

The Universal Rule M-Boats

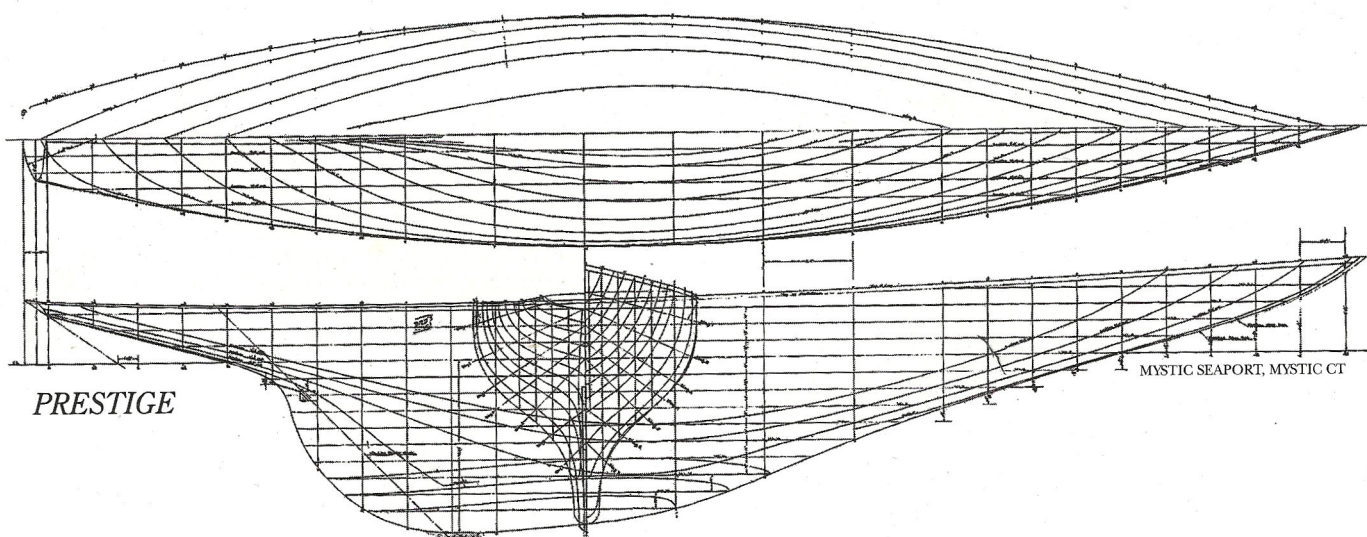
Precursors of the mighty J-class

by Llewellyn Howland III

In the May 1927 issue of America's newly launched monthly magazine *The Sportsman*, yacht designer W. Starling Burgess discussed the Universal Rule of yacht measurement and its influence on his design of the new M-class sloop PRESTIGE for Harold S. Vanderbilt. Adopted by the New York Yacht Club in December 1902, the Universal Rule had been the creation of Nathanael G. Herreshoff. It reflected and defined his vision of the elements that should make for a fast, durable, seakindly, efficient, and attractive round-the-buoys and coastwise racing sailboat. The formula was amended several times during its years as the dominant American measurement rule. It was ultimately pushed aside—unwisely, in the view of many—by Europe's evolving International Rule. (The only place where it maintained primacy until World War II was, of course, in AMERICA's Cup competition with respect to the design of J-class sloops.) But there is no

question that boats designed to the Universal Rule were, at their best, some of the finest and loveliest and most wholesome racing sailboats of all time. None were finer or lovelier or offered better sport than the nine gaff-topsail sloops designed and built by Herreshoff Manufacturing Company in 1913 that formed the New York Yacht Club's 50' class: VENTURA, SPARTAN, IROQUOIS II, PLEIONE, GRAYLING, SAMURAI, BARBARA, ACUSHLA, and CAROLINA. These one-design sloops measured 72' LOA, 50' LWL, 14'7" beam, 9'9" draft. They had reasonable cruising accommodations, and carried no auxiliary power (until much later).

During the years remaining before the start of World War I, the New York 50s raced actively and successfully as a one-design class—the largest fleet of one-design wooden racing sailboats of 50' or greater waterline length in history. But by the mid-1920s, the winds of fashion were



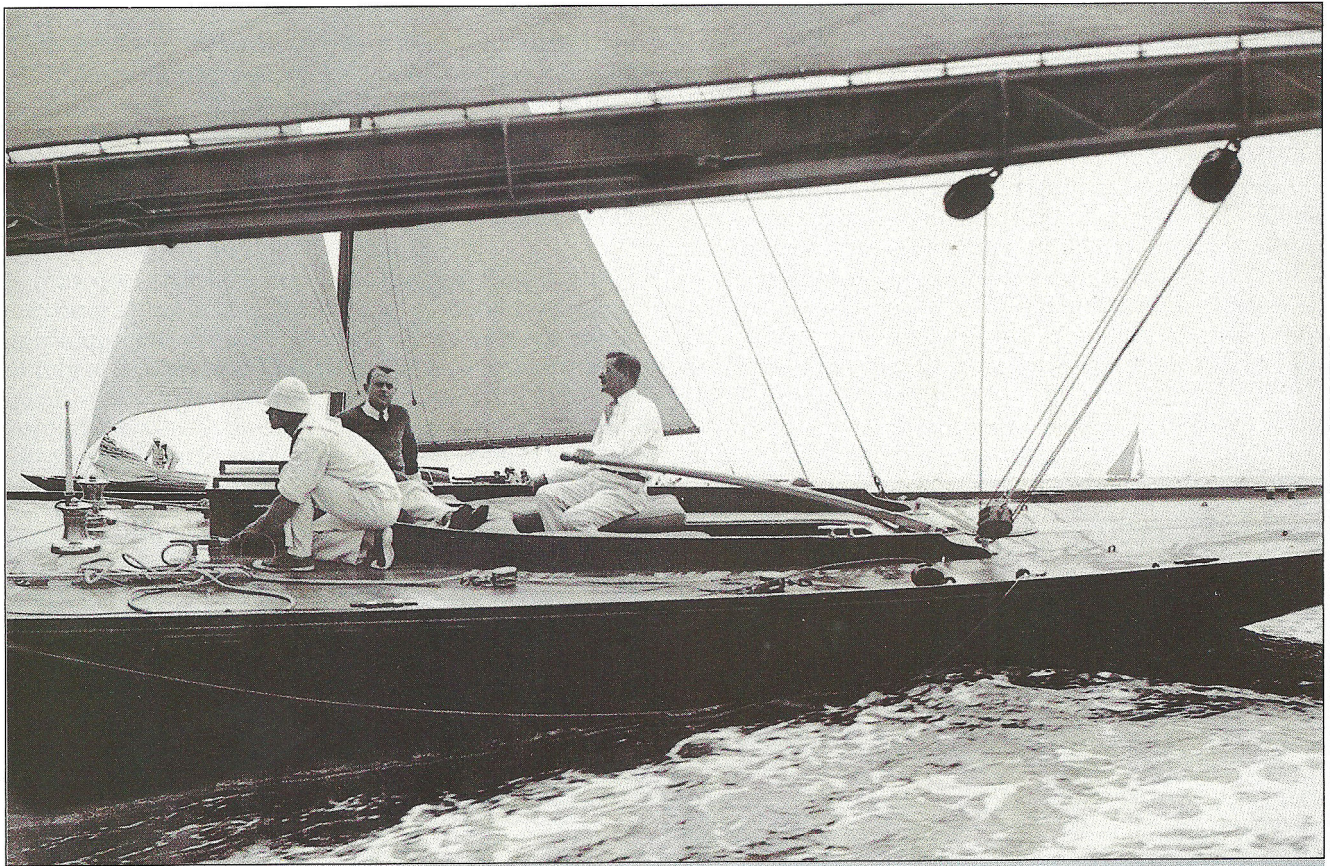
PRESTIGE

MYSTIC SEAPORT, MYSTIC CT

The M-class Boats

BOAT	DESIGNER	YEAR	LOA	LWL	BEAM	DRAFT	SA
NY 50	NGH	1913	72'0"	50'0"	14'7"	9'9"	2,964*
PRESTIGE	Burgess	1927	80'6"	54'0"	13'6"	10'4"	2,862
VALIANT	Burgess	1928	80'9"	54'0"	14'0"	10'4"	2,739
SIMBA	Burgess	1929	81'2"	53'0"	14'7"	10'0"	2,825
AVATAR	Burgess	1929	81'2"	53'0"	14'7"	10'0"	2,825
WINDWARD	Mower	1929	82'0"	53'0"	15'0"	10'0"	NA
ISTALENA	L.F. Herreshoff	1929	87'0"	54'0"	14'6"	10'5"	2,848

* Sail area figure is for ANDIAMO



ALL PHOTOS ARE FROM THE MARINERS MUSEUM/LEVICK COLLECTION

PRESTIGE

Tall, straight-backed, imperially slim, Harold Stirling Vanderbilt did not need this 8' tiller to proclaim his absolute command of the M-boat PRESTIGE. Nor did members of his afterguard need to be told twice to stay clear of the tiller when Vanderbilt was commencing to come about or jibe. But the perfection of PRESTIGE as a racing machine depended as much on the skill and training of first-class professionals as on the design genius of Starling Burgess; the exacting production standards of the Herreshoff Manufacturing Company; and the brains, tactical wizardry, and bank account of her owner. Among these professionals, in the late 1920s, were three remarkable Swedish-born brothers: Herby, Walter, and Martin Jackson, whose place in American yachting history is admirably discussed in Waldo Howland's book *A Life in Boats: The Years Before the War*. Herby, the oldest Jackson brother, left PRESTIGE in 1929 to become the professional on Walter K. Shaw's M-boat ANDIAMO, a converted New York 50, in Marblehead.

Without auxiliary power, shooting the mooring on an M-boat was always a chancy proposition. Over the years, ANDIAMO ran down and sank more than one bright-finished Lawley tender that had hung on her mooring pendant. My father recalls being invited by Capt. Jackson to take an afternoon busman's holiday sail on ANDIAMO before she went to Neponset for winter layup. Sailing back to Marblehead Harbor in a moderate southwesterly, Jackson instructed Pa to aim the closehauled sloop directly toward the dining room of the Rockmere Hotel, then, at the last possible moment, to put the helm hard over ("Harder, boy,

harder!"), and, finally, to steer for the bright Lawley tender bobbing at the mooring hundreds of feet up the harbor.

Down came the jib, down the staysail. Down clattered the main. Still ANDIAMO pushed forward. Forward. *For...ward.* ANDIAMO came to a full stop within comfortable reach by boathook of the mooring and with not even a nudge to the tender. A glorious memory for my father, now 91 years old. Just another afternoon outing for Capt. Herby Jackson, who now sails in Valhalla.

Herby Jackson's younger brother Martin, for years the foreman of Concordia Company in South Dartmouth, told some great stories about his racing days on PRESTIGE. The one I remember best concerns the morning after a race on Long Island Sound when one of Martin's fellow deckhands, still drunk from a hard night ashore, came up behind Harold Vanderbilt and gave him a swift kick in the transom. Vanderbilt winced, but said and did nothing to retaliate. Mr. Munsell, sailing master on PRESTIGE, took note of the event, however. As VARA towed PRESTIGE down the Sound to Newport later that long, hot, airless summer day, Mr. Munsell instructed the entire crew to bend on and then unbend PRESTIGE's entire locker of working canvas, not once but again and again. And again.

What about the sailor who kicked Harold Vanderbilt? "Don't worry," Martin said, "Vee took care of him. Good."

As for what kind of a person Vanderbilt was to work for and sail with, "He was okay," Martin told me. "But, you know, it was a serious business for him. Most people, they work for a living. They sail for the fun of it. Not Mr. Vanderbilt. He sailed to win."

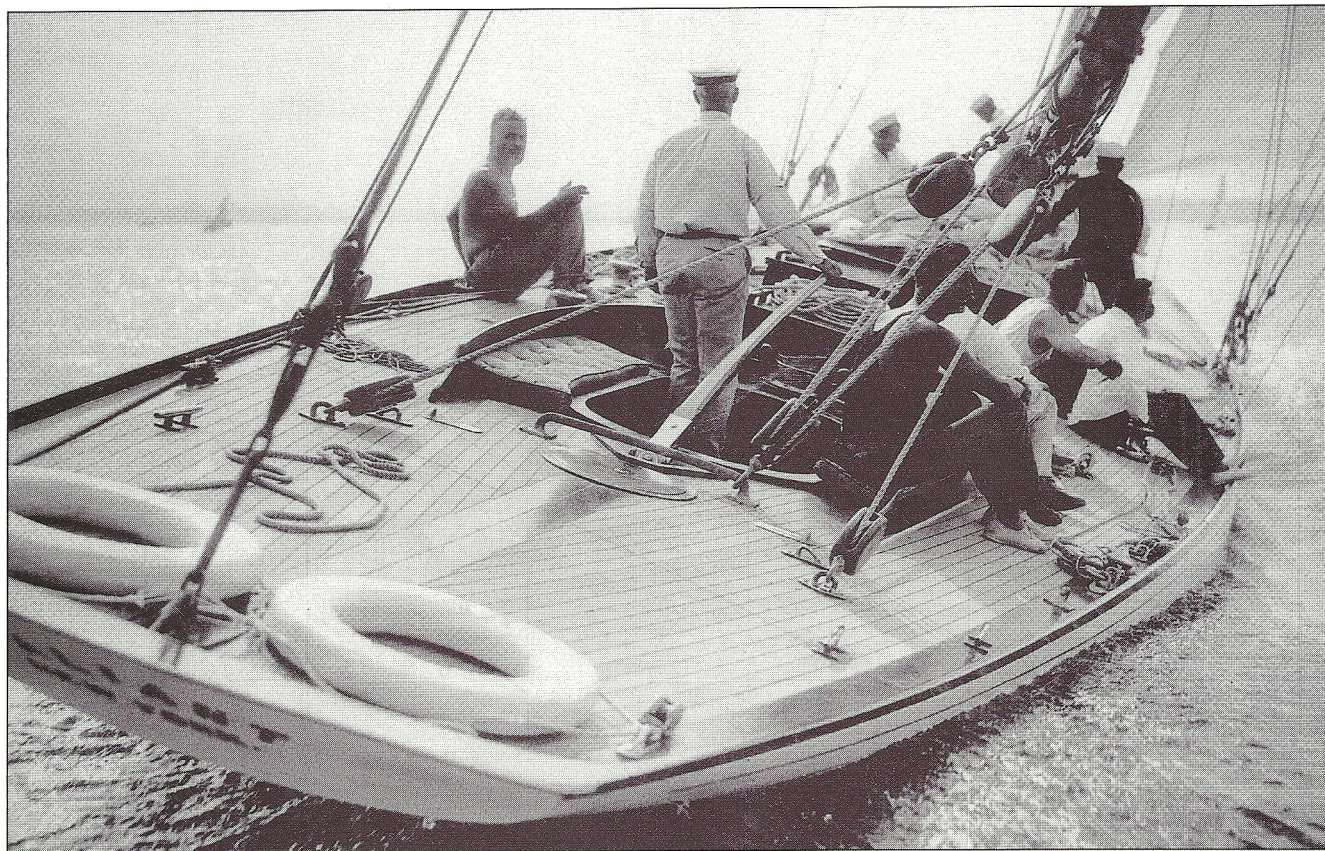
—LH

blowing from a new direction on Long Island Sound. Several influential owners had dropped out of the New York 50 class, which had, in the words of yachting journalist Alfred F. Loomis, "disintegrated." Meanwhile, proponents of the International Rule, led by Clifford Mallory, had banded together to have Starling Burgess design (and Abeking & Rasmussen build in Germany, at a cost too low for America's best yachtbuilders to match) a new one-design class of 14 International Rule 10-Meter sloops, 6 International Rule 12-Meters, and 8 Eight-Meters.

Instead of attempting to launch a new one-design class to replace the scattered, but still competitive New York 50s, adherents of the Universal Rule decided to reclassify the 50s as M-boats (which gave them a handicap length of 46' under the Universal Rule); to give the sloops new, tall marconi rigs; and to encourage the design and building

of new open-class M-boats to race against the six New York 50s still in the game: CAROLINA, IBIS (ex-GRAYLING), BARBARA (now fitted with an auxiliary engine), SPARTAN, ANDIAMO (ex-SAMURAI), and CHIORA (ex-IROQUOIS II). According to John Parkinson, Jr., in his *History of the New York Yacht Club*, the Gardner-designed sloop MEDORA and the Crowninshield sloop DOLLY also raced in the class.

Starling Burgess's career as a yacht designer had begun when he was still a Harvard undergraduate at the turn of the century. His brief, but important, career as an aircraft designer and builder had begun in 1910. By 1926, with N.G. Herreshoff virtually retired, Clinton Crane sidetracked as head of the family lead-smelting business, and his own design practice flourishing, Burgess was



VALIANT

Another split second, and photographer Edwin Levick could easily have jumped from his pursuit boat onto the after-deck of the Burgess M-boat VALIANT (1928). And who could blame Levick for being mesmerized by that wide and welcoming counter, the spacious waterways, the freshly scrubbed pine decks, and the rush of water kissing the covestripe along VALIANT's lee rail? Owner Winthrop Aldrich (then or soon to be commodore of the New York Yacht Club, chairman of Chase Bank, and Ambassador to the Court of St. James) is presumably the man at the tiller, his bespoke sailing shirt with a reef tucked into the sleeve and an extra wide pleat in the yoke. The only sheet winch showing would seem small on a 30' cruising sloop today.

From this angle, VALIANT clearly shows the influence of the New York 50. The photograph reminds me of cruising in Maine in 1954, when I encountered the M-boat ANDIAMO, a converted New York 50, lying derelict at the tide line at Bucks Harbor. She had been stripped of her lead and bronze fittings in World War II and left to the elements. (The lead keel had been removed after the war and recast as the ballast for John Alden's ketch-rigged MALABAR XIII.) Standing in her cockpit and looking forward, with her lee rail not yet under water, it took no imagination at all for me to sense the power of her hull and see the perfect fit of her Egyptian cotton sails and share the tension of her professional crew and afterguard as she approached a crowded weather mark.

—LH

a logical choice to design the first purpose-built M-class sloop. Indeed, his pioneering work on the postwar design of high-aspect rigs for big racing schooners and sloops made his selection inevitable.

So it was that, in the spring of 1927, Herreshoff Manufacturing Company launched the M-class sloop PRESTIGE to Burgess's design for her owner, Harold S. Vanderbilt. Her dimensions were 80'6" LOA, 54' LWL, 13'6" beam, and 10'4" draft.

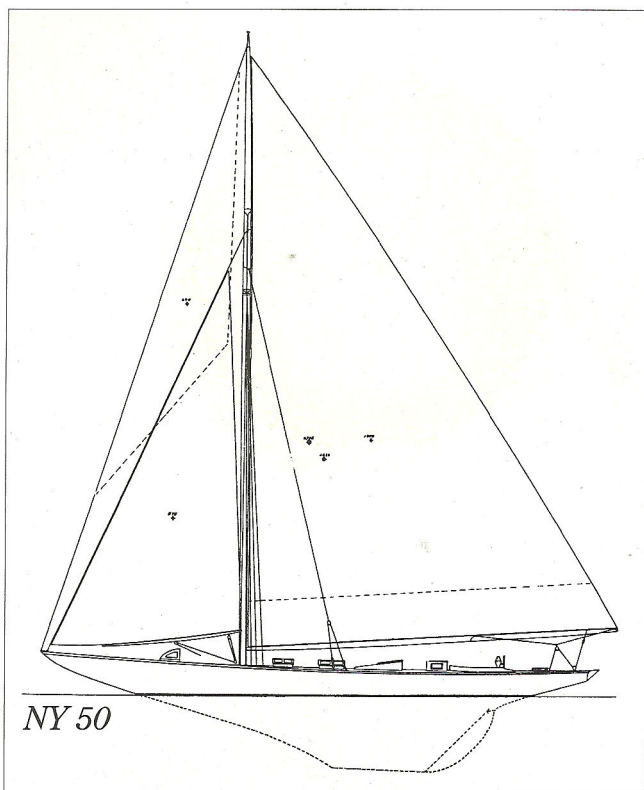
Introducing PRESTIGE in *The Sportsman*, Burgess pointed out that "for the past 14 years literally no out-and-out racing boat has yet been built in the larger classes." Vanderbilt had instructed him, Burgess said, "to design the fastest possible boat under the rule." For Burgess, this meant creating a boat 4' longer than the New York 50s on the waterline, 8'6" longer overall, with 1' less beam and with 24 tons of lead ballast to the New York 50's 17 tons.

Unlike the bow sections of the New York 50, with their characteristic Herreshoff concavity, Burgess had given PRESTIGE the U-shaped sections more characteristic of an International Rule design. The rig of PRESTIGE was even more distinctive: the mast was stepped well aft, the mainsail was relatively small, the double-head rig fore-triangle very large by the standards of the day. Although the M-class was (for whatever reason) not yet subject to scantling restrictions, PRESTIGE had been built like the New York 50s in Herreshoff's usual strong, but light fashion: double-planked and strapped. Her ballast-to-displacement ratio was an impressive 58%.

Despite the money and skill that went into her creation, PRESTIGE was not quite the breakthrough that Burgess and Vanderbilt had hoped she would be. Although her first summer of racing had gained her important victories and the Herreshoff Medal for her performance in New York Yacht Club-sponsored races, she had actually been beaten more often in total races sailed by the New York 50 CAROLINA than she had beaten CAROLINA. Some suggested that her mainsail was just too small to drive her in moderate conditions. Harold Vanderbilt believed in her, however, and worked ceaselessly and by and large successfully to keep her competitive during the years (with time out for his AMERICA's Cup defenses in J-boats) that she sailed under his ownership.

Another new M-boat entered the fleet in 1928: the Starling Burgess-designed, Abeking & Rasmussen-built VALIANT. At 80'9" LOA, 54' LWL, 14' beam, and 10'4" draft, she was a moderate refinement of PRESTIGE, but, while a good and a fast boat, hardly an improvement in her racing performance. But her low cost and excellent construction encouraged two additional orders for Burgess-designed M-boats, SIMBA and AVATAR. Delivered by Abeking & Rasmussen in time for the 1929 racing season, SIMBA and AVATAR were virtual sisters, each 81'2" LOA, 53' LWL, 14'7" beam, and 10' draft. One wonders whether the increased beam might not have been to correct a certain tenderness in the earlier Burgess M-boats. Whatever, these composite-built Burgess Ms were fine-looking boats capable of winning races in the class. But PRESTIGE remained the frontrunner among the Burgess sloops.

The experience he gained working on the M-boats



and being active in M-class competition as an afterguardsman added greatly to Starling Burgess's design resources when it came time for him to undertake the design of Harold Vanderbilt's first AMERICA's Cup defender, the J-boat ENTERPRISE. It is only surprising he did not learn earlier the basic lesson taught by PRESTIGE and other M-boats: that the full potential of boats designed to the Universal Rule could only be reached near or at the outer limit of permissible waterline length.

A third new M-boat that joined SIMBA and AVATAR and the squadron in the summer of 1929 was Junius S. Morgan's WINDWARD, in the design of which Morgan collaborated (to what extent is not clear) with that great, but currently unsung American yacht designer Charles D. Mower. WINDWARD was built by Henry B. Nevins at City Island under the Herreshoff scantling rules that had

W Starling Burgess introduced the M-class in the May 1927 issue of *The Sportsman*. He led that article by giving the measurement formula:

$$\text{Class M of Universal Rule: } R = \frac{.18L \times \sqrt{SA}}{3\sqrt{D}}$$

where R = 46 (Class M rating)
 L = Length factor in feet
 SA = Sail area in square feet
 D = Displacement in cubic feet....

"The length factor 'L' is the load waterline length of the yacht," Burgess continued, "plus a certain penalty for excess of so-called quarter-beam length—measured one-quarter of the waterline beam outboard from the fore-and-aft plane of symmetry—and one-tenth the waterline beam above the plane of the water. This limiting quarter-beam measurement is designed to prevent excessively long and full overhangs...."

—LH



WINDWARD

Starling Burgess's extensive and hard-won knowledge of aerodynamic theory and technology served him well during the 1920s, as he competed against other top American and English yacht designers to perfect the modern high-aspect marconi rig. Although Charles D. Mower, a friend and near contemporary, was in most respects a designer of great competence, this view of his M-boat WINDWARD (built by Nevins in 1929 for Junius Morgan) indicates that he was still a season or two behind Burgess when it came to staying a mast. Note in particular the hound-and-cheek shroud arrangement: a tried-and-true and very seamanlike

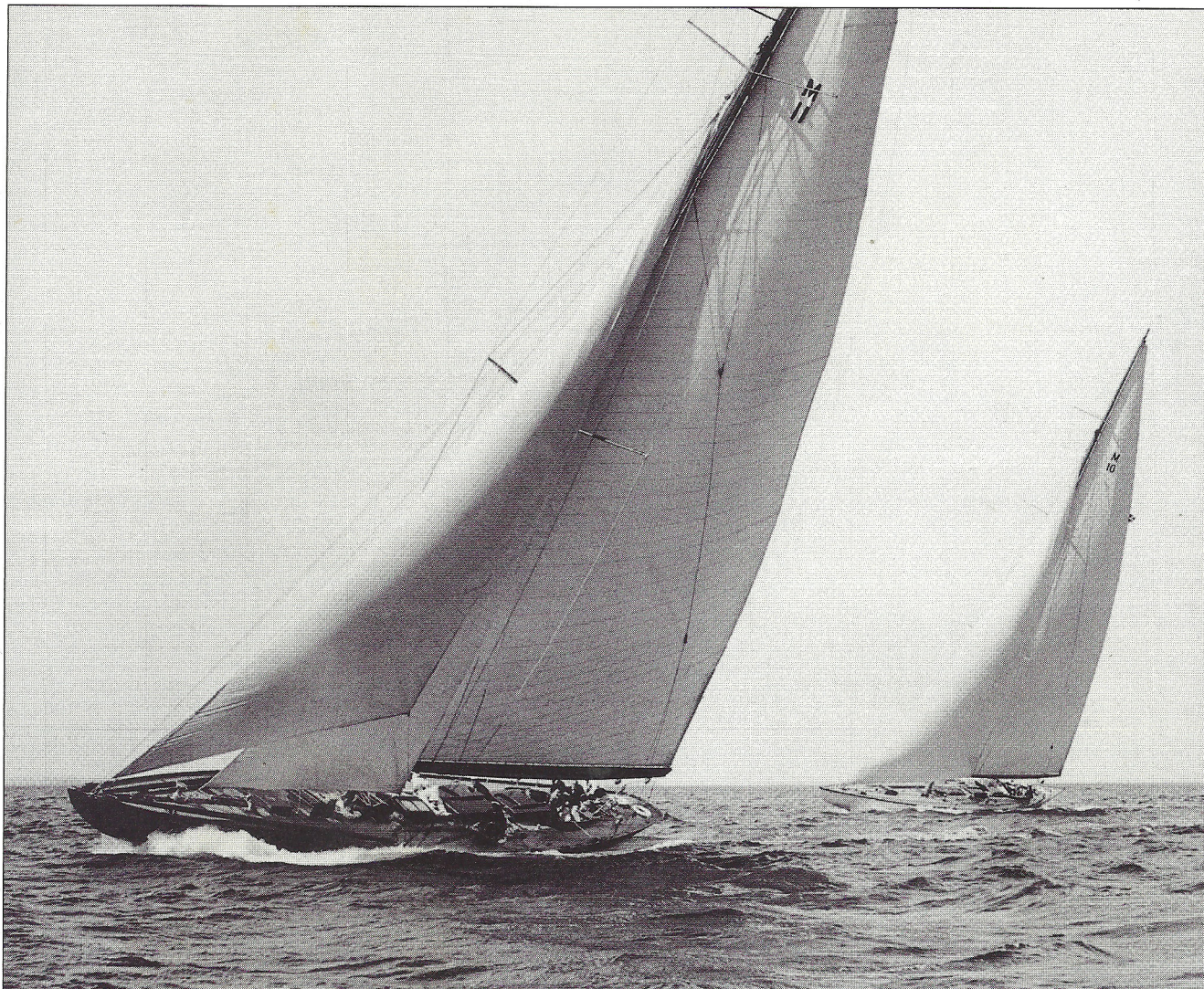
way to attach a stay to a mast, but lacking the advantages of a well-designed tang assembly. His sail plans, too, were somewhat behind the curve (although sometimes Burgess's sail plans proved to be rather too far ahead of the curve—or off the curve entirely). The big headsail carried by WINDWARD in this photograph is, I assume, a ballooner, not a genoa. The more the wind comes ahead, the less satisfactory this full-cut sail will prove to be.

The pair of white life rings aft appear to have been obligatory for boats competing in the M class. Unlike J-boats, M-boats were not required to carry tenders on deck. Or life rails. Or PFDs.

—LH

(according to *Yachting's* writeup of WINDWARD) just been adopted by the New York Yacht Club "as a substitute for Lloyd's scantlings." At 82'0" LOA, 53' LWL, 15' beam, and 10' draft, she was a big boat. Like the Burgess M-boats, she had many design elements we now associate with International Rule boats.

Junius Morgan was a good helmsman and a committed racing sailor with bottomless pockets. WINDWARD's maiden summer was far from a failure. In the season finale, she came in second on points behind PRESTIGE in a three-day, three-race, eight-boat competition (with one 12-Meter added) for the New York Yacht Club Cup.



AVATAR

Launched 75 years ago and long since renamed PURSUIT (and still very much alive in Sausalito, California), the Burgess-designed, German-built M-boat AVATAR (1929) differed in only minor respects from Burgess's first M-boat, PRESTIGE (1927), or at least in length, beam, and draft from the Mower-designed M-boat WINDWARD (1929). But this fine photograph by Edwin Levick shows how distinctly the Burgess, Mower, and N.G. Herreshoff M-boats differed from ISTALENA (M-boat No. 10, 1929). The image also suggests that AVATAR was more tender than ISTALENA, a suspicion confirmed by the fact that AVATAR (along with PRESTIGE and VALIANT) had her keel recast and centerboard added in 1931. As for her rig, in May, 1931 *Yachting* reported: "Up at the Herreshoff yard...they are at work on alterations in rig and build of three of the Class M yachts...."

In the light of the performance of (the J Boat) ENTERPRISE last year, with her duraluminum mast and wide boom, VALIANT, PRESTIGE, and AVATAR are to have masts made of duraluminum and covered with canvas impregnated with aeroplane 'dope.' They will be fitted with triangular booms with thwartship slides and have the new booms on single headsails, as well as mainsails...."

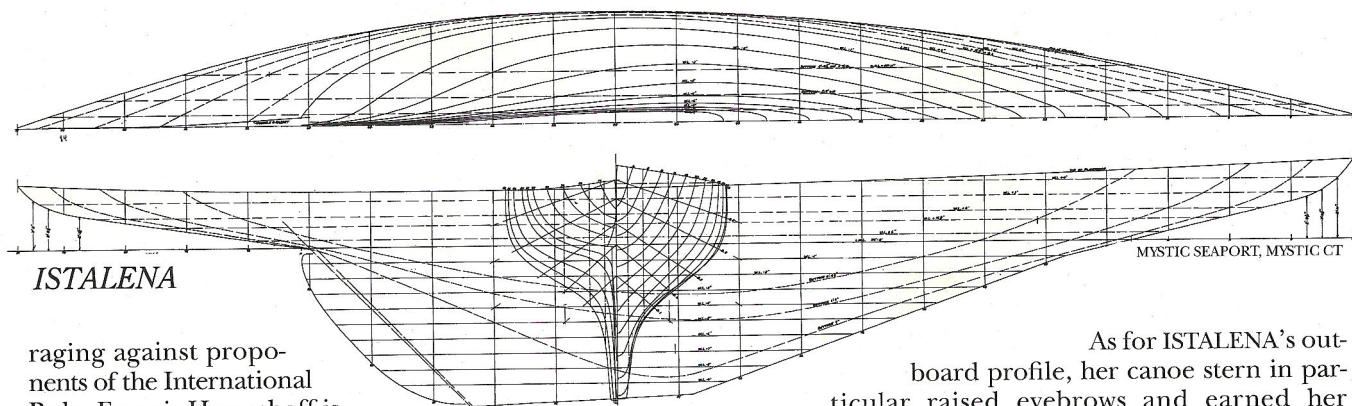
As long as M-boats continued to race against each other in their class, they were continually upgraded and altered. After 1930, however, they took their lead from the J-boats, rather than influencing the design of them.

It is perhaps superfluous to note that AVATAR's first owner, Floyd Carlisle, a paper manufacturer (St. Regis and Champion), was one of the most powerful American capitalists of his day. "Avatar" is defined as "the carnation of a deity" or "exultation into an object of worship or cult." —LH

She was, however, outclassed by the final M-boat to make an appearance in 1929—the last M-boat ever built. This was the canoe-sterned sloop ISTALENA designed by L. Francis Herreshoff and built of wood by Herreshoff Manufacturing Company. Unlike WINDWARD, which was a very good boat, and PRESTIGE, which was an even

better boat, ISTALENA was truly a great one.

From his very first mature work as a designer, under the watchful eye of mentor Starling Burgess, Francis Herreshoff had shown a passionate, even radical affinity for his father's Universal Rule. As Alf Loomis wrote in his April 1927 article for *The Sportsman*, "...In the contest now



raging against proponents of the International Rule, Francis Herreshoff is a most outspoken partisan. It is said that when his letter on the subject was delivered before the (most recent) gathering of the North American Yacht Racing Union, his spokesman deleted fifty 'damns' and a hundred and fifty 'Goddamns'. But not even this unpardonable emasculation weakened the force of his arguments."

In the second volume of *The Common Sense of Yacht Design* (1948), Herreshoff devotes some 10 pages to a discussion and comparison of the two measurement rules. And in my own frequent conversations with Skipper Herreshoff in the late 1950s about the rules, I learned of his contempt for the excessively narrow beam and ugly shapes of International Rule boats, their inability to stand up to a strong breeze, and their wetness in any kind of a sea. He also hated the International Rule for discouraging hollow sections (including clipper bows) and, in general, for producing boats that did not accord with his sense of how boats should look and perform.

By the mid-1920s, young Herreshoff was emerging as an important innovator and as a designer unafraid to explore the limits of the Universal Rule—and even (as in the case of his unbeatable R-boat LIVE YANKEE of 1927) to look beyond it. Along with Starling Burgess, he deserves credit for many advances in rig, hull, and hardware design that now seem quite routine. He is generally conceded to be the designer who (with Burgess) perfected tang rigging and who introduced the genoa jib in the United States. As early as 1927, for an M-boat that was never built, he proposed the first quadrilateral jib: a potent weapon in the American arsenal during the defense of AMERICA's Cup a decade later. In these and in many other ways, Francis Herreshoff's posthumous reputation has lagged far behind his actual importance as a yacht designer.

In 1928, the seasoned old Long Island Sound campaigner George Mallory Pynchon came to Francis Herreshoff with a commission for an M boat, and Herreshoff, with preliminary sketches already in hand for such a boat, was ready for the challenge. The result was the M-Class sloop ISTALENA, the last of a long line of big racing sloops named ISTALENA that Pynchon had owned over many years.

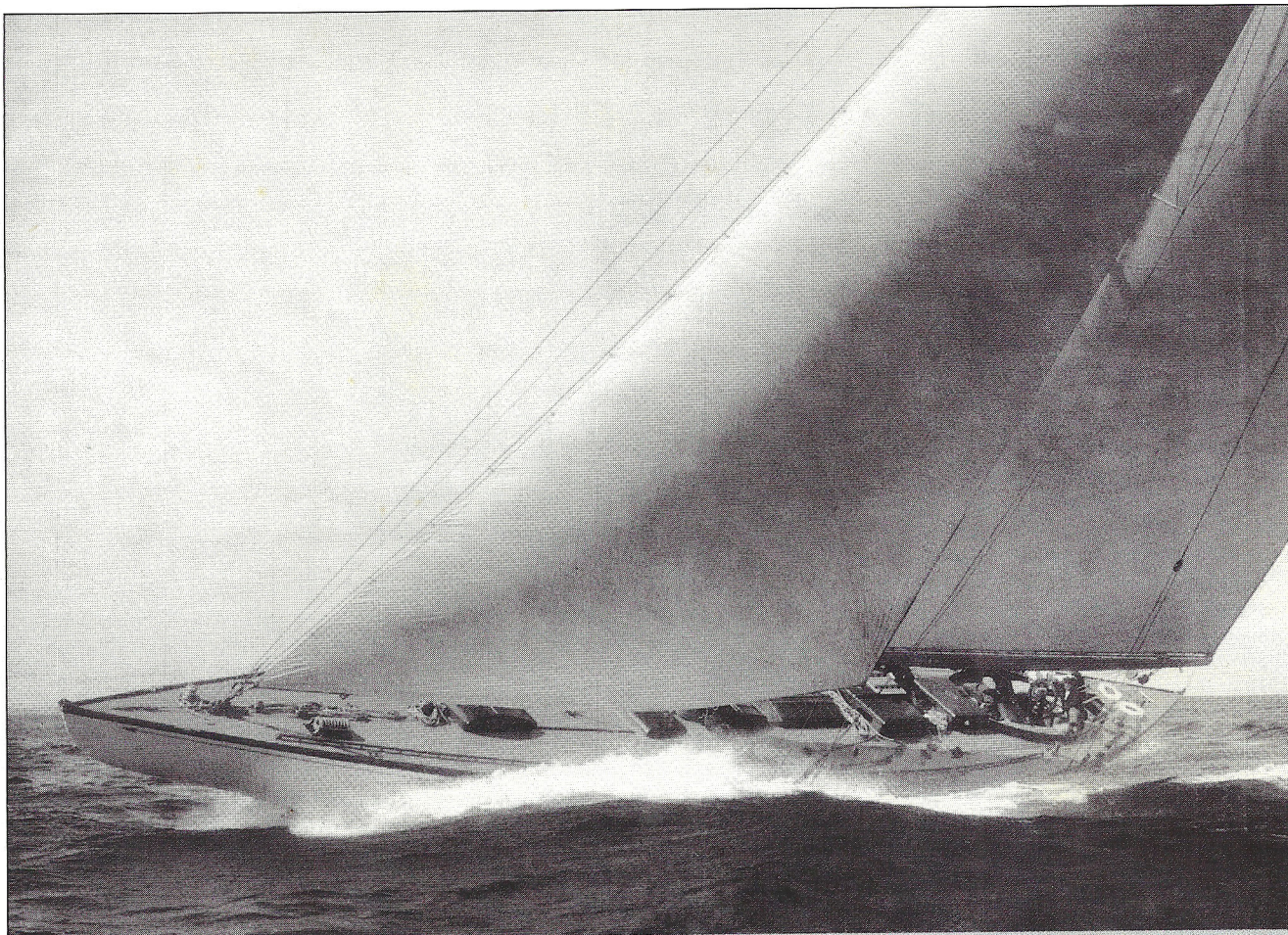
At 87', the M boat ISTALENA had the greatest overall length of any boat in the class—a full 15' more than the New York 50s (which now raced with a handicap allowance in the class). In beam (14'6") and draft (10'6") she also topped the other M boats. Her 54' waterline was the same as PRESTIGE's and longer than all the others in the class.

As for ISTALENA's outboard profile, her canoe stern in particular raised eyebrows and earned her nickname as "The Cleat." As a matter of fact, there was a certain tubular quality to her long ends that might in ungenerous minds suggest the complex sculpture of a Herreshoff cleat. (Critics of Herreshoff's R boat LIVE YANKEE had likened that boat to a cigar; so in a sense Herreshoff was moving up in the world.)

ISTALENA was in most ways a technological marvel, complete with aerodynamically shaped deck houses and with intricately designed winches and hardware to match. All of which, for skeptics during her first day of trials, only added to the fun when she lost her mast. (She was not, however, the only M boat to be dismasted at least once. High aspect rigs were still very much in the developmental stage in the late 1920s, as indeed they remained during the J-boat era of the 1930s. Only by then, of course, aluminum was beginning to displace wood and steel as the spar material of choice.)

ISTALENA, like Herreshoff's earlier Universal Rule racers, was slow finding her groove. The first half of her first season was a distinct disappointment to her owner, afterguard, and designer. Then, to the dismay of Harold Vanderbilt and Junius Morgan and their fellows, she came alive and began taking important races from the hitherto dominant PRESTIGE, not to mention the other Burgess sloops, the New York 50s, and WINDWARD. Although during that and later seasons racing in the M class was often close and spirited, ISTALENA now became the boat to watch and, with PRESTIGE, the boat to beat. "Francis had designed the ISTALENA to sail not at the designed waterline but as deep as she would go without going below the tops of her marks," wrote the great yacht designer and one-time New York 50 owner Clinton Crane years later, "and she proved to be the outstanding boat. It took George Pynchon some time to learn how to sail her, but when he did, he succeeded in beating all of us." ISTALENA's reputation for speed survived 11 years of racing on Long Island Sound and followed her to the Great Lakes, where she reigned as queen of the Universal Rule during the early years following World War II.

No sooner had ISTALENA's maiden season of 1929 ended than AMERICA's Cup fever swept through the upper reaches of American yacht racing: the owners, the helmsmen, the afterguardsmen, the designers and builders, the professional sailing masters and crewmen. Harold Vanderbilt, George Pynchon (soon to become a fatality of the Great Depression), Junius Morgan, Winthrop Aldrich, Chandler Hovey, Paul Hammond, Clinton Crane, and other Cup syndicate members had all



ISTALENA

She was nicknamed "The Cleat"—a Herreshoff cleat at that—because of her extreme semicylindrical overhangs. On most points of sailing, however, and perhaps most obviously when seen from the lee bow in a fresh breeze, ISTALENA resembled a spear or javelin. Not even her doomed big sister WHIRLWIND, a J-boat, projected a more potent image of flat-out performance, an image artfully enhanced by the design of her deck structures and layout—and confirmed by her cutting-edge rigging details, sail plan, and hardware.


Among the great racing sailors who fell under the spell of ISTALENA was "Sis" Hovey (Morss). She sampled the magic of L. Francis Herreshoff in her double-ended

30-Square-Meter sloop ORIOLE II in 1930 and successfully campaigned ISTALENA under charter in 1931. Ironically, neither ISTALENA in the early years nor the short-lived Herreshoff J-boat WHIRLWIND made use of the overlapping jib that Herreshoff devised for Sis Hovey's European racing in ORIOLE II in the summer of 1930. The special headsail was quickly copied and adopted by performance-minded sailors on both sides of the Atlantic. It has been known ever since as a genoa jib.

Unlike PRESTIGE, VALIANT, and many of the converted New York 50s, ISTALENA steered with a wheel. If ISTALENA was only half as hard to steer as WHIRLWIND, the wheel must have been a necessity.

—LH

owned or campaigned New York 50s or other 46-raters. Now Crane would join Starling Burgess, Francis Herreshoff, and Frank Paine in designing rival J-boats for the 1930 AMERICA'S Cup trials and for the eventual right to defend the Cup.

The parameters of the Universal Rule that had been tested by New York 50s, PRESTIGE, VALIANT, the sisters SIMBA and AVATAR, WINDWARD, and "The Cleat" would now be further tested by racing sloops 30 and more feet longer on the waterline, as much as 45' longer overall, with twice the sail area and with mainmasts rising some 165' from waterline to truck. But that is a story for others to tell. 

Antiquarian book seller Llewellyn Howland III has written extensively on the social aspects of maritime history. His most recent book, The New Bedford Yacht Club, was reviewed in WB No. 172.

The author is grateful to Gordon Shaw and Paul Bakke for sharing with him their memories of ANDIAMO.

This article is adapted from the book J Class, by François Chevalier and Jacques Taglang, and published by Yachting Heritage (Albany House, Suite 401, 324/326 Regent St., London W1B 3BL UK). Howland contributed a chapter including the M-boat story. The book (\$395.00, 447 pp, 17 lbs) is available at select bookstores, or from Howland and Company, 100 Rockwood St., Jamaica Plain, MA 02130; 617-522-5281; <howlandandco@earthlink.net>.