

US VMYG "Classic" VM – Timeline

1994 Winter #94

cations for the 30-inch class required the hull to be not over 30 inches long, 8 inches wide and 13 inches deep from the deck to the keel. The sail area of this model was restricted to 600 square inches. The 26-inch class rules were even simpler, a 26 inch hull length with a sail area of 450 square inches.

The Origins of the Marblehead 50-800 Design

In 1927, L. Francis Herreshoff, the noted naval architect, joined the M.M.Y.C. Mr. Herreshoff had designed a variety of large racing craft, ranging from dinghies to America's Cup "J" boats, before becoming active in model yacht design. Also, at this time, a class of full size yachts had been developed with restricted sail areas but almost unlimited length of hulls. With this in mind, Mr Herreshoff proposed a class of model yachts with only one restriction, namely, 450 square inches of sail.

This design adopted by the club became known as the 450 Sail Area Class. Hulls of this racing class ranged up to 45 inches in length and were built in a variety of forms; bows could be either pointed, round or square shaped, while the stern sections had a canoe shape or squared off profile, some as wide as the hull. The keels were also a variety of sizes, with their lead ballast ranging from 3 to 6 pounds. Obviously, this new class allowed for the development of a large number of original club designs.

Given the popularity in the late 1920s of the "450" Class and the innovative nature of many of the club's members, it was not too long before a club model design was to emerge that

displayed more optimum sailing qualities. Late in 1930, Mr Roy Clough, a charter club member, conceived the idea for a new class of model yachts with a greater overall length and proportionately-scaled sail area. Although there is no record of the exact origins of Mr. Clough's

- * A jib sail area of 150 square inches
- * A mainsail area of 650 square inches
- * A sail plan height of 60 inches

With these basic characteristics, this model design soon proved to be what most model yachtsmen of that time desired.

The Establishment of the "M" Class as an International Design

When this design was introduced in the 1931 sailing season at Redd's Pond, it quickly became not only the club's favored racing model, but one widely recognized as "the right boat for the times," given its inherently sound sailing capabilities. This rapid, widespread acceptance of the "M" Class was due in no small part to the M.M.Y.C. and its subsequent promotion of this "home grown" design in club, interclub, regional and national sailing events of this era. When the club was incorporated in 1933, the membership felt so strongly about its affiliation with the Marblehead 50-800 that it adopted as its club burgee the international code flag representing number one. This action was meant to signify that this model yachting organization was the first club to sponsor the "M" Class.

Coupled with the simple set of "M" design rules, this quickly led to the adoption of the design by the Model Yacht Racing Association of America (MYRAA) as an official class in 1932; followed in 1937 by the International Model Yacht Racing Union's (IMYRU) recognition of the design as an international class. It is important to note, at this juncture, that a M.M.Y.C. member influential in national and international model yachting affairs and an ardent supporter of the "M" design, Mr. John Black, was elected IMYRU president in 1937, at the same meeting that the "M" Class was adopted by IMYRU. Mr. Black had won the "M" Class World Championship the previous year in Germany. (See photo of Mr. Black and his World Champion "Cheerio" model). Also, Mr. Black later authored



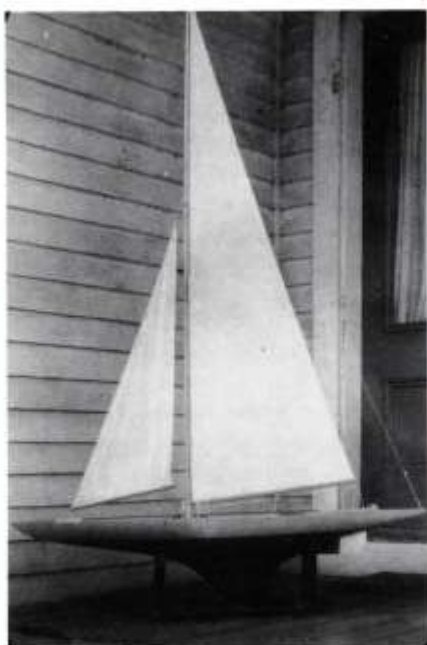
Marconi Rigged Model

design, it is thought that his ideas for the new yacht were rooted in the simple and flexible design rules of the "450" Class. A key consideration had to be the physical size and weight for a model that would be ideal for both sailing and ease of transporting.

Mr. Clough's original yacht design, [See photos of original "M" and Mr. Clough with one of his 1930s models] was 50 inches long with 800 square inches of sail, hence the name "Marblehead 50-800". Even today, these are still the principal design measures that govern development of modern "M" boat designs. In the early 1930s, the typical dimensions of Mr. Clough's model yacht would have been:

- * An overall length of 50 inches
- * A waterline length of 40 inches
- * A draft of 7 inches
- * A keel ballast of 9 pounds

in 1939 what was then considered the definitive book on the "M" 50-800,



Clear evidence of developing design

Yachting With Models - How to Build a Champion "M" Class Model Yacht.

Thus, Roy Clough's original model yacht design, (named for the Town of Marblehead), became the world standard known today as the Marblehead 50-800 or, more simply, the "M" Class.

Continuing the Legacy

For the next 40 years, through the 1930s and into the 1970s, the basic "M" model design matured at both the local and national levels, (i.e., development of full waterline hulls, torpedo keels, balanced rudders, improved steering [vane gear], tall sail rigs, and use of molded hull material and alternative sail fabrics). Typical of the M.M.Y.C.'s initial developmental role, this maturation period also saw club members introduce several important designs and ideas that gained widespread acceptance. Noteworthy ones were:

The "Cheerio" "M" yachts by John Black (1930s), which won regional, national and world "M" Class championships;

The local "Broom" series of "M" boats

designed by J. Selmar Larsen (1930s through 1950s);

The "self-tacking" vane gear steering control by Bill Full (1940s);

The ultra-high sail rig and "Warrior" series of "M" yachts by Standley Goodwin (1960s and 1970s).

The ultra-high sail rig is used universally today within the "M" Class, while "self-tacking" vane steering was only supplanted by the advent of radio-controlled model yachts in the 1970s.

Continuing the legacy of these earlier model yachting activities in Marblehead, the present group of M.M.Y.C. members have closely involved themselves in the sailing and development of the "M" boat. The club commodore serves as the "M" Class Secretary for AMYA, while club members still principally sail the "M" 50-800 and have recently

adopted a fairly radical sail rig, the free-standing, pivoting liswing "rig, as the standard for their "M" boats. (See photo of the modern "M" design ["Pinter"], with "swing" rig at Redd's Pond)

Also, the Town of Marblehead still has a business that solely supports model yachtsmen both locally and world-wide, (Worth Marine), which builds "M" Class yachts, such as the "Pinter" model, and sells various other model boat kits, fittings and accessories to those interested in the sport.

In summary, the following figure depicts the key design features of the

wide variety of model yachts sailed at Redd's Pond, Marblehead, from the 1890s to the present. Apparent from this design summary, both the liberal design rules of experimental-type model yacht classes and the natural evolution of state-of-the-art building materials have provided the means to develop unique model design ideas. Given this conducive design environment, this article is just one historical perspective on, and tribute to, those forward-thinking organizers, designers, builders and skippers involved in American model yachting these past 100 years.

Insert —Summary of Key Features of Model Yacht Designs in Marblehead From 1890s to 1990s]

The 100th Anniversary Regatta

In tribute to the many model yachtsmen, both young and old, who have sailed in Marblehead the last 100 years, 1894 to 1994, the Marblehead Model Yacht Club is sponsoring a special regatta to honor this occasion. This sailing event, "The 100th Anniversary Regatta", will be held in conjunction with the AMYA "M" Class Northern Divisional, on Saturday and



John Black and his "Cheerio"

FIGURE - SUMMARY OF KEY FEATURES OF MODEL YACHT DESIGNS IN MARBLEHEAD FROM 1890s TO 1990s

<u>Marblehead 50-800 Era</u>			
Key Design Features	1890s- 1920s*	1930s-1960s	1970s-1990s
Hull:			
Length	18-45 inches	50 inches	50 inches
Displacement	4-12 lbs	14-24 lbs	9-15 lbs
Material	Wood	Wood,Fiberglass	Composites**
Construction	Bread & Butter, Buttocks, Solid	Bread & Butter, Buttocks, Planked, Molded	Molded
RIG			
Design	Gaff, Marconi	Marconi	Marconi, Swing
Height	Up to 48 inches	60-80 inches	80-88 inches
Material (Mast)	Wood	Wood, Aluminum	Aluminum, Carbon Fiber
<u>Sails:</u>			
Aspect Ratio	Low	Medium-High	High
Jib/Mainsail Areas ***	Variable by Class	150/650-300/500	200/600-350/450
Material	Cloth	Egyptian Cotton, Oiled Cloth, Cambric, Nylon, Dacron	Dacron, Mylar
Controls:			
Sheeting	Bowsers & Travelers	Bowsers & Travelers	Bowsers & Radio
Steering	Marblehead, (Clyde Type), Gear	Marblehead, Braine, Vane Gear	Radio

*Various model yacht classes

**Composite material such as fiberglass, carbon fiber, Kevlar

***Jib/mainsail areas noted by square inches of area

1994 Summer #96

M CLASS NEWS by Standley Goodwin

The Marblehead Model Yacht Club held the M Class Northern Division Championship in conjunction with its 100th Anniversary. In addition, a display of classic model yachts going back as far as the turn of the century was

held. This display consisted mainly of wooden M Class models. Several of these models were raced using the old free sailing controls in a four race series.

The interest generated by the classic M Class models surprised me. Possibly the time has come for establishment of a classic division within the M Class. One group from New Jersey has gone as far as building fiberglass models of a 1930's design. A regatta and display for classic models is being considered for next year by the Marblehead club. I intend to watch developments and see if the interest is long term and warrants further action.

Returning to our modern M Class, the international rule was revised after the motion AMYA adopted was submitted. Most of the changes were clarification, however, two changes are significant and should be incorporated in our rule. The most important change is recognition of the swing-rig fitting that goes around the mast. The rule statement recognizes that this fitting is generally substantial and places some limit on its size.

The other change is in sail numbering. A much larger set of numbers (four inch) is used. The last two digits of the boat's registration number are used and a one added if there is conflict. The numbers are easily read from considerable distance and have solved the problem of boat identification in large international regattas.

Most skippers sailing in local races do not require the sail numbering change, because everyone is familiar with the boats sailing. However, there are some skippers who would like to go to the new sail numbering system. Therefore I will propose it as an alternate to our present system.

I expect to have a motion to update the "M" Class rule ready for the 1995 ballot.

Discussion of a Classic division within the AMYA M rule. (Classic meaning all older M boats) Although not a new idea, remember the "Phoenix" proposal, the time had arrived to form the US VMYG.



Dear Paul:

Just a short note to thank you and AMYA for the cover and feature article on vintage model yachts in the AMYA Quarterly summer issue! I have also included some "words" that I am hoping in some form can appear in the fall issue. This would be a short note on my request (as acting President/Secretary of the U.S. Vintage Model Yacht Group) for the submission of registrations on older R/C "M" Class model yachts. This is principally to "test the waters" on interest in the possible formation of another new AMYA class -- the Classic R/C "M" Class, under the direct sponsorship of the vintage group and the overall sanctioning of AMYA. Per a reference to this same subject that will appear in Standley Goodwin's "M" Class Secretary Notes, I am hoping you might also mention this subject in your editor's column and refer your readers to Stan's section for more details.

Basically, if we can establish this class, we would hold the first ACCR in Marblehead next year. This would be in conjunction with the first, annual "U.S. Vintage Model Yachting Days" event scheduled for June 24 & 25, 1995 at Redd's Pond. This vintage event will have two full days of older model sailboat racing activities, including a Classic R/C "M" Class ACCR, R/C scale model schooner and sloop design sailing, and 1930s to 1960s vintage, free-sailing (nonradio) "M" Class racing. Readers can directly contact me at my

The US VMYG proposes to AMYA the establishment of a Classic RC "M" class for older M boats.

M CLASS NEWS

by Standley H. Goodwin

A good portion of the best M Class sailors in North America gathered in San Diego for the finale of race week, the M Class ACCR. The boats were fast and the competition excellent. Four skippers emerged with the boat speed and sailing skill to consistently stay near the front of every race. The outcome was in doubt until the last heat. Bud Fassnacht from Vancouver won sailing an Orbit. He was closely followed by Jon Elmaleh sailing a Pinter 11. Pete Jefferson sailing a boat of his own design was third. Bob Sterne sailing his Viper design was fourth. Completing the trophy group was you class secretary sailing a Pinter II.

For those interest in the regular vs. swing rig question the result was a wash. The first, fourth, and sixth boats and most of the rest of the fleet used standard rigs. The second, third, and fifth boats used swing rigs.

Although a number of new designs were sailed, none were breakthrough boats. Most were similar in performance to existing designs.

Regattas like this year's M ACCR are what help keep our class great. The competition and equipment draws the best sailors and designers to our class.

The result is the superb equipment available to class members. You too can sail the best.

A vintage M Class radio control class is being formed. The idea is to preserve the best of the free sailors by adopting them to radio. Replicas are also being encouraged. The basics will be the 1950's M class rule with restrictions on displacement, draft, materials, and sails. The limits are likely to be about 16 inches maximum draft, 16 pounds minimum weight, materials available before 1970, and single panned sails. If you have a boat that meets these requirements, send a registration request along with \$2.00 to the provisional class secretary, John Snow, 76 Woodbine Ave., Concord, N.H. 03301. Only 20 registrations are required to make the class

official.

When you send in your AMYA membership renewal, don't forget to include a list of the boats you have registered. It's free, and keeps your registration current. This applies to any class. My interest is in keeping the M class number one so don't forget to include your registered M class boats.



One of the overseas competitors, a M from Japan leads the fleet to wind at the ACCR

After a number of years of faithful service to the M class, John Snow is returning the M class registration to your class secretary. I personally and the class in general thank John for his efforts. Remember to send your registration requests to the M class secretary, Standley Goodwin.

SANTA BARBARA-CLASS NEWS

by Jerry Dolls

First off, I would like to congratulate, Ron Cunningham, of the San Diego Argonauts, the 1994 ACCR winner for the Santa Barbara O/D yachts.. Ron was closely pursued by Andy Littlejohn, Sr. who finished second, followed by Bill Sage in third. There were three former national champions in the sixteen boat field.

The host of the 1995 Santa Barbara is

Preserve teh best of free-sailors and adapt them to RC. Basic will be the 1950 M rule, 16' max draft, 16# min displacement, pre 1970 materials, single panel sails.

Request help
writing the Classic
M class rule

Storrow Lagoon!

Establishment of a Vintage R/C "M" Class

Given the large number of older "M" boats still around, I have had numerous inquiries as to why not go ahead and "test the waters" by establishing a Vintage "M" Class under AMYA with the support of the Vintage Group. Well, our group is willing to attempt this task in 1996, with your help. We have to identify at least twenty vintage "M" boats (either free-sailed or R/C-converted models) that originally conformed to the old MYRAA "M" rules that would be the core fleet for such an AMYA class. Our initial feeling is that a Vintage "M" Class with R/C would be more preferable than one for just free-sailed "M" yachts. Our rationale is that R/C-equipped "M" boats can be raced by a greater number of AMYA members at many more sailing sites than their free-sailed cousins. Please contact me as soon as possible, if you have an older "M" model(s) and would be interested in supporting such a class concept!

Furthermore, if this can be quickly accomplished, e.g., by early spring, the Vintage Group may be able to accommodate a 1996 regional event for Vintage R/C ~M~ models at Boston's Storrow Lagoon. An AMYA Vintage R/C "M" ACCR could then follow in 1997. Also, I would appreciate

comments from the AMYA membership on the concept of vintage R/C model yacht classes, as well as any inputs on possible basic design limitations, similar to the SFMYC rules, to keep the many older "M" designs competitive. In the meantime, I will try to work with Standley Goodwin to consider changes to the original MYRAA "M" Class rules and briefly summarize any proposed new class design parameters in the spring "MY" issue.

New Vintage R/C Model Yacht Design

I recently received a packet of information on a very interesting sailing model adaptation of the famous "International One-Design" ("IOD") racing class, whose basic lines were initially laid down in 1937 by Bjarne Aas of Oslo, Norway. Milton Thrasher of Sarasota, FL., AMYA Member # 8533, has taken the full-size "IOD" design and developed a 48-inch, 16 pound R/C sailing version of it, that he is proposing as an AMYA "IOD" Class (one-design model) under the Vintage Model Yacht Group.

The fiberglass-molded "IOD" is offered in a standard "ready-to-sail" version, with sails by Carr and a Futaba Attack IV radio, for \$1399.00, which includes shipping and handling costs within the continental U.S. It is also available in kit form or customized models.

Vintage "M" (VM) Class

We are progressing towards our goal of establishing a R/C VM Class in 1998. With luck, we should have an approved set of VM rating (design) rules and a VM Class Secretary by the time you read this. VM skippers at our national event fully supported a national R/C VM Class within AMYA, given that the rating rules could be equitably structured to accommodate the wide variety of "M"s designed over a 40 year period. The basic requirements for inclusion in this class is AMYA membership and ownership of a 1930 to 1970 era "M" that conforms to the "M" Class rules then extant. Free-sailing "M" models would have to be converted to R/C for registration in this class. VM Class organization and sailing activities will be similar to other AMYA classes. If you desire a copy of the VM rating rules contact me.

1998 – AMYA #111 (Summer 1998) – Announced a class coordinator for Classic M to see the interest.

R/C Vintage "M" (VM) Class

R/C "VM" Class rating (design) rules are available from the VM Coordinator—Charlie Roden. There are two class divisions based on grouping like-performance early "M" boats together. One is 1945 and prior designs "Traditional" and the second is designs after 1945 through 1970 "High Flyer". The VM draft rules are being tested this year with plans to refine them after the season. Charlie is registering "VM" boats and is planning on class status (20 boats) by late 1998.

VM rule published,
two sub-classes,
"Traditional" and
"High-flyer"

Proposed R/C American Classic “50/800” (C50) Group

The VMYG is working with the AMYA and its “M” and Open class secretaries to assess the feasibility of adding racing activities for “M 50/800” model yachts built to early “M” Class specifications. These “M” models have a tentative group designation within the VMYG for promotional purposes - the American Classic “50/800” or “C50” Group. The reason for this effort is that many earlier “M” boats are no longer competitive with the newer, high-tech “M” models because the AMYA “M” Class is a developmental design class. Older AMYA “M”s are mainly those designed from 1971 to 1991 with conventional sail plans (no swing rigs) and non-kevlar hulls. Our initial step is to assess AMYA skippers support for a “C50” model group. If sufficient, racing events for “C50”s may then be promoted through the VMYG. The goal is to provide these “Mr’s and their owners an opportunity to competitively sail them again. This will not preclude

First discussion on the actual "Classic" M sub-class for boats 1971 - 1991 with no swing rigs or Kevlar hulls

these models from being raced in regular "M" Class events. The C50's may also serve as entry-level boats for AMYA members wanting high performance in a model at a more affordable cost. The VMYG needs a volunteer to be the "C50" Group Coordinator—without one the concept cannot go forward. Until then, I will provide information on this concept and the "C50" rating rules. If you would like to be the Coordinator, contact me (0 781-631-4203. The VMYG would especially like to thank Alden Whitehead and John Unterreiner for their efforts in laying the ground work for the "C50" Group and developing the draft rules. Without their ideas and contributions, this concept could not have been defined.

1998 Fall #112

R/C American
Classic "50/800" (C50)
Group. The VMYG
Coordinator for the new
"C50" Group is: Dennis
Lindsey, 515 N. Lyall

Class coordinator
for the C50 group.

Ave, West Covina, CA 91790-1827
and 818-966-9538. His email is:
lindseyd@flash.net. Dennis will work
closely with AMYA to promote racing
activities for "M 50/800" model yachts
built to early "M" Class specifications.
Most of these earlier AMYA "M"
boats are no longer competitive with
the newer, high-tech "M" models.
Older "M"s are defined as 1971 to
1991 era designs with conventional sail
plans (no swing rigs) and non-kevlar
hulls. An initial assessment is ongoing
for support for a "C50" model group:
goal is to promote a slate of racing
events for "C50"s starting in 1999.
Association with the VMYG "C50"
Group does not preclude these models
from being raced in other "M" Class
events. If you are interested
in "C50"s, contact Dennis directly.

1998 – The Model Yacht V2N1 – Mentioned Classic M (1971-1991) proposed, used same description as AMYA

- *Proposed R/C American Classic "50/ 800" (C50) Group - The VMYG is working with the AMYA and its "M" and Open class secretaries to assess the feasibility of adding racing activities for "M 50/800" model yachts built to early "M" Class specifications. These "M" models have a tentative group designation within the VMYG for promotional purposes - the American Classic "50/ 800" or "C50" Group. The reason for this effort is that many earlier "M" boats are no longer competitive with the newer, high-tech "M" models because the AMYA "M" Class is a developmental design class. Older AMYA "M"s are mainly those designed from 1971 to 1991 with conventional sail plans (no swing rigs) and non-kevlar hulls. Our initial step is to assess AMYA skippers support for a "C50" model group. If sufficient, racing events for "C50"s may then be promoted through the VMYG. The goal is to provide these "M" s and their owners an opportunity to competitively sail them again. This will not preclude these models from being raced in regular "M" Class events. The C50' s may also serve as entry-level boats for AMYA members wanting high performance in a model at a more affordable cost.*

Vintage Model Yacht C

in a total of 23 races over the weekend. These were raced as a fleet, with skippers scored separately for awards purposes. The boats were grouped according to the design age: 1945 and before – “Traditional M”s, and post-1945 through 1970 – “High Flyer M”s. Older designs having major modifications, such as spade rudders and tall rigs, were placed in the “High Flyer M” group for scoring.

Overall “VM” champion was J.R. LeBlanc from the Marblehead MYC sailing his new reproduction of John Black’s 1936 Cheerio I design with a spade rudder. J.R. dominated the competition in the light air, win-



ning 19 of 23 races and finishing 60 points ahead of the next nearest skipper. Trophies were awarded to the top three in each of the two R/C “VM” groupings. Final standings: “*High Flyer M*”s – 1. J.R. LeBlanc, fiberglass Cheerio I, 2. Bob Lombard, 1947 wooden “M”, 3. Ben Martin, 1960s English fiberglass “M”. “*Traditional M*”s – 1. Thom McLaughlin, late 1940s wooden “M”, 2. Harry Mote, fiberglass version of 1935 New Jersey “M”, 3. Chris Saby, fiberglass Cheerio I. Charlie Roden and Alden Whitehead were the other “VM” skippers participating.

ntage Model Yacht G

626-966-9538

2000 Vintage Activities

"C50" Regattas – East and West Coast regattas for 1971-1991 M 50/800 models. Events to be based on C50 skipper interest in NY and CA areas. Contact Dennis Lindsey.

C50 events planned to gauge interest.

1999 – AMYA #118 (Winter 1999-2000) – "Time to Tack" article by class secretary talking about the explosion in costs for modern Marbleheads

The Marblehead: Time to Tack?

by Standley Goodwin

The Marblehead Class has reached a point in its existence where it must decide what it wants to be. Does it want to be a popular class suited for the average sailor, or does it want to be a class targeted for the sailor with substantial funds?

The easiest path to follow is to continue as we are now. Today the AMYA M Class is an English-units parallel of the International M Class without all of the bureaucracy the latter requires. Since the AMYA Class is not considered part of the International M Class it has no say in rule changes. Even though this situation is emotionally unsatisfying, it has worked quite well since 1992.

The wonderful development achieved under this rule has produced an M boat that is a work of art. Unfortunately the level of construction difficulty has been constantly increasing and the price of the models has been increasing proportionately. Today's top of the line fully equipped M costs around three thousand dollars. Buying a kit really isn't an option. The average sailor doesn't have the knowledge or skill to assemble the boat properly.

The path the class has followed is one that favors a group of sailors who are willing to pay the price to compete.



Standley Goodwin, seen here in the background, grew up and still lives within sight of the pond in Marblehead Massachusetts where the M class was conceived.

The rest of us will have to sail used boats. Since M Class design is nearly static, this is not a tremendous disadvantage. However counting M Class success by the number of new boats is a thing of the past.

There is another path the class can follow. Stop the weight and draft race our present rule has encouraged by put-

ting limits on both. This will change the direction of development in the class and bring back the kit builder who has been the backbone of the class. It will also necessitate a rule change that will return control of the M Class to AMYA.

After considerable research the author has come to the conclusion that the weight of the hull with fin and ballast, rig, and batteries removed should not be less than thirty ounces. Hulls lighter than this would not be obsoleted. Weight could be added to bring them up to spec by adding a servo or two for additional controls or by adding corrector weights.

The standard fin has for the last several years spanned eighteen inches between the bottom of the hull and the top of the lead. The author therefore proposes a depth limit of twenty and one-quarter inches between the bottom of the hull and the bottom of the lead ballast.

Adoption of these limits should put the M Class on a different path. The existing class will be preserved and the kit builder will reenter the class.

The history of the M Class shows that it has existed for seventy years by adapting to the times. Again conditions have changed presenting the M Class with an opportunity to return to its roots as a popular class for the average sailor. The question is which path class members want to follow. Your Class Secretary would appreciate comments from Class members and is considering initiating a survey in the near future.

\$3,000 M boats, continue toward elite status and shrink participation or impose weight and depth limits to allow more skippers to participate with cost effective boats?

Featured Class

The M Class Then and Now

by Standley Goodwin

The M class started as a local Club phenomenon that developed into a National and then International Class. Over the seventy years of its existence, the rule and the boats it produced have changed so much that none of today's boats would be legal under the original rule. Conversely, none of the original M class boats would be legal today.

To understand the class you have to go back to the roots of model sailing in Marblehead, Massachusetts. In the late 1800's two major fires destroyed the manufacturing section of the town and nearly wiped out the town's major industry, shoemaking. To prevent a recurrence the town fathers turned a local pond into a fire-fighting reservoir. In the process they created a usable model sailing pond that was located a half-mile from the population center of the town. In 1892 the Marblehead Midget Model Yacht Club was formed and organized sailing began.

To sail, the average sailor had to walk half a mile carrying his boat to the pond. This meant the boat had to be small and easily handled. For the next thirty-five years various classes in the two to three foot range were sailed. The Class preceding the M class had, as its main restriction, a sail area of 450 square

inches and was a wide-open development Class.

Local sailors had a strong background in what worked well for small sailing models. They also knew that larger models performed much better. The popularity of the automobile in the late 1920's made it possible to transport a larger model to the pond. The time was ripe for a new Marblehead MYC Class.

Roy Clough put it all together and built a boat 50 inches long with 800 square inches of sail area. The boat looked like a real boat and sailed well. It was an instant hit. A simple rule was generated for a limited development Class. To keep the rule simple, only features that were achievable with available materials and construction techniques were specified. There was an unwritten part of the rule that has been long forgotten. If you can't do it or it doesn't work, the rule didn't mention it. The keepers of the rule constantly monitored boats looking for features that violated the intent of the rule. When one appeared an addition to the rule was quickly generated. From the founding of the M class in 1930 until the early 1950's, when the last of the original members passed from the scene, the class was tightly controlled. The rule may have looked simple but the hidden intent of the class was strictly enforced.

One of the more important rules featured a ban on fin keels. The founders had their fill of fin keels in the 450 class



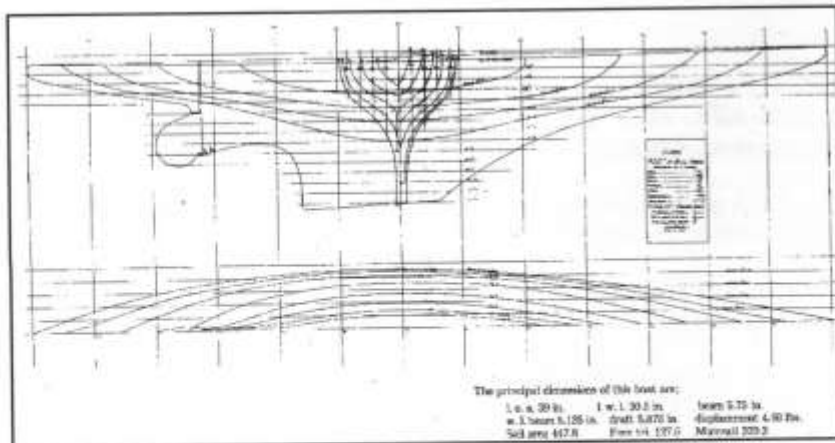
"M-1" The first M Class yacht by Roy Clough, photographed about 1930.

and banned them. Over the years the form of the ban changed. However, until 1971 when the ban was lifted, effective deep fin keels were not possible.

The M class was an instant success. It went from a local club class in 1930 to a national Class in 1932 to an international Class in 1937. In the 1930's literally thousands of free sailing M class models were home built. The Great Depression was at its height, materials were inexpensive, and lots of middle aged men had the time and skills to build them.

By the late 1930's, the free sailing M using a combination of mainsheet and jibsheet tension for steering control, had been developed. Meanwhile, on the West Coast, a group of sailors were developing vane steering and the boat that went with it. At the 1940 M Nationals one of these boats appeared and beat the East Coast boats in a convincing fashion. Overnight, all of the competitive East Coast boats were obsolete. Vane steering had been around since the 1890's, so it was judged legal. Some halfhearted attempts were made to ban other features on vane boats but they were unsuccessful.

The vane steering boat was the future of the M class. During the 1940's the vane steering boat was developed. By



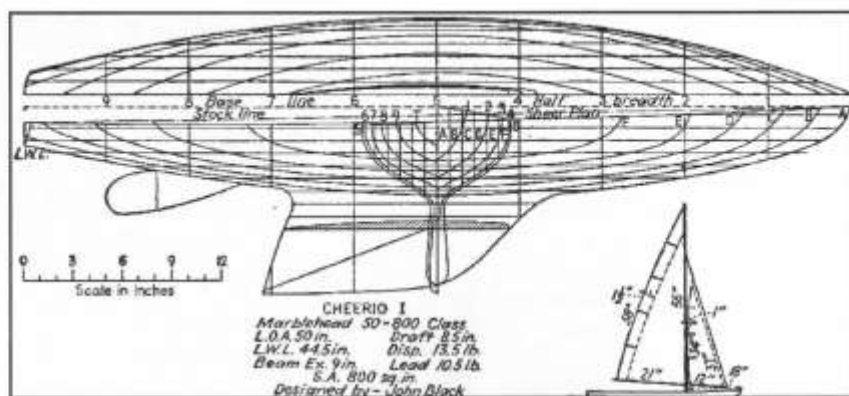
The 450 Class. About a meter long, with 450 square inches of sail, this class was the immediate predecessor to the M in Marblehead.

1950 it had reached its final form. From 1950 until 1970 little significant hull development took place. Attempts at improvement met with little success.

The 1950's were a period of survival for the M class and model yachting. The original members from the 1930's were leaving the scene. Due to the phenomenal success of model yachting in the 1930's, clubs had recruited few new members. Recruiting new members became a matter of survival. Only the strongest or luckiest clubs survived. By 1960, less than ten clubs were left out of the forty-eight clubs active in 1941.

In the late 1950's, high quality light weight Dacron sail cloth appeared. Rig height, which had been limited to the sixty to seventy inch range by cotton sailcloth, climbed to the eighty to ninety inch range. The rig efficiency and additional free sail area in the roach made these rigs unbeatable upwind. Finally, tall rig development was capped with an eighty five-inch limit.

Around 1970, reasonably priced radio control units became available to the general public. It was time for a change to another method of control. The free sailing establishment was not interested in change so the AMYA was organized. In 1971, it issued its first Regulations and Class rules. One of the classes adopted was the 50-800 Class. The rules adopted were a simplified one-page take-



Cheerio, by John Black, was one of the early M's with worldwide success.

off of the free sailing M class rules, with appropriate changes for the new method of control, along with a few modifications.

Before radio controlled sailing really took off, a major change in the International M free sailing rule was made. The minimal progress made in hull design in the preceding twenty years prompted the designers to lobby for a rule change. They wanted to legalize the fin keel. In 1971, the restrictions on the fin keel were lifted. In 1972, AMYA adopted this change along with the rig height limit setting the stage for the second golden age of the M class in North America. Between the founding of AMYA and by early 1980, the M class registered two thousand boats. Almost every club had an M class contingent.

The introduction of radio control coincided with the maturing of fiberglass molding technology. The techniques could be extended into model boat construction. Once a mould was built, many hull shells could be produced. They were lightweight and available at an attractive cost. No longer did a sailor have to spend two hundred hours building a wood boat in order to sail. A hull shell was available for less than one hundred dollars or a kit including a hull shell, fin, rudder, and lead for less than two hundred and fifty dollars. The prospective sailor could get the rest from his local hobby shop and assemble the boat. A crude set of instructions and a sketch of the boat were all that was needed. Full plans were not necessary or available. The market for plans was minimal.

Scratch builders generally drafted their own design. The designers were also the manufacturers. They sold hull shells and kits. As a result, plans of most successful designs no longer exist.

Radio controlled sailing depended on the radio-controlled equipment developed for the flying community. It was still crude and was being rapidly developed. For sailing you needed a sail winch, a boat, and a rig. These items had to be developed and marketed by the sailing community. The sail control winch was originally a modified aircraft drone servo with a rotating arm. It weighed three quarters of a pound. When these ran out, Probar and Dumas manufactured lighter and similar winches.

Hull and Fin

Hull and fin development started from nearly ground zero. Most of the early M class development took place in precisely the areas where model yachting had not survived the 1950's. The developments in free sailing in the forties, fifties and sixties were unknown. Initial development was based on original designs or published designs from the late thirties. Basically, the early M class developers repeated much of what had gone on in the forties and fifties. It took until the mid seventies for the modern form to appear. The ACCR winners in the seventies gave an idea of design progress. The M-Class boat Soling, which was similar to late 1930 designs, won the 1972 ACCR. The Boomer, a good heavy air home built boat, won the 1973 ACCR and fathered the LJ50 that was popular in California for much of the seventies. A converted wood free sailing boat, the Warrior, won the 1974 ACCR. 1975 brought the boat that was the ancestor of the modern M. The Bingo, designed by Doug Petersen and built by Chuck Black, had the fin keel, a canoe body hull, and a tall rig. It had the speed of the free sailing M's and was more maneuverable. 1976 brought the Epic, a boat with a double ended hull and a sixteen-pound displacement. It was a boat with few vices and sailed particularly well in light and shifty conditions. It was the first design to win two ACCR's, 1976 and 1978, and is the sentimental favorite of many sailors. 1977 brought development



These modern M's show the tall rigs now common. Action at the 1999 M ACCR. Steve Walsh photo.

back on track with the Orion by Doug Peterson. At sixteen pounds it was a superior design. However, it came during a frantic period of development. New lighter, deeper and faster designs appeared almost monthly. Quickly, displacement dropped to fourteen pounds, then to twelve pounds. The Kisuch designed by Rob Sterne was the first of the really successful twelve pounders. It won the 1980 World Championships. In 1981, Karl Kirkman's twelve pounder, Bone XIII, had been developed and won the ACCR. The Bone had a profound influence on designs that followed and ended the first period of design development.

It was time for a pause. Since 1975 the competitive M had reduced its displacement by a third and had increased draft by forty percent. Two problems thwarted further significant development. The fin couldn't go deeper with the materials available. Fiberglass wasn't stiff enough and aluminum was too heavy. The winch was still the rotary arm type which was heavy, used lots of battery power and tended to interfere with the radios.

Many designs were produced in the early 80's but they weren't any faster than

the existing designs. The solutions to the fin and winch problems came in the mid-80's. First, the solid carbon fiber fin was perfected. Next, David Andrews of England perfected a four-ounce drum winch that did the job and ran off the radio battery. It was sold under the trade name Whirlwind. Eventually, carbon fiber and Kevlar became available. The stage was set for another round of design development.

From the mid 80's until the early 90's, design weight dropped to the nine and a half to ten pound range where it has remained ever since. The hull design parameters had been defined. No breakthroughs have occurred since. Fin depth increased until a draft of twenty-two inches became common. In the mid 90's, Januz Walicki explored the advantages of a very deep fin. The draft of his Skalpel is nearly twenty-seven inches. ISAF-RSD is introducing a draft limit of twenty-seven and a half inches, effectively curtailing

further deep fin development. The hull has been developed, and the fin is being optimized within a set of limits. The M class is presently in a low development period much like the one of the fifties and sixties.

The designers that have dominated the scene ever since emerged in the early eighties. Terry Allen produced a series of designs including the Toad, Spot, Rover and the Max. Jon Elmaleh produced a series that included the Donna, Archer, Pinter I, Pinter II, Toast and a number of lesser-known designs. Bob Sterne of Vancouver, Canada is the most prolific designer in North America. Among his better-known designs are the Kisuch, Logic, Orbit, Fusion, Monocat and Viper. John Amen was active in the eighties and produced the Santa Cruz 50, and the Eclipse I, II and III. Lloyd "Swede" Johnson produced a series of M's for the budget minded sailor under the name ORCO. The most notable were nicknamed the Skinny and the Hot Dog. By 1992, European designs had gotten light enough to be competitive in US conditions. Graham Bantock's Paradox has shown reasonable popularity and his new Strad shows promise. Janus Walicki's 1995 Skalpel has proven ex-

tremely fast in medium wind flat water conditions and is quite popular in Southern California.

Construction

During its second golden age in the seventies, the M class consisted of kit builders with a smattering of scratch builders. As the design weight of the boat dropped, pressure on the scratch builders increased. They had great difficulty building a light enough hull. The transition to composites finished them off.

The kit builder remained the backbone of the class through the early 90's. When hull designs stabilized, the designers started to look for other ways to save weight. Hull shells were already as light as anyone dared. Every major part inside the boat was made into a minimum weight, molded part. The result was an assembled hull weight reduction of four to six ounces. Kit prices and difficulty of assembly escalated. More and more class members felt they could not assemble a competitive M. The more dedicated bought a professionally built boat, if they could afford it. The others either kept their present boat or left the class. Today, the kit builder is nearly extinct.

Those getting new boats are buying professional built boats at substantial

prices.

Rigs

The first M rigs in the early 70's were about seventy inches high and had wood or aluminum masts. The sails were single panel with a luff curve added. Immediately, a problem appeared: the mast material of choice was wood, specifically, Sitka spruce. Obtaining first quality spruce was difficult and quickly became nearly impossible. The alternatives were lesser quality woods or aluminum. Both required additional staying if mast weight was to be kept within reason. The fact that 85 inch rigs were faster quickly became known and caused mast height to increase, exacerbating the mast problem. In the late 70's the carbon fiber mast was introduced, solving these problems, and quickly became the standard. They were a bit expensive but they did the job and were readily available.

In the early seventies, sails were single panel as they had been since the thirties. Their shape wasn't ideal but no alternative was available. Soon, some bright sailmakers found that paneled sails could be made for models. Paneled sails gave the sailmaker control of sail shape and produced some excellent sails. Throughout the eighties, an eighty-five

inch rig with paneled sails was the standard.

In the latter half of the 1980's, unbeknownst to AMYA M class members, the swing rig was being developed in Europe. It is questionable whether the swing rig was legal under the rules of the time; however, the international community accepted it as a legal rig. In 1989, Jon Elmaleh went to the European Championship and saw how effective it was in light air. He came back and developed his own version. In 1990, Jon and his swing rig dominated East Coast M class sailing and won the M ACCR with a near perfect score. In light air, stop and go conditions, its performance was devastating. Suddenly, East Coast sailors needed a swing rig. This necessitated either a new boat or a major hull modification to existing boats. The rigs were expensive, in short supply, and couldn't be home built. Needless to say, there were a lot of unhappy and frustrated East Coast sailors. After a few years the supply problem was solved and the swing rig became the normal East Coast rig. The swing rig delivers its best performance in light air. In conditions where winds are above four mph, the advantages of the swing rig are marginal and by 10 mph, the standard rig is superior.



M Class yachts sail against the backdrop of New York City's Central Park. Al Bradford photo.

The Europeans, who sail in wind conditions from zero to thirty mph, initially flocked to the swing rig because of its quick-change characteristics. However, they quickly found it had a fatal flaw. When overpowered on a run, the rig causes the boat to roll to weather. Should a puff suddenly arise, the jib digs into the water and lays the boat flat, stopping it dead. Graham Bantock of England developed the solution. It was the stayless rig. The stayless rig is basically a standard rig without stays, which goes into a hull socket like the swing rig. The stayless rig has the quick-change feature without the fatal weather roll of the swing rig. The swing rig is only used in lower wind ranges.

AMYA sailors seldom sail in really strong, puffy conditions. As a result, a split developed in rig type. East Coast

sailors went to the swing rig because of their light conditions. Most other areas stayed with the standard rig. Bob Sterne learned from the European experience and designed the Viper so that it would take either a swing rig or a modified standard rig. Many argue over which rig is superior. The real answer depends on the conditions being sailed in. Each rig has its strong and weak points.

A significant portion of the class now uses the swing rig. Therefore, it is a feature that is going to stay with the class. However, the swing rig has added significant complexity and cost to the modern M.

Sailors

The phenomenal popularity of the M class in the 1970's attracted nearly all the top sailors in AMYA to the M class. They elevated the level of sailing in a

class where skipper skill makes a significant difference. They enjoyed the top level of competition at the M ACCR and SCRS4 and other major events. As a result, they stayed with the class. The sailors with less skill were more likely to leave the class. The result is that the average level of skill in the M class has moved up over the years. It has become a difficult class for inexperienced newcomers to break into. Successful new M class sailors tend to be ones with significant sailing experience in either model sailing or full size boats.

The Rule under AMYA

During the seventies and early eighties the simple one page M-Class rule remained in effect nearly unchanged. In the early 1980's, the AMYA joined the International Model Yachting Organization. The M class then adopted the international M class rule. Since the AMYA rule was a simplified version of the international rule, little difficulty was experienced. The essentials of the rule remained stable for nearly seventeen years.

The international rule of the early eighties was a direct descendent of the US free sailing rules of the mid-1930's. Some statements had been added and others were modified, but the basics of the rule were the same. Some of the rule statements were open to interpretation. As long as sailing was on a national basis, this caused little difficulty. However, when M class International Championships became important events, it was discovered that different countries had different interpretations for the same statement. Sailors from one country considered boats from other countries illegal while each country considered their own boats legal. Clearly, something had to be done.

The answer was the 1988 International M class rule. It was drafted by an International Technical Committee that had an AMYA member. The rule clearly defined the areas that had previously been open to interpretation and solved the problem of measuring the area of bent mast swing rigs by introducing sail cross width measurements.

It also had two features that were the seeds of the problems the AMYA M class is now having with the international body. The most significant feature was a change of the measurement units from English to Metric. In addi-

tion, a number of administrative statements that conflicted with the AMYA constitution were included.

The M class secretary drafted a rule for AMYA use which changed the metric dimension back to English units and removed the troublesome administrative provisions. After one rejection, the rule was finally passed in 1992. The international rule was updated in 1992. The major new feature of the 1992 rule was the introduction of the two digit sail numbering system. The 1992 update was adopted just before AMYA adopted the modified 1988 rule. AMYA was out of step. The reason is that the AMYA expects a stable Class rule and has a somewhat lengthy change process.

A new International Technical Committee Chairman took over after 1992 and decided to totally rewrite the M class rule. To make the M class rule look shorter he split out portions of the rule common to other international classes. They included the sail numbering requirements and the troublesome administrative statements. They were placed in the International Class Administrative Rules. Some other statements were moved to the Racing, Rules of Sailing, Appendix E.

Technically, the 1996 International M class rule had two significant changes. Metric measurements were rounded up to the next convenient number. For instance, three-quarters of an inch, which is about 19mm, was changed to 20mm. A number of measurements were changed by one or two millimeters to

accomplish this. The really significant change was a requirement that the bumper thickness be greater than 13 mm or half an inch. Internationally, virtually every AMYA M in existence was illegal. Protests by the M class secretary were ignored. At least the international organization, now called ISAF-RSD, did provide AMYA a version of the 1996 rule in English units for AMYA use only. After the addition of a few grandfather clauses to keep existing AMYA boats legal in AMYA, the present version of the AMYA M rule was passed in 1988. The International Class Administrative Rules were never presented to the M class for passage. The present AMYA M class rule is incomplete.

The whole international mess finally blew up in the fall of 1998 when AMYA responded to a proposal to put a depth restriction on the M class. AMYA voted for a 600mm limit and said that the AMYA M class had 500 registered boats. ISAF-RSD arbitrarily reduced the count, first to ten and then to zero. After numerous communications, involving officers of the AMYA and the ISAF-RSD, the RSD would not relax its strict interpretation of its regulations. Thus, the AMYA M class is not recognized as part of the International M class.

Summary

The M class is a limited development class with two main restrictions: a fifty-inch length and eight hundred square inches of sail area. Many of the other limitations have been changed over the seventy years of the class' existence.

The changes have been great enough so that no modern M model can be legal under the original rule.

The M class is a high performance boat with good handling characteristics over a wide range of conditions. It remains the largest class that can be easily transported to the pond in an auto. It's good performance, high level of competition and ease of transportation has made it one of the most popular classes in AMYA.

Design development in the class has been a series of periods of almost frantic development followed by lulls of low development. The periods of active development have been triggered by either a new M class rule change or a technical development. Technical developments include innovations such as the vane gear, radio control, and new construction or sail materials.

By the mid 1990's, hull and rig development had stabilized and some development was going on in fin design. Today's M class appears to be in a period of low development.

The M class rule under AMYA stewardship was reasonably stable through the late 1980's when ISAF-RSD started changing the rule in four year cycles for various reasons. AMYA has been unable to respond rapidly to stay in step. Currently, the AMYA M class has an incomplete rule and is not considered part of the International M class.

Differences between AMYA and IMYRU continues until 1998

To Spend or Not to Spend ... That is the Question!

by Bob Sterne

These are interesting and trying times for the Marblehead Class. For years, the largest class in model yachting, we now face a serious threat. We are losing skippers to other classes, and new skippers who would normally build an M aren't. What has changed?

The Marblehead Class has always had the reputation of being a "Boat of the Month" Club. New designs are constantly coming along, and sailed by the best skippers, soon prove their worth and everyone jumps on the bandwagon and buys one. I personally don't think this is justified. My designs have always been "middle of the road", and have been successful in basically all conditions, from light winds to heavy. They have always had a long competitive life span, and have been developed throughout their life to take advantages of changes in technology. Currently, however, the boats with the "hot reputation" happen to be worth a small fortune, with the result that the Class is dwindling.

The first boat I designed was the KISUTCH in 1978. It was a winner in light conditions right off the bat, but needed more stability, and when it got a deeper keel and more ballast, it became World Champion in 1980. It remained competitive until the mid 1980's, being built in Europe and the South Pacific as well as North America. During the early 1980's, technology drastically changed the class. Fibreglass gave way to Kevlar for hulls and carbon-fibre for keels. The rigs dropped drastically in weight as Dacron was replaced by Mylar for sails, aluminum by carbon-fibre for masts. This allowed the yachts to carry less ballast. The weight of the average Marblehead tumbled from something like 13-15 lbs. in 1980 to the 9-11 lbs. common today.

1986 to 1994. He currently sails a VIPER+, which debuted in 1994 with an ACCR win and was updated with the addition of our STING RIG and a deeper keel in 1998, defeating Janus Walicki sailing his Scalpel at SCRS#4 in San Diego that year. Blair still wins.... sailing only 3 designs in over 20 years.... Boat of the Month Club?.... I think not!!!!

The point I am trying to make is this. Good designs last a long time. They are competitive over a wide range of conditions. They are supported by continuous development. I firmly believe that the only time you need a new hull design is when technology overtakes you and for instance displacement falls below what is efficient for the existing design, or changes in other items such as the rig or construction techniques dictate a major change in design direction. Our typical "design cycle" involves taking a

boat.... although I probably could have made more money taking that approach!

My current Marblehead is the VIPER+. It is a direct descendant of the KISUTCH, LOGIC, and ORBIT designs. It is the first yacht I have marketed with a swing rig, although they have been around for many years. I was never very impressed with early swing rigs. They didn't go to windward very well because of the tiny jibs. They had tremendous handling problems downwind in puffy conditions, leading to loss of control in many instances. What they did do was go downwind very fast in light winds. I experimented with them a lot.... but was never satisfied until I developed the STING RIG in 1998. Once I had it perfected, I ended up with such an increase in power that I had to increase the stability of the VIPER to handle it! This new version became the VIPER+.... conventional rigs for heavier conditions,



As the displacement of Marbleheads

design and working through it's weak

and the STING RIG for light winds

the boat! New skippers can buy the latest VIPER+ in kit form for just over \$900 with 1 rig, under \$1200 with 2 rigs! You DON'T need to spend \$5000 to have a competitive Marblehead!

What makes the VIPER+ such a great boat? First of all, it's a very "middle of the road" design. In San Diego, where the Scalpel is currently the boat to beat, it's one of the few designs to remain competitive, often winning in lighter conditions. In New York, long the kingdom of John Elmaleh's designs, it is also competitive, especially when the windspeed increases. In Europe, it's competitive too, although considered a "light air" boat.... while it's best victories in Scandinavia have come in events where the wind was blowing about 40 knots! Surely a yacht can have no better endorsement than to be called a good "light air" boat in windy areas and a good "heavy air" boat where you drift around.... and to win more than it's fair share in both conditions!

The VIPER+ is one of the lightest Marblehead designs in commercial production. The bare Kevlar hull weighs about 7 ounces, and the kit less lead is just a pound! A complete yacht, ready to sail is typically completed at about 9.5 to 9.7 lbs. of which 7 lbs. is ballast. The carbon-fibre fin is moderately deep at 19" from hull to lead, giving a draft of 23". While not as deep as a Scalpel, it doesn't run aground as often either, and just ask those at the 1999 ACCR how much of a factor this was in the results of the event! In case you hadn't heard, the search for ever deeper keels is about to come to an end.... no classes will be allowed to have a draft of over 700mm.... about 27.5 inches.... to keep the number of sailing sites from shrinking even further. The keel in the VIPER+ fits snugly into a carbon-fibre trunk that also supports the mast for the conventional B and C rigs, adding rigidity and insuring alignment. Conventional rigs are used for everything except light winds for their superior performance and ease of handling.

The most unusual feature about the VIPER+ is the STING RIG that it uses in light winds. Most swing rigs use a tiny jib in order to allow the rig to "weathervane" properly, and this hurts performance to windward and reaching. My STING SWING (STING) rig uses a highly bent mast (some 8 inches) to provide the ability to carry a fully



elliptical (hence more efficient) mainsail and to allow those wide upper chords to aid mast rotation. This means a 20% larger jib than the typical swing rig, and vastly improved windward performance, virtually equaling that of a conventional rig, even exceeding it in lighter conditions. Some of this extra power comes from having more sail area up high where there is more wind, particularly on those light, drifty days. The STING RIG works like a conventional rig having a height of about 100 inches.... while still complying with the 85" height limit in the rules! The rig developed enough extra power that we had to increase the stability of the VIPER by about 13% by fitting the new deeper fin and more ballast. This increase in stability, of course, helped the boat to be even quicker with the B & C rigs fitted. I also developed a simple method for using a jib-trim on the STING RIG, and this is built into the trunk which supports it in the boat.

There are several good choices right now in the Marblehead class. Some of them are quite "condition specific" yachts. Some of them are extremely expensive. All of them are capable of winning when sailed well. Has the class

changed? Yes, I think it has.... the development has finally slowed a bit! We have utilized virtually all of the technology available to us. The average skipper can now purchase a yacht virtually identical to the ones sailed by the top skippers and designers in the World. The top yacht designs are getting more and more similar in specifications, weight, beam, draft. Most designers have settled on a swing rig for light air, conventional rigs for heavier conditions. The performance gaps between the "best" and "the rest" is smaller than it has been since model yachts started using radio control!

I see a bright future for the Marblehead Class. One that emphasizes skipper skill over the depth of your pocket. A time when more manufacturers will adopt my proven method of refinement rather than replacement. A time when skippers will realize that they don't have to have the latest to win. I see a return to the roots of the class, too, with more development by individuals and Clubs. I know I won't make a

believer of all of you. Some of you will continue to throw money at the latest boat out there. Hopefully enough of you will realize that sailing these silly things is more important than spending money on them, which will let the Marblehead Class return to it's former glory. Next time you get frustrated at the lake.... ask yourself was it really the money your competitor spent that allowed him to beat you.... or did he simply go the right way on that last shift?

Hints & Tips

by Tom Causin

Water finds its way in our boats one way or another. To help remove small bits of water from your hull, put the boat on its stand, take about 6 feet of aquarium hose and suck the water out. The tubing is clear, so you can gauge how much to suck out without getting a surprise! It is compact and coils up nicely in your rigging box.

for first, nine for second, etc.

R/C Racing

Sixteen competitors started the R/C VM racing, with thirteen completing all twenty-two heats. A total of thirty-three R/C races were sailed using the red, white and blue heat schedule, where a competitor is in two races and then out one. The three R/C VM design categories were Traditional models (1930 to 1945), High Flyer models (1946 to 1959) and Transition models (1960 to 1969).

The 1999 AMYA M champion, Stan Goodwin, continued his winning ways with top honors in the R/C VM competition and Transition design category with a 1969 Warrior II wood model. JR LeBlanc was regatta runner-up with a new fiberglass R/C model of the 1949 Riptide II design and placed first in the High Flyer category. Ned Lakeman won in the Traditional VM with his scratch-built model based on 1930s M design concepts. Tim Sullivan, Ben Martin and Harry Mote were second-place finishers in the Transition, High Flyer and Traditional VMs respectively. Steve Crewes, Steve Denis and John Storrow got incomplete scores by not racing the last day. Most of trophy skippers won multiple R/C VM races, with Goodwin again at the head of the list with thirteen firsts.

Observations

Two 1940s-designed VMs carried modified sail plans for R/C racing. Lesson-learned was that early models with non-original (tall) rigs need to be scored with Transition VM boats for performance/awards purposes. Two VM models were configured to race using both vane and R/C by their owners Earl Boebert and Thom McLaughlin. It was also evident that US vane skippers will need to brush-up on their pond sailing etiquette for next year's VM races in England.

2000 – The Model Yacht (Winter 2000-2001) – No longer listed a Classic M coordinator

2001 – AMYA #122 (Winter 2001) – High Flyer VM were scored in two groups, High Aspect Rigs and Low Aspect Rigs

Vintage Marblehead Group

by Charlie Roden

The Vintage Marblehead (VM) Group has been a key element of the US VMYG program since its inception in 1994. Our annual national vintage regattas have featured radio control racing of early models of the Marblehead model yacht for the past six years. Display and static judging of home-built models began in 1999 with awards being presented for excellence in construction.

The Marblehead model yacht was the brain child of Roy Clough of Marblehead, MA in late 1929. It was an instant success then and remains so to this day. The boat is 50 inches in length with a sail area of 800 square inches. It is a development class characterized by few restrictions beyond the stated length and sail area limit. At the beginning, we realized that additional VM rules would be required to assure fair racing and to promote construction by non-professionals. Our aim, however, has been to impose as few additional rules as pos-

sible.

Our preliminary rules focused on constraints in materials and form to assure ease of construction at a reasonable cost. A Vintage Marblehead was defined as a Marblehead model yacht having the characteristics and features in general use by 1970 or before (i.e. 1930-1970). The use of exotic materials including carbon fiber and kevlar in the hull and rig are prohibited as are fin keels and swing rigs. Hulls of at least one inch garboard radius are required and may be constructed of wood or fiberglass. Fiberglass is allowed in order to accommodate existing yachts and to encourage the availability of construction kits. Fiberglass hulls must, however, be at least of comparable weight to an equivalent wooden hull. Spars can be of wood or aluminum. Sail material must be woven. Single panel sails were originally required although a recent change allows multi-panel sails. A design committee oversees these rules and allows registered owners to approve or override their rec-

ommendations. Our rule of thumb for judging conformance or proposed changes is a derivative of the now outlawed practice of dueling with pistols. We stand with our backs to the boat in question and walk ten paces and then abruptly about-face. If it looks like a Vintage Marblehead from this point, then by gosh it is a Vintage Marblehead. Put it in the water and see if it floats.

A builder may choose to build or restore an existing design such as one of the early champions e.g. "Cheerio," "Sun Kiss," "Broom," "Warrior," etc. or formulate a new design based on the design characteristics of the early M's. Both of these approaches have been successfully pursued. The first two VM regattas (1995 and 1996) were won by Alan Suydam of the Detroit MYC with a restored model of John Black's famous 1936 world champion "Cheerio." Alan built the model in 1960 at the age of 16 and then set it aside as he pursued a career and raised a family. In 1993 he finished the model and converted it to R/C

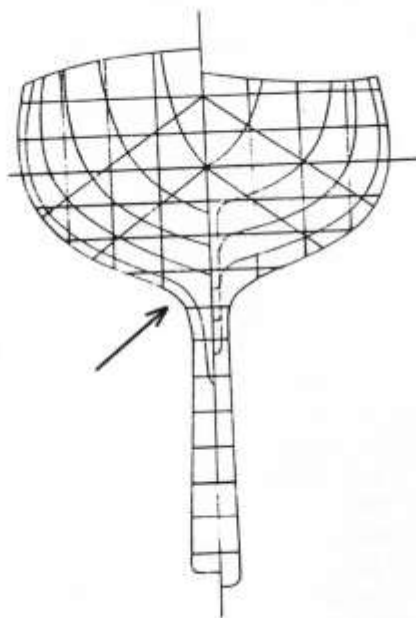


Two M skippers awaiting the start signal from the Officer of the Day for a free sailed upwind leg at the first Campbell Cup Regatta at Storrow Lagoon, Boston 1934.

control before his memorable wins at Marblehead and Spring Lake, NJ. Ned Lakeman of the Marblehead MYC, on the other hand, has subsequently won VM regattas with a design of his own making that is based on the design features of the early 1930's models. At least two VM kits are now available and have been raced successfully as well. Many builders are also available to build a complete boat that is ready to sail for those sailors without the time or inclination to build. We have tried to be as inclusive, encouraging and as accommodating as possible.

Performance issues came to the fore at the 1997 national regatta in Marblehead. It was the first time that more recent Marblehead designs competed against boats designed in the 1930's. The regatta was won by Greg Worth sailing a 1970 design named "Warrior." The older boats were no match for "Warrior." It was clearly time to address the forty years of design evolution of the Marblehead Class. Surprise! Surprise! There were two issues of primary concern, steering or rudder design and rig height.

Early Marblehead models were either skiff sailed or free sailed and accordingly were designed to sail in a straight line. Their small rudders were what we would call trim tabs today. Any major



Ray Clough disliked the appearance of metal fins, so he wrote into the rules a requirement that the fin be faired into the hull with a 1" radius curve (the concave portion of the hull shown in the diagram). This was called the "garboard radius." At the height of popularity of the M Class, John Black convinced the Stanley Works to produce a special curved-sole plane to carve this radius.

course change was accomplished by external means. It wasn't until self-tacking vanes entered the picture in the 1940's that sailors thought about having a rudder actually turn a boat to an opposite tack. Early models had either partial keels with full skegs or partial keels with isolated skegs to assure straight-line tracking. Rudders were skeg mounted. These configurations are difficult to turn under R/C control due to the considerable resistance of the skeg as it moves laterally through the water during the turn. Increasing rudder size within practical limits was of marginal benefit. While a larger rudder would exert more turning moment and try to turn the boat faster before it loses way, it was met by increased lateral skeg drag with its velocity squared dependence preventing any substantial increase in turning rate. Sailors of these boats in windy venues such as Spring Lake learned to live with the skeg rudder. Treatises were written on the proper sequence of rudder control to tack a boat. Servo steering linkages were set to limit maximum rudder angle to prevent stalling during the turn. Separate winches for jib and mainsail control were provided to help turn these boats at mark roundings. In light air venues such as Marblehead, the skeg rudder was deemed unsuitable. Sailors chose more recent vintage designs with

sufficient hull rocker to minimize the underwater lateral section at the bow and stern and went to a spade or balanced rudders. The difference in performance of the two approaches in "around the buoys" racing is considerable.

Mast height was the other issue. The tall mast on "Warrior" provides at least three advantages in light air. A tall sail of high aspect ratio is more efficient than a lower aspect ratio sail. When sailing upwind, a sail generates lift producing a pressure difference on the two sides of the sail. Air near the ends of the sail, head and foot, on the high pressure windward side tries to flow around the ends to the low pressure leeward side of the sail. This creates swirling tip vortices which are the major drag component of a sail. The air flow at the extremities of a tall sail constitutes a smaller part of the total flow than it does for a shorter sail and hence produces less drag. The tall rig also has greater actual sail area. The sail area measurement is based on the area of the inner triangle formed by the head, tack, and clew of the sail and excludes the two inch roach area. A taller sail has a longer roach of greater area than the roach of a shorter sail. The final advantage of a tall rig results from the increase in wind strength with height above the water due to surface friction. Measurements taken at Spring Lake last year in very light air that barely ruffles the surface of the water (laminar flow with little vertical mixing), gave a true wind speed increase at the head of a Marblehead sail of three times the speed at the foot of the sail. Since sail force varies as the square of velocity, the force at the top of the sail is nine times that at the foot. Only the top of the sail is driving the boat under these conditions which favors a tall rig. In a breeze that produces ripples or wavelets (turbulent flow with greater vertical mixing) the difference between wind velocity at the top of the sail from that at the bottom is only 40 to 50 per cent. This advantage is smaller and tends to be offset by the increased heeling of a tall rig in heavier



Harold "Pete" Peterson shown with his two plank-on-frame VM models that were awarded the first USVMYG construction excellence award for outstanding workmanship. A tutorial by Peterson on "spiling" (tapering) planks appears with a workshop on plank on frame construction by Al Hubbard on the USVMYG constructional video. Charlie Roden photo.

air due to its higher center of effort.

As a result of the above, the VM Class was subsequently divided into two divisions, Traditional and High Flyer, to provide more comparable racing performance. The Traditional Division covers roughly the first half of the forty year development period and is characterized by boats with short waterlines, integral skeg/rudder arrangements and low aspect ratio sail forms. A maximum draft limitation of 12 inches was set as a control for this division. The High Flyer Division encompasses models with deeper keels, full waterlines, taller rigs and balanced spade rudders. A maximum draft of 16 inches is allowed in this division. It was felt that the draft limits in the two divisions would in effect also limit rig height. It should be noted that while multiple rigs are allowed, vintage sailors for economic reasons sail a given regatta with a single rig. Boats with spade rudders that would otherwise qualify for the Traditional Division must be scored with the High Flyer Division. This has unfortunately placed both low

and high rigs in the High Flyer Division. At the regatta in Marblehead last year, this was handled by scoring the low and high rig High Flyers separately and awarding two sets of trophies. We will continue to monitor this situation to see if additional constraints are needed.

Static judging for quality of construction and workmanship began at our annual regatta in Detroit in 1999. Construction excellence awards are given separately, apart from the racing awards. Our first winner of the construction excellence award was Harold "Pete" Peterson of the Marbleheaders of Spring Lake. In order to be sure of winning, Pete entered two boats in the competition. Pete is a master builder and has a world of construction knowledge and experience which he is in the process of passing on to the rest of us. His plank on frame procedure involving the use of the spiling technique to assure perfect plank fits is awesome, as well as his flawless inlaid plank decks. Pete is a complete builder. He pours his own lead keels, and makes his own brass hardware and sails. He doesn't have much competition at this time, but many of us are determined to match his genius at some point.

I believe that our VM program is off to a good start. We now have forty registered VM owners evenly split between the two divisions and at least another ten who keep forgetting to register. I would be remiss if I didn't end without some kind words for our VM sailors. They have managed to keep VM sailing low key and fun which has allowed me to keep the rules as simple as possible. For this I am eternally grateful. Our regattas are a ball and have been totally free of the rancor of excessive competition. We thoroughly enjoy sailing these beautiful boats of the past. We owe a debt of gratitude to Roy Clough and all who have followed him in the development of this great model yacht, the Marblehead.

For more information, contact Charlie Roden, 732-462-7483, cer@monmouth.com

2005 – AMYA #139 – Classic M not mentioned but V36 proposed

2006 – The Model Yacht V10N3 (Winter 2006 – 2007) - No Classic M at NCR

2007 – The Model Yacht V11N3 (Winter 2007-2008) – Again mentioned exploring Classic M but now 1971-1985

Discussion within VMYG about the C50 class of M boats but now 1971 - 1985.

2008 – AMYA #151 – Classic M not racing in vintage regattas

2012 – AMYA #167 – Talked again about experimenting with Classic M interest due to 2,500+ boats registered during that period of 1971-1991

C50 mentioned again in AMYA.

19–22. Our “Traditional Sailing Craft/Scale Model” National Regatta will be at the Calvert Maritime Museum in Solomons Island, Md., September 8–9. Contact John Snow at (jsnowj@comcast.net) and Alan Suydam at (asuydam@comcast.net), respectively for event details.

2012 Vintage Activities

The VMYG, in coordination with the AMYA, is supporting the following key vintage model activities in the Eastern US:

June 9: Bill Full Cup VM/CM Invitational Regatta at Redd’s Pond, Marblehead, Mass.

July 1–7 and 8–14: WoodenBoat School building (VM) and finishing R/C planked vintage pond yacht courses at Brooklin, Maine, conducted by Thom McLaughlin.

July 7: Laconia MYC VM Invitational Regatta at Lily Pond, Laconia, N.H.

July 19–22: VMYG “Vintage Model Yachting Days” National Regatta hosted by the Marblehead MYC at Redd’s Pond: R/C V36, VM, and CM model racing and exhibits.

August 12–18 and 19–25: WoodenBoat School building R/C traditional Skipjack sailing model and pond yacht sailmaking courses at Brooklin, Maine, conducted by Alan Suydam.

September 8–9: VMYG “Traditional Sailing Craft/Scale Model” National Regatta hosted by the Solomons Island MBC at Calvert Maritime Museum, Solomons Island, Md. R/C Skipjacks and over/under 50-inch Schooner model racing and exhibits.

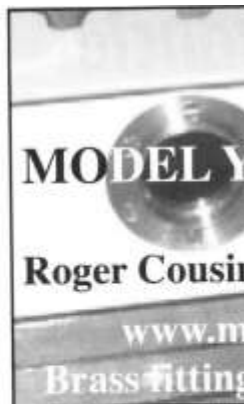
October 13–14: Bithell Cup VM/CM Invitational Regatta (10/13) and the Marblehead MYC Chowder Race (10/14) open regatta, including VM and CM models at Redd’s Pond, Marblehead.

Early AMYA Classic M (CM) Designs—The VMYG in collaboration with the AMYA M Class Secretary and the Marblehead MYC will have racing activities in 2012 for early

AMYA CM boats—designs from 1971 to 1985. Goal is to continue to test interest in these designs to get them back on the water, given their 2500-plus class registration numbers in this timeframe. As such, the Marblehead MYC will include CM models in their VM invitational regattas and monthly club racing at Redd’s Pond. Contact Stan Goodwin or Ben Martin at 781-631-5847 and 978-828-9765, respectively, if you would like to race your CM in 2012.

Columbia 12 Meter Model Project—Bill Huizing from Summit, N.J., and Tod Johnstone from Mystic, Conn. are coordinating the development of a 42-inch scale R/C model of the Sparkman & Stephens *Columbia 12 Meter* yacht that won the 1958 America’s Cup in Newport, R.I. Bill test sailed the prototype fiberglass model on December 25. Four ready-to-sail production versions are envisioned by Spring 2012 under the Mystic Model Yachts banner, with this design concept utilizing match racing as the primary means of competition. As their project progresses, we may consider this design for another VMYG grouping to eventually include the UK 1958 America’s Cup Challenger *Sceptre* and other early 12 Meter boats from 1930s onward. Note that Bill is a VMYG member noted for superb scratch-built R/C wooden models, such as the Edward Burgess designed 1885 America’s Cup Defender *Puritan*.

VMYG Resource Material—Visit the USVMYG website at (www.usvmyg.org), and then click on the “USVMYG Store” to order



2012 – AMYA #168 – Defined Classic M as 1971- early 1980's with draft max of 17.25 inches and minimum weight of 13#

C50 or Classic M now 1971 - 1980's, draft max 17.25 and minimum weight 13#.

September 8–9: VMYG “Traditional Sailing Craft/Scale Model” National Regatta, hosted by Solomon Island MBC at Calvert Maritime Museum, Solomon Island, Maryland: R/C Skipjacks and over/under 50-inch schooner model racing and exhibits.

October 13–14: Bithell Cup VM/CM Invitational Regatta (10/13) and the Marblehead MYC Chowder Race (10/14) open regatta, including VM and CM models at Redd's Pond, Marblehead.

Early AMYA *Classic M* (CM) Designs

AMYA M Class Secretary Stan Goodwin, with the Marblehead MYC, will be hosting racing activities in 2012 for early AMYA CM boats—designs from 1971 to the early 1980s. Specifically, M boats having maximum draft not exceeding 17.25 inches and a minimum weight of 13 pounds. Note the weight is measured with the boat in ready-to-sail condition. The goal is to assess interest in these designs, to hopefully get them back on the water and racing, given 2000-plus class registration numbers in that timeframe. The club will include CM models with their VM invitational regattas and regular monthly VM racing at Redd's Pond. Contact Stan Goodwin at 781-631-5847 or (shgoodwin@dslextreme.com) if you have a CM model and would like to race it in 2012. Also check Stan's M Class column in this issue for added CM details. He is also responsible for the CM entries and racing during the 2012 US VMYG National Regatta. CM models will be then raced on July 21–22 (Saturday and Sunday) as a fleet separate from the VM boats.

2017 – AMYA #187 – American M class defined M as:

- Traditional – Pre 1945
- High Flyer – 1945 – 1970
- Classic 1970 – 1995
- Modern – 1995 to today

Fraction Fanatics - Now AMYA proposes the "American Marblehead" and approved this sub-class. Modern starts in 1995.

American M Class

An Opportunity to Invigorate Racing Marblehead (M) 50-800 Designs

by Craig Speck

The American M Class idea is an outgrowth of a discussion among members and participants after a Marblehead Class NCR, held by the Marblehead MYC at Redd's Pond in Marblehead, Massachusetts.

The outcome of the discussion identified two significant concepts for consideration: 1. The need to create a method to encourage more racing participation by owners of Marblehead (50-800) design boats, regardless of the vintage or design. 2. The rules would support the inclusion of all Marblehead (50-800) Class model yachts, regardless of vintage or design. Thus, to ensure the preservation of the M 50-800 design concept, rules should be as simple as possible to administer and give all owners of these boats a permanent "umbrella" under which to race. Also, the rules should allow for the support of the 50-800 established position as a development class.

At a Marblehead MYC annual meeting, the potential to further investigate and develop the necessary actions was discussed and approved to go forward. Biff Martin and John Skerry were asked to develop the rules concept for the American M Class. The rules developed are essentially from the Model Yacht Racing Association of America (MYRAA) and the early AMYA Marblehead M (50-800) Class rules. The rules established were also based on the existing M Class rules, with separate sections for pre-1970 designs and for 1970 designs up to today.

Efforts were made so that any Marblehead (50/800) boat, regardless of the design period (or age), could participate in racing without major changes to the boat. The fundamental rules for all boats are: 1. a minimum hull weight of 2.5 lbs., including the hull, batteries, rudder, radio, receiver, and servos. 2. A maximum keel length of 20 inches, measured from bottom of the hull to the bottom of the lead. 3. For classification to one of the design periods for fleet racing, the hull and appendages must conform to the design requirements for the design period, as defined by the existing M Class rules, as well as the remainder of the approved rules for the class—available at (www.theamya.org).

The class concept was developed so if the number of entrants permits, all boats can race in one fleet. Should the number of boats exceeds the event venue's capacity for a single start, the design-period group with the largest number of entrants can be separated and have a separate start. In regattas and club races, scores will be segregated into four separate, design-period groups. These groups have been identified as **Modern** (designs post 1995), **Classic** (designs between 1970 and 1995), **Traditional High-Flyer** (designs between 1945 and 1970), and **Traditional** (designs prior to 1945). In regattas and club races, the scores are to be segregated by the design-period groups (above) after fleet racing is completed, as is currently being done by the USVMYG. Awards will be presented for each of the above design-period groups. There is not an overall fleet award included.

The refined proposal was presented at a Marblehead MYC annual meeting and approved to go forward, contingent on AMYA Board of Directors approval, to proceed with class member solicitation. The AMYA Board approved the initiative, and action to obtain the necessary number of members to gain recognized AMYA class status was started. Subsequently, the American M Class was recognized by the AMYA Board. With the recognition, the American M Class was added to the 2015 MMYC Race Calendar, as well scheduling an R1CR and an NCR.

In less than two years, progress included gaining a membership of thirty skippers. (Note: A registration fee of \$7.00 is charged to register a boat and an assign a sail number. Also, assigning sail numbers separate from a boat's existing sail number is not required unless there is a conflict with another boat's sail number. During the 2015 season, there were nine club-race days, with 17 different participants, an R1CR with 10 boats participating, representing six Classic designs, one Modern design, one Traditional High-Flyer, and two of Traditional design. Racing was competitive, with different boat design-period groups winning at least one race. In terms of this competition and for the American M concept, response was very positive.

In 2016, there were nine, club race days scheduled, an R1CR (10 boats participated: six Classic, two Traditional HF, one Traditional, and one Modern), and an NCR with 14 boats participating. Design-period group representation was four Modern, four Classic, three Traditional HF, and three Traditional. Boats represented were not only from Massachusetts but also from Connecticut, New Hampshire, Maine, Illinois, and New York. The regatta was deemed a success by the competitors, who gave a "thumbs-up" to the concept and the resulting enjoyable aspect of sailing against more boats than normal, as well as being scored for awards against boats of the same design period.

For additional information, questions about fleet structure, design designations and planned activities, plus inputs on other potential sailing sites, please contact Biff Martin, American M Class Secretary at (bifflmartin6@gmail.com) or 978-828-9765.



Practice sailing with an American Marblehead VM-HF boat. Craig Speck photo.

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Although approved by AMYA, not sure if this expanded beyond Marblehead MA club.

2018 – AMYA #192 – Re-invigorate VMYG – Goals list pre-1970 but Classic M not raced yet

2019 – AMYA #197 – Defined Classic M as 1971-1980's

US VMYG revamps and looks to better define the Classic M period.

What Defines a Marblehead-Class Boat?

by Ken Young

In 1930, Roy Clough, Commodore of the Marblehead MYC, proposed a new class of boats, the Marblehead 50/800, with a length of 50 inches and 800 sq.in. of sail. Many of these boats were built during the Depression for very few dollars and were small enough to be transported in a car. At one time, the class had over a thousand boats registered worldwide. With it being a development class and with new technology and materials, the design of the hull and rig changed over time. Boats were originally free-sailed and still are. The introduction of radio control brought about many new developments. There are now over 400 Marblehead designs.

Free-Sailed M Class Boats

Free-sailing boats differ from radio-controlled ones in significant ways. They tend to be heavier because they have to sustain some fairly rigorous collisions with pond walls and other obstacles. They are generally of shallower draft because they have to be able to sail anywhere in a pond. Also, to minimize the number of fouls, the vast majority of free-sailing races were match races of two boats at a time. A free-sailed boat, whether pursued from a skiff or sailed from side to side of a pond, must be able to maintain a straight course. The full keel and skeg rudder helped to do that. A variety of mechanisms were used to hold a model on course during a run. The earliest steering gears were weighted, free-swinging rudders; if the boat heeled, the weight swung the rudder to compensate.

The development of radio control brought about more advances in the class. Radio-controlled Marbleheads have been divided into four divisions according to design characteristics of a particular time period: Vintage Traditional, Vintage High Flyer, Classic, and Modern. My purpose here is to attempt to describe the design characteristics of these four different divisions. The Vintage Model Yacht Group has rules for the Traditional and High Flyer divisions. I'm not advocating any new rules or rule changes, just offering a description of the boats. I had a lot of help with my research. Ed Wolfe had great comments, and Graham Reeves, of the UK, sent me a great history of the early Marblehead Class, along with comments from Jim Linville, Standley Goodwin, Biff Martin, and other wise men familiar with the early days of the class. My buddy, Jeff Gros, provided me with 57 issues of the AMYA quarterly magazine from 1974 to 1990. As these showed which boats were doing well and what changes had been made, they were priceless!

Vintage Marblehead Traditional (1930-1945)

Traditional Marbleheads carry keel- or skeg-mounted rudders. They are built from materials available at that time: wood, brass, aluminum, stainless steel (I found a reference to German ship builders using their version of stainless steel in 1906), etc. The US VMYG rules allow epoxy and fiberglass even though they didn't exist then, as we know them. The use of carbon fiber or Kevlar® is not allowed. Cloth sails are required. Rigs aren't tall because the draft isn't deep, generally less than 12 inches. Keels are generally full, but fins are also seen. They may not have prognathous keels: no portion of the keel appendage, including the lead, may project forward of the leading edge of the keel. There must be a one inch garboard radius at the keel/hull attachment if the keel is a fin. The purpose of this is to prevent movable or metal keels.



FreesailIM. SFMYC photo.



Tritonia. Photo by John Stoudt.



Magic Dragon. Cliff Martin photo.

Vintage Marblehead High Flyer (1945-1970)

These boats generally have fin keels and spade (balanced) rudders. Racing around marks made it necessary for the boats to be maneuverable, and the fin and spade rudders made this easier to do. These are the first boats to use very tall, high aspect rigs. They have the same material restrictions as noted in the Traditional division. Epoxy and fiberglass were in general use by this time. They may not have prognathous keels, and must have a one-in. garboard radius at the keel/hull attachment.

Classic Marblehead (1971-mid 1980s)

Remember, I'm talking about the original design characteristics. These boats no longer required the one inch garboard radius at the keel-hull attachment. Aluminum and carbon fiber were being used for rigs, but there were no swing rigs. Keels could be prognathous or non-prognathous, with a depth less than 17 in. Carbon-fiber fins and rudders were being used in the early 1980s. Fiberglass was the most



Bone. Eddie Wolfe photo.



Paradox. Eddie Wolfe photo.

common building material for hulls. No carbon fiber or Kevlar® was used. Displacement was about 12 lb., or more, with a beam greater than 9 inches. Mylar sails were introduced and became the material of choice.

Modern Marblehead (mid 1980s to the present)

Modern Marbleheads saw the advent of swing rigs and lighter, deeper, and narrower designs. Sail material is not limited. Rigs continue to be high aspect. Extremely light boats are sought after. They are designed to be built of fiberglass, carbon fiber, or Kevlar®. Most designs

were around 10 lb. and displacement is less than 12 lb., with keel depth being generally over 17 in., although many boats are designed with multiple depth keels. Freeboard at the bow is greater than at the stern, with some having a difference of over 3 inches.

There are four distinct design epochs, with the first two (Vintage Traditional and Vintage High Flyer) codified in the US VMYG Class rules. The design changes were influenced by new technology, new scientific knowledge, and new building materials. The important thing, though, is that no matter what the design is, get them out and sail them!

Based on our 2026 research most of the Classic comments were true for the 1970's but less true in the 1980, especially the end of the 80's.

In Search of the “Classic” Marblehead

Author Ken Young

When John Stoudt asked me to write an article describing the various divisions of the Marblehead Class for the AMYA magazine *Model Yachting*, I knew it would be a challenge. This was mainly because I knew nothing about the history of the boat. The most difficult of the divisions to describe was the “Classic”; that time period from about 1970 to the mid 1980s. As I did the research, I became fascinated with the developments the class went through. New technology (tank testing for model boats), new material, rule changes, and innovative designers lead to significant changes in the boat. But that’s the purpose of a developmental class.

In 1930 Roy Clough, commodore of the Marblehead Model Yacht Club, proposed a new class of boats, the Marblehead 50/800, with a length of 50 in and 800 in² of sail. With it being a developmental class, the design of the hull and rig changed over time with new technology and materials. Boats were originally free sailed, and still are. The introduction of radio control brought about many new developments. R/C Marbleheads have been differentiated into four divisions determined by design characteristics of a particular time period: Vintage Traditional (1930–1945), Vintage High Flyer (1945–1970), Classic (1971 through mid-1980s), and Modern (mid-1980s through present).

Builder’s ads from the 1970s and 80s were interesting. You could rarely buy plans, but instead bought kits since there was more money in that. The ads also showed which boats were being pushed by various designers and boat shops. When new designs came out, sometimes only the top sailors could get them. If they proved successful they were made available to everybody.

Rule changes in the early 1970s removed some of the restrictions that had been in place. Prognathous keels were no longer forbidden (No part of the bulb could extend beyond the leading edge of the keel). The requirement for 1-in garboard radius at the keel/fin joint was eliminated. This had been put in place to prevent movable keels and metal fins. Boats like the *Littlejohn 50*, *Soling Marblehead*, and *Shadow* had swept back keels, wide beams, shorter rigs, and large jibs. Rod Carr once said that the *Littlejohn 50*, designed by Sandy and Andy Littlejohn in California, looked like “a dough dish crossed with a punkin seed.” I have one. He’s right. But it’s fast.



Aquilo profile.

Doug Pederson’s *Bingo* and Ray Ozmun’s *Aquilo* both appeared about 1974. They were fairly typical of that period, but they did show the mix of designs. The *Aquilo* had a non-prognathous keel, while the *Bingo* did not. *Bingo*’s beam was 10 in, and the *Aquilo*’s was 13 in. Both had a draft of 15 in and displaced 15–16 lb. Yet both were competitive in 1976 ACCR. Bluff bows to increase waterline length became the signature look of the class.

This period of the mid to late 1970s saw a real high point for the class. In the US, Marblehead registration was almost three times that of the next class (36/600) and was almost equal to the total of all other registered boats combined. So many skippers wanted to sail in the ACCR that there had to be qualifying regattas leading up to them. But it was also when complaints that M boats had become a "boat of the month" class. With so many new designs coming out people were buying one, if not multiple, new boats every year. Complaints were also starting that 10 AMYA classes was too many – 10! As an aside, unlike today, there were very few regattas in the South.



Bingo's 10 in beam.



Aquilo's 13 in beam.



Bingo profile.

It's at this point that geography seems to play a part in which boats did well. While most designs were sailed all over the country, the results from regattas would seem to indicate that *Epics* and *Bingos* were big on the west coast, *Warrior* and *Warrior II* on the east coast, and *Magic Dragons* in the Midwest.

The late 1970s also saw taller rigs. Most mast heights had been about 72–77 in, but now we start to see main luffs at 80–82 in.

By this time, Mylar[®] sails had become the greatest things since pockets. Sailmakers were experimenting with different thicknesses, combination “sandwiches” of layers, and reinforcing string in the material. The sails became so important that regatta results would include not only the design of the boat, but also who made the sails.

Keels became longer so that less weight could be used. It took a while for keels to get much longer than 17 in because designers were having trouble eliminating what they called “flutter”. The keel would vibrate side to side. Carbon fiber, and the shape of the fin itself, helped solve the problem. They also realized, though, that in light air long keels are slow, and hitting the bottom of a shallow pond is even slower, so boats came with more than one keel.

In 1980 we see boats like *Toad* show up with more rocker in the stern—there is more freeboard in the bow than in the stern. This was to help prevent submarining downwind with the taller rigs. At this point there seems to be an explosion of new boat designs, and we start to see the old stalwarts like *Bingo* and *Aquilo* not showing up in results as often. The question is, did they get slower, or were skippers just replacing them with hot new designs? For

example, the *Kisutch*, designed by Bob Stearne in 1978, was a very successful boat. Bob owned Bob's Boatyard, and in an ad in the AMYA quarterly in 1986 he was describing two new boat designs he had for sale. Almost as an afterthought the ad said “We still offer the *Kisutch* as a low tech, inexpensive Marblehead since some clubs desire to follow the approach.”

In 1982 the *Bone* arrives, which I consider to be the beginning of the Modern boat designs. It was designed specifically to be built of Kevlar[®]. But it had to be kept in a humidity controlled environment or it would warp. There were 15 designs of *Bone*, with considerable tank testing, but it garnered only mixed reviews: good off the wind but not so good to windward.

Fiberglass remained the hull material of choice. When Chuck Black obtained the molds for *Toad* and *Spot* in 1984 you had a choice of Kevlar, carbon fiber, or fiberglass. While Kevlar and carbon fiber were the lighter materials, fiberglass was definitely cheaper. We don't see swing rigs until after the World Championships in Germany in 1988 when Graham Bantock had them on two boats. Again, in my opinion, swing rigs are more modern.



Black Watch, a Classic Marblehead with a prognathous keel.



Bone, an early Modern Marblehead.

Unfortunately we start to see the falloff in participation in major regattas in the late 1980s. The complaint was that in order to be competitive at the upper levels, the boats had become too expensive. Almost tongue in cheek, Ray Ozmun said the boats were getting so fast you had to run to keep up with them. If so, that might discourage a certain segment of skippers. Boats like *Magic Dragons*, *Bingos*, *Epics*, etc continued to be raced successfully, but fell from the top tier of major regattas.

The Classic period saw very progressive thinking and creative uses of technology. The boats are still incredibly fun to sail. So if you have one of these Classic boats, dust it off, get it in the water, and acquaint yourself with the fun you had the first time you got it wet.

Acknowledgments

I had a great deal of help with this project. Ed Wolfe is an encyclopedia of Marblehead history. Biff Martin and Standley Goodwin have been involved since the beginning. Graham Reeves in the UK wrote a book on the history of Marbleheads and shared parts of that with me. One of my best sources was my sailing buddy Jeff Gros, who showed up on my doorstep with 57 editions of the *AMYA Quarterly* magazine published from 1974–1990. These were priceless! I could see Annual Class Championship Regatta (ACCR) results, as well as many other regattas. There were also many critiques of various boat designs. One thing became clear. Just like now, the good guys did well no matter what they sailed. The thumbs on the sticks seemed to have more to do with success than the design of the boat.

2019 – US VMYG – Added Classic Marbleheads to the Vintage Marblehead Class Rule

2021 – The Model Yacht V22N3 – 2021 NCR included Classic M scoring for first time

2024 – Questions on the M rule and potential loopholes that could be exploited.

February 2025 – M Rule Update

1. A clarification was added under “Hull” to address removable keels.

2. Definition of prognathous keel clarified to: “No portion of the keel appendage, including the lead, may project forward of any portion of the leading edge of the keel fin above” to match the definition in the V36 rule.
3. A clarification was added regarding deck materials in the Classic subclass.
4. A clarification to the Classic (1971 to 1985) subclass to add a maximum cross-sectional dimension for masts of 0.75 in.
5. A clarification to the Classic (1971 to 1985) subclass rule to allow sail plans from the period. Specifically the following bullet was added:
 - a. Sail specifications and measurements shall be as defined under “Traditional” and “High Flyer”. Different designs may be acceptable if they are original sails or it can be shown that they match exactly a sail plan that was in use during the “period”. A copy (photo) of the plan may be required.
6. Updated the Sail Measurement Equation for image quality only.
7. Labeled the Historical Note as Appendix A.
8. Added this “Change History” section as Appendix B.

2026 – Classic M Rule Committee Formed to research and write a separate Classic M rule