N. G. Herreshoff, showing complete disregard for convention, cut a model which not only revolutionized the yachting scene, but placed the designer at the head of his profession. In GLORIANA, the Wizard of Bristol eliminated the conventional "clipper bow" and "fore-foot" which had long been thought essential. The racing success of GLORIANA rendered archaic the conventional designs of Burgess, Gardner, Smith, Watson, and Fife.

When the New York Yacht Club established the 46 Foot Class for 1891, Royal Phelps Carroll, a young yachtsman, was advised by Herreshoff customer E. D. Morgan, Jr. to go to Bristol for a boat. The contract was made, the design completed, and work was about to begin when Mr. Carroll, who was about to be married, decided that he could not afford the yacht. He was released from the contract and the design was put aside. On February 27, 1891, Mr. Morgan visited the Herreshoff Shop, and after seeing the model made for Carroll and studying the plans, assumed the contract himself. Word soon spread among the yachting fraternity that the new Herreshoff yacht had a radical bow. The skeptics shook their heads, but "Ally" Morgan paid them no heed. He was Vice-Commodore of the New York Yacht Club, and owned a number of yachts ranging from a catboat to a steam yacht of 200 feet. Herreshoff had recently built him a 27 foot steam yacht, and the famous cat-yawls PELICAN (which he gave to his brother-in-law, Percy F. Moran) and GANNET in 1890.



GLORIANA
HMCo. #411-1891

Revolutionary in Design and Construction

The New York Times interviewed N. G. Herreshoff, who said, "We have been keeping this thing pretty quiet, but I suppose we shall have to let you see it now." The Times reporter, accompanied by the designer, was taken to the "southerly building shed" where "a most unusual sight met his eye." He reported that. "It is no exaggeration to say that this Herreshoff boat will attract attention next summer, for her form above water is very unlike that of the other 46-Footers now building. On a waterline length of less than 46 feet, the new boat is within an inch or two of 70 feet over all. This is about eight feet longer on deck than her competitors will be. This enormous overhang of 24 feet is gained

By late March, the newspapers, prying for information on the Herreshoff keel yacht, received this reply from the company: "We have entered into contract with a New York gentleman to build a cutter of the 46 Foot Class, having a waterline length of about 45 feet 3 inches, beam 13 feet, draft of water 10 feet 2 inches, and of 38 ½ tons displacement. The yacht is designed for a good cruising craft as well as racing in coming regattas. It is to have a main saloon with folding berths, two staterooms and roomy forecabin and galley. Cabin and staterooms to be very commodious, and finished in butternut. The construction is to be composite with double planking, and is to be fitted with a cockpit. It is the intention to have the yacht ready for the early regattas during the coming season."

By early April, the mystery, compounded by articles in the press, had intensified. It was reported that the craft was to have a "large and curious sail plan," and that "her over-all length was something tremendous." Finally, on April 8, a reporter for

Continued from Page 1

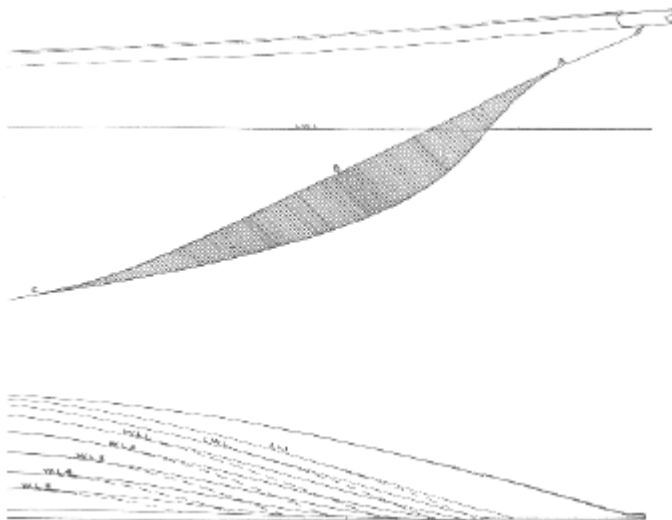
by an increase partly at each end, but mostly forward." He reported that the yacht's unusual form forward and overhangs were different from the other designs and that the Herreshoffs could not be accused of imitating anybody in their design, and "if they are right, the others are all wrong, and vice versa." When the *Times* man expressed some concern at the "hard curves of the load water line," Mr. Nat replied. "That makes very little difference. The water doesn't go that way. Look at the diagonals." With this explanation, it was easy for the journalist to see the principle upon which the boat was designed. The diagonals showed beautiful easy curves, and it was the effort to make these lines easy which produced the hard looking water line. Although the other designers did not agree, Mr. Nat believed that most of the water displaced goes under the boat, and not around the sides, so that he made the lines easy, with the idea that this regulates the course of the displaced water.

With regard to her construction, N.G. Herreshoff said. "She carries about 23 1/2 tons of ballast. Her frames, as you see, are of steel from stemhead to taffrail, and of course, all the deck beams are 16 inches apart on centers. Her planking is all hard pine, 1 3/8 inches in thickness. The lower courses are single, but about three-fourths of the planking is double, both layers being laid fore and aft, the inner course being one-half inch and the other seven-eighths inch. All the fastenings are copper. Two diagonal plates on each side, extending from deck to keel, strengthen the construction, tying the frames together and doing away with the bilge stringers. One of these starts in the wake of the rigging and the other just forward of the runner plates. Wide steel plates radiate from the partners at the mast and extend diagonally to the rail, strengthening the deck to hold the great strains at the mast. Steel knees tie the frames and the deck beams together, and steel floor timbers secure each pair of frames at the keel, with a strengthening piece running well up the side. Along the frame the deck planking will be white pine about one and one-quarter inches thick, covered with canvas to prevent any possible leakage."

With regard to questions on the sail plan, the designer responded, "As I remember it now, the mast is 59 feet over all. We have gone in for a lower rig than the others and perhaps stretched out longer fore and aft. I am told that some of the new Forty-Six Footers have the mast placed forward at a point one-third the water-line length from the stem. If this is true, our mast is further aft than theirs. Our foretopsail will be long on the foot, but not as long a distance between the mast and overhang, as the gammon will not go out clear to the end. Still it will be a broad foresail and a small jib compared with the others as we shall have a short bowsprit. Our sails will be low in the hoist, but what we lack there we shall make up in the topsails. From what I learn, I should place our boat as somewhere between the extremes of the new ones in power. I figured her sail plans roughly by the New York rule, and as I remember, it came somewhere near 3,900 square feet."

Sometime between April 9 and 13, the new boat was named GLORIANA, a name equated with Queen Elizabeth I, the heroine of Edmund Spenser's sixteenth century poem. "The Faerie Queene." Although there was a yacht named GLORIANA in the British yachting registry, there was none on this side of the Atlantic, and the name was indeed appropriate as this vessel marked a new and glorious era in yachting.

For her launching, the Herreshoff Manufacturing Company built new ways, as GLORIANA was the first deep draft vessel built at the Shop. After her four trial sails were completed, GLORIANA sailed to New York in time for the June races and was raced during the season by E. D. Morgan and N. G. Herreshoff. Newspaper accounts recorded her victories with the following headlines: "Herreshoff Beats Burgess — The GLORIANA Walks Away from the MINEOLA," "GLORIANA First of the Forty-Sixers," "GLORIANA Makes a New Record — Vice-Commodore Morgan's Yacht Leads the Fleet in the New York Club's Annual Regatta," "The GLORIANA Again — A Splendid Victory in Rough Weather," — GLORIANA — Swift As Light," "GLORIANA in a Seaway — The Herreshoff 46-Footer Yacht Wins Another Race," "Four Straight — GLORIANA Still Leads the Fleet of Racers," "JESSICA in Second Place — The GLORIANA Wins." "Mr Morgan's Yacht Has No Close Competition," "Burgess' Latest Boat Left Far in the Rear," "Alone in Her Class — The GLORIANA Proves an Easy Winner."



The Evolution of GLORIANA: The conventional clipper bow, as designed by Watson, Fife, Burgess and Gary Smith prior to 1891, is shown by the line outside the shaded portion, and by the full lines in the half-breadth plan. The bow of GLORIANA is represented by the line A, B, C and the broken lines in the half-breadth plan. The shaded portion, cut away, represents unnecessary forefoot and detrimental wetted surface.

In *Representative American Yachts*, George A. Stewart reported, "For the racing season of 1891, nine 46-Footers were built, five from Burgess designs, and one each from the drafting boards of Herreshoff, Paine, Fife, and Wintringham. Of all this fleet, GLORIANA was easily the best. She closed the season with the remarkable record of eight first prizes without a defeat."

With this fantastic journalistic publicity, the demand for Herreshoff sailing craft increased in the half dozen years following 1891. Prior to the GLORIANA, the Herreshoff Manufacturing Company had built about 175 boats, of which only about 45 were sail boats. With the exception of some schooners, most of these were under 33 feet at the waterline.

After GLORIANA's success in the 46-Footer Class, the Herreshoffs built WASP in 1892, NAVAHOE, COLONIA, and VIGILANT in 1893, NIAGARA and ISOLDE in 1894, and DEFENDER in 1895. In addition to these large yachts, the company built about 74 smaller sailboats, certainly rising on the success of GLORIANA. As Mr. Morgan once said, "She not only did what was expected of her, but she revolutionized yacht designing."

CHRONICLE

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