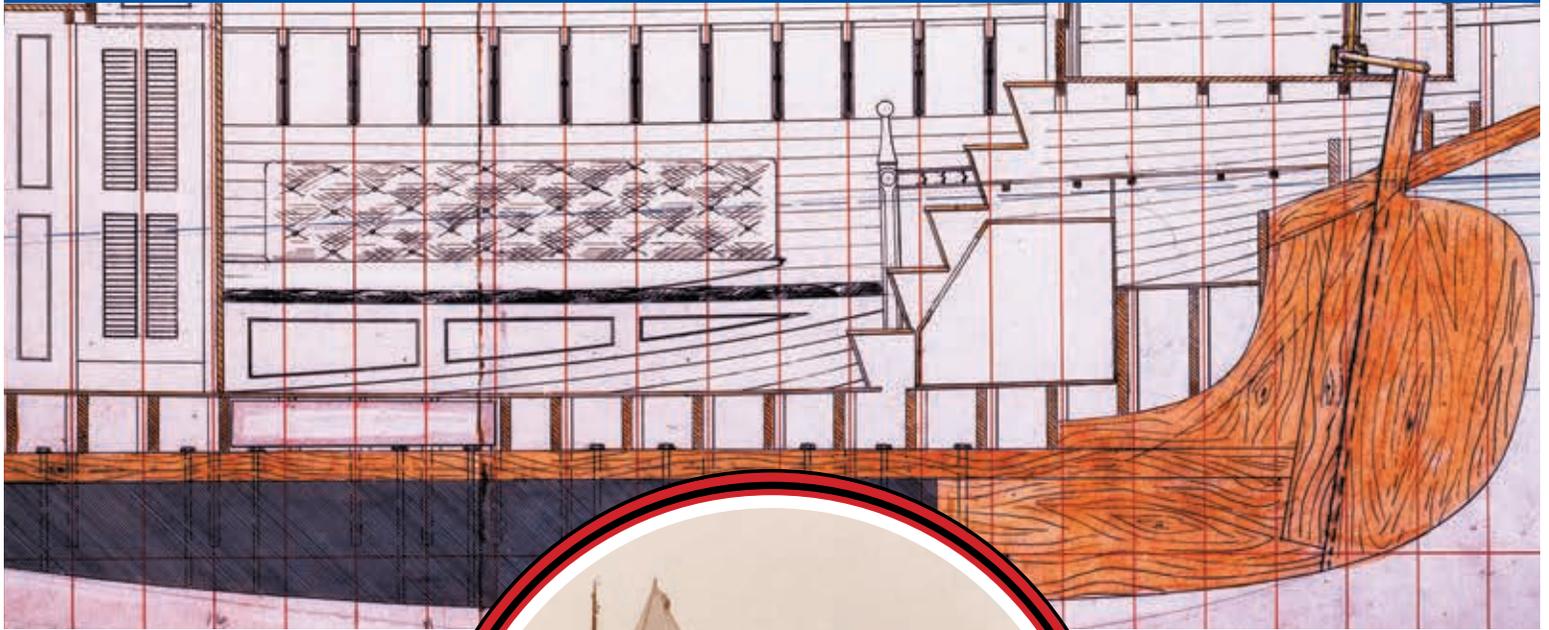


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MARINE MUSEUM

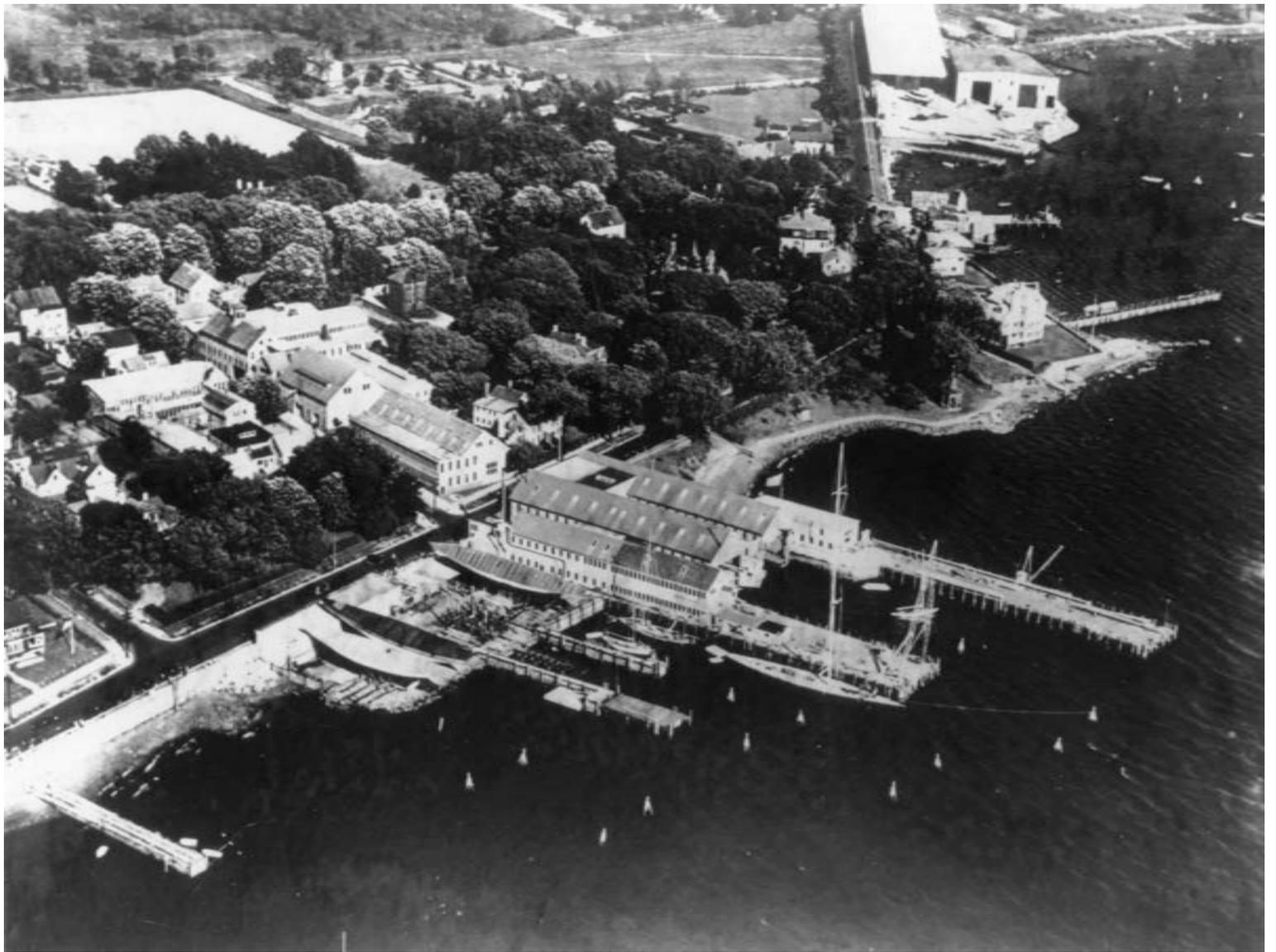
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THE 7TH CLASSIC YACHT SYMPOSIUM

MAY 20-22, 2016







The Classic Yacht Symposium™ 2016

WELCOME! TO THE HERRESHOFF MARINE MUSEUM

Welcome to the Herreshoff Marine Museum and especially to this, the biannual Classic Yacht Symposium. This Symposium is your event, you the enthusiasts, owners, designers, builders and dreamers that encourage and preserve the great maritime heritage that underpins our sport. The Classic Yacht Symposium - or CYS as we refer to it - holds a special place in the mission of the Museum for it is very much a live exhibit portraying the works of the great designers and builders who have gone before us. It brings these works to life and it represents an opportunity to learn about the innovations, science and engineering combined into the great designs of the past and how they are being preserved, restored or replicated for us to view, enjoy and learn from and sail on today.

Our museum is dedicated to preserving and interpreting the legacy of the Herreshoff Manufacturing Company and its founders Nathanael and John Brown Herreshoff. We welcome you to take time to explore and visit our exhibits which range from many fine yachts and boats in the Hall of Boats, the America's Cup Hall of Fame, the 1/6th-scale model of RELIANCE (HMCo #605) and a variety of displays of technology, design, science and engineering. These are situated on a campus of buildings which include the main museum building, an active boatbuilding and restoration shop and our own project work bays. New exhibit space will be opened shortly housing more great innovations as we continue to develop and grow.

The Museum also hosts a number of other events including our monthly Lecture Series, an outstanding youth sailing & seamanship program and a number of other educational projects in collaboration with local institutions. We also host the annual Herreshoff Classic Yacht Regatta & Rendezvous each August. This event has become a popular stop on the New England Classic Yacht Regatta circuit, and we hope you'll join us at this year's event. Please visit our website, sign up to receive our newsletter, and considering joining us in any number of ways through your interests, volunteered time and membership.

Wishing all of you another outstanding experience at CYS 2016.

Regards,

Bill Lynn

President & Executive Director





The Classic Yacht Symposium™ 2016

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Seawanhaka Corinthian Fish Class (From Herreshoff Marine Museum Archives)

by L. Francis Herreshoff

In this 1970 letter L. Francis provides his illuminating description of the Fish Class as a “refined” class; possibly the last “that decently dressed ladies and gentlemen who appreciated the beautiful landscape” could sail and enjoy.

Fish Class Sloop Donated (Herreshoff Marine Museum Chronicle Fall 1989)

by Michael J. Pesare

Michael takes the opportunity of the donation of the Fish boat DOLPHIN (by Frederick M. Heald of Bristol) to provide a history of the class through the 1936-39 Marlin Auxiliary Cruisers.

Fish Class 75th Anniversary Regatta (Herreshoff Marine Museum Chronicle 1991)

by Michael J. Pesare

Description of the 75th Anniversary Regatta of the Fish Class held August 17 & 18, 1991. Nine wooden Fish and three fiberglass Petrels raced in 15 to 25 knot southwesterly breezes kicked up by the fast approaching Hurricane Bob.

Herreshoff 16 Foot Class History (Written for the 75th Anniversary)

by Richard Meyers

Written in January 1991 this paper present the Fish Class from inception through its first 75 years. At the time of writing more than half of the forty original boats were still being sailed. Conceived by the Seawanhaka selection committee “to be a safe and seaworthy boat in varying weather conditions, ideal for teaching children to sail, for pleasure sailing and Saturday racing.” Meyers discusses the design, the fleets that were created, the devastation wrought by the 1938 hurricane and the follow-on Marlin and fiberglass Petrel.



The Classic Yacht Symposium™ 2016

Welcome – from Jan Davison, Chair of CYS 2016

Dear Classic Yacht Enthusiasts,

Welcome to the seventh Classic Yacht Symposium 2016 and the historic town of Bristol. We look forward to welcoming old friends and to meeting new ones during this wonderful weekend. We encourage you to participate in our panel discussions and various Q.& A. sessions.

The CYS 2016 begins with a tour of area boatyards to view current projects like CORONET at IYRS, the restoration of SANTANA at Joe Loughborough's yard, a tour of Block and Becket Shipwrights in Bristol to view a power cruiser restoration and onto Dan Shea's Bristol Boat Company to view NGH's iconic 12½'s. Stay tuned on Friday evening for our thought provoking panel discussion on the Breadth and Boundaries of Classic Yachts moderated by marine author and yachtsman, John Rousmaniere. This event will be followed by a lively cocktail reception. At 0730 hours on Saturday, we will meet in the RWU Law School Auditorium for an entire day of presentations on subjects ranging from the classic and Centennial HMCo. NY 40's and Fish boat to a breadth of sail and powerboats.

I am grateful to our distinguished CYS 2016 Committee: Bill Lynn, Dyer Jones, Dave Curtin, Halsey Herreshoff, John Palmieri, Adam Langerman, Norene Rickson, Chris Wick, Peter Vermilya, Svetlana Cutler, Elisabeth Lavers and Katherine Beaumont for their tireless efforts to bring CYS 2016 to fruition. We are also honored to be affiliated with SNAME since 2006. I wish to thank our hosts, RWU Law School, our advertisers and event exhibitors for their participation and support.

The Classic Yacht Symposium series is a mainstay for the Museum and it is an honor to stage this event. We endeavor to bring you relevant, accurate and timely information regarding Classic Yachts in the US, Europe and Australia. We are so pleased you have joined us and we hope to see you back in Bristol for CYS 2018.

Cheers,

Janice G Davison
CYS Chair, 2016



The Classic Yacht Symposium™ 2016

Welcome – from Joe Comer, President of SNAME

SNAME is proud to continue the support and collaboration that has been established with the Classic Yacht Symposium (CYS), the premiere event of its type. SNAME, as you may know, was formed in 1893 to promote the practical and scientific knowledge in the arts of ship building and marine engineering. We share a heritage and culture with this community. We have evolved over the years to serve the full spectrum of the vessel and boating life cycle, including:

**Students - Educators/Researchers - Engineers/Designers - Shipbuilders -
Manufacturers - Operators - Recyclers/Salvors**

These make up the Faces of SNAME and we are working hard to provide services, activities, education, and content that bring benefit to our members in this very same community, no matter where you sit on this spectrum. Together these form the foundation of the knowledge base that future developments in this field will be built upon. We hope to find better and stronger ways to work together in the future.

Finally, we would like to share in this year's dedication of CYS that honors Dr. Fabio Fossati, which is fully in keeping with honoring the common values that we all share.

Welcome, everyone, to the 2016 Classic Yacht Symposium.

Sincerely,

Joe Comer
President



The Classic Yacht Symposium™ 2016



In remembrance and honor of Professor Fabio Fossati



The Classic Yacht Symposium™ 2016

Honoring Fabio Fossati



The 7th Classic Yacht Symposium is presented in honor of Fabio Fossati Mechanical Engineer, PhD in Applied Mechanics and Full Professor of Applied Mechanics at the Politecnico di Milano, Milano Italy who passed away in late November 2015. He was scientific coordinator of wind tunnel testing of sailing yachts at the Milan Polytechnic and also taught courses in Elements of Fluid Mechanics, Elements of Naval Architecture, and Mechanics of the Sailing Yacht. In his research he applied numerical and experimental fluid dynamics to sailing yachts with special reference to sail plan aerodynamics and hull appendages. In this work he supported several America's Cup teams. Through the years Fabio was a most enthusiastic attendee at CYS, and in 2014 authored two papers as well as participating in the HMCo Centennial Class Panel: 1914- 2014. In 2014 he wrote of the "extraordinary chance that life has given me to combine the abiding passion for sailing yachts with my professional role as a university researcher and lecturer". Fabio was a great admirer of Capt. Nat Herreshoff, spending as much time as possible at each CYS to study Capt. Nat's half-models, and technique of open water towing model tests. Working at the leading edge of research in fluid dynamics, Fabio understood better than most the efficiency of Capt. Nat's hull lines and the genius of the man to achieve such results while working in a mix of "science" and "art" long before the growth of the methods for calculating yacht performance.

Fabio had planned a paper for this CYS. He was not able to write it. Here is his abstract.

Maintaining and Preserving Classic Yachts through a Pragmatic Approach: Application of Technology

by Fabio Fossati- Dept. of Mechanical Engineering, Politecnico di Milano, Milan-Italy

Once again 2016 Herreshoff Centennial Yachts, the New York 40 class, the schooner MARIETTE, as well as the Fish class provide me the cause of reflection to explore the breadth and boundaries of classic yachts. Fish class is a prime example of a boat recently produced also in a fiberglass version called Petrel. Adaptation of classic designs to modern materials is a key issue not only for several classes designed by N. G. Herreshoff and nowadays built with modern materials, but also within the increasingly popular classic yacht scene in Europe and the Mediterranean: typical examples are Dinghy and Dragoon classes. In this paper after a short summary of beautiful Capt. Nat designs and other examples of classics also built with modern materials, I will try to sketch out some personal thoughts seeking to explore the emotional and technical sides of classic boat maintaining and preserving, also through the pragmatic application of technology. Finally a small technical clarification will be proposed and discussed concerning the key issue of the weight distribution to create new yachts with equal sailing performance.



The Classic Yacht Symposium™ 2016

CYS Committee

- Jan Davison** / Chair, CYS 2016
- David Curtin** / Chair Papers & Panel,
Board of Directors, Collections and Exhibits Chair
- Katherine Beaumont** / SNAME, NE Chapter Chair
- Svetlana Cutler** / Graphic Design & Marketing Associate
- Halsey C. Herreshoff** / Board of Directors, Partner, Herreshoff Designs Inc.
- Dyer Jones** / Chief Collections Officer, Herreshoff Marine Museum
- Adam F. Langerman** / Partner, Herreshoff Designs, Inc.
- Bill Lynn** / President and Executive Director, Herreshoff Marine Museum
- John Palmieri** / Curator Emeritus, Herreshoff Marine Museum
- Norene Rickson** / Librarian and Archivist
- Peter Vermilya** / Curator Emeritus of Small Craft, Mystic Seaport Museum
- Chris Wick** / Board of Directors, Boat Preservation Committee

SNAME – Collaborative Supporter

- Joe Comer** / President
- Erik Seither** / Executive Director
- Alana Anderson** / Director of Events
- Katherine Beaumont** / Section Chair, NE Section

Dedication

The 7th Classic Yacht Symposium is presented in honor of **Prof. Fabio Fossati**
Our friend, past participant and contributor passed away in 2015. A Commemoration is included on Pages 6 & 7.

CYS 2016 Authors

The success of this Symposium is based on collaboration and the technical input through talks of the most interesting developments in classic yacht restorations, their design and special challenges. We are again delighted at the depth of expertise that has come forward to present their ideas, their expertise and the results of their works.

- Amy Ballentine-Stevens** / BEN MY CHREE and Stuart Knockabout
- Alec Brainerd** / Fish Class History, HMCo Centennial Yacht
- Sam Chamberlin** / TRADEWIND and ADVENTURESS Restorations
- Patrick Dorgan** / Cork Harbor Fife III One Design
- Ben Emory** / PERCH: Joys Of Owning A Herreshoff Fish Class
- Halsey Herreshoff** / NY Fighting 40's, HMCo Centennial Yachts
- Anatoli & Josephine Jaworsky** / GLORIA OF HOBART: a Modern MOB JACK
- Adam Langerman** / Herreshoff's Special 30-Foot Class: Newport 30
- David Snediker** / DORIS HMCo #625: Early Days In A Major Restoration

CYS Discussion Panel; Breadth & Boundaries of Classic Yachts

- John Rousmaniere** / Moderator
- Matt Murphy** / Editor, WoodenBoat
- Jim Taylor** / Yacht Designer
- Donald Tofias** / W-Class Yacht Co., Developer, Founder & President



The Classic Yacht Symposium™ 2016

Paper Review Panel

- John Burman** / Vice President, Kingman Yacht Center
- Paul Bushueff**
- David Curtin** / Chair CYS Papers & Panel, Director, Herreshoff Marine Museum
- Ethan Davison**
- Jan Davison** / Chair Classic Yacht Symposium, Director, Herreshoff Marine Museum
- Bernard Gustin**
- Larry Lavers** / Director, Herreshoff Marine Museum
- Ken Legg**
- John Palmieri** / Curator Emeritus, Herreshoff Marine Museum
- Michael Rossi** / Education Committee, Herreshoff Marine Museum
- Tom Weaver** / Advisor to Board, Herreshoff Marine Museum
- Chris Wick** / Director, Herreshoff Marine Museum
- Dean Wood** / Advisor to Board, Herreshoff Marine Museum

Moderators – Thematic Session Talks

In order of Sessions:

- Centennial Yachts: **John Palmieri**, Herreshoff Marine Museum, Curator Emeritus
- L.Francis Herreshoff Yacht Designs: **Matt Murphy**, Editor, WoodenBoat Magazine
- Early One Designs of the late 1800's: **David Curtin**, Herreshoff Marine Museum, Director
- Antique Powerboats: **Jan Davison**, Herreshoff Marine Museum, Director
- Large Restoration Projects: **Dyer Jones**, Herreshoff Marine Museum, Chief Collections Officer

Boat Yard Visits Facilitated

In order of the tour:

- IYRS** – Boatshops and CORONET Project
- Loughborough Marine Interests** – SANTANA Project
- Block & Becket** – AURORA & other restoration projects
- Bristol Boat Company** – Herreshoff 12 ½ Restorations

Exhibitors and Advertisers

- Artisan Boatworks**
- Ballentine's Boat Shop**
- Block & Becket**
- Classic Yacht Owners Association**
- CRF Group**
- Herreshoff Designs, Inc.**
- Janice G. Davison**
- J.M. Reineck & Son**
- MP&G**
- R&W Ropes**
- SNAME**
- Snediker Yacht Restoration**
- Starkweather & Shepley**
- Stuart Knockabout**
- Wooden Boat Magazine**



The Classic Yacht Symposium™ 2016

CYS '16 – Origins & Ten Year Look Back

Halsey C. Herreshoff

Ten years ago in 2005, the Herreshoff Marine Museum initiated the Classic Yacht Symposium (CYS). The intention was to facilitate recognition of best practices in wooden boat construction relating especially to restoration of classic yachts. The prospect was gathering skillful practitioners together with boat owners and aficionados for a new mix of learning to evolve. Actually, we didn't quite know what to expect from the CYS '05 innovation. That year, and at succeeding CYS events every two years since, the goal has been exceeded. Beyond the wisdom and practicality of formal presentations, the collegiality of all who meet has been highly constructive through the mix of experiences in the shop or at sea.

So, here we are at the seventh Classic Yacht Symposium in the year 2016. With considerable effort by our Chairperson Jan Davison, Museum staff, and volunteers from the ranks of Board Members and passionate proponents, another outstanding program is presented for appreciation and discussion by our outstanding participants.

CYS relates not only to Herreshoff classic yachts, but also to any commendable boat actions in any part of the marine world. But given the amazing leadership in design and structure for yachts of Capt. Nathanael G. Herreshoff and the situation of the Herreshoff Marine Museum, we tend to set a focus upon particular Herreshoff creations. This year the centennial classes are the famous New York Yacht Club 40 Footers (The Fighting 40s) and also the highly appreciated Fish Class of 1916. Presentations on these special craft of distinction on Saturday morning will be followed by an eclectic mix of lessons from diverse craft from Australia, Europe and the USA.

We believe that all involved will again learn and especially will profit from the inspiration of well addressed details and also bold actions beyond the ordinary.



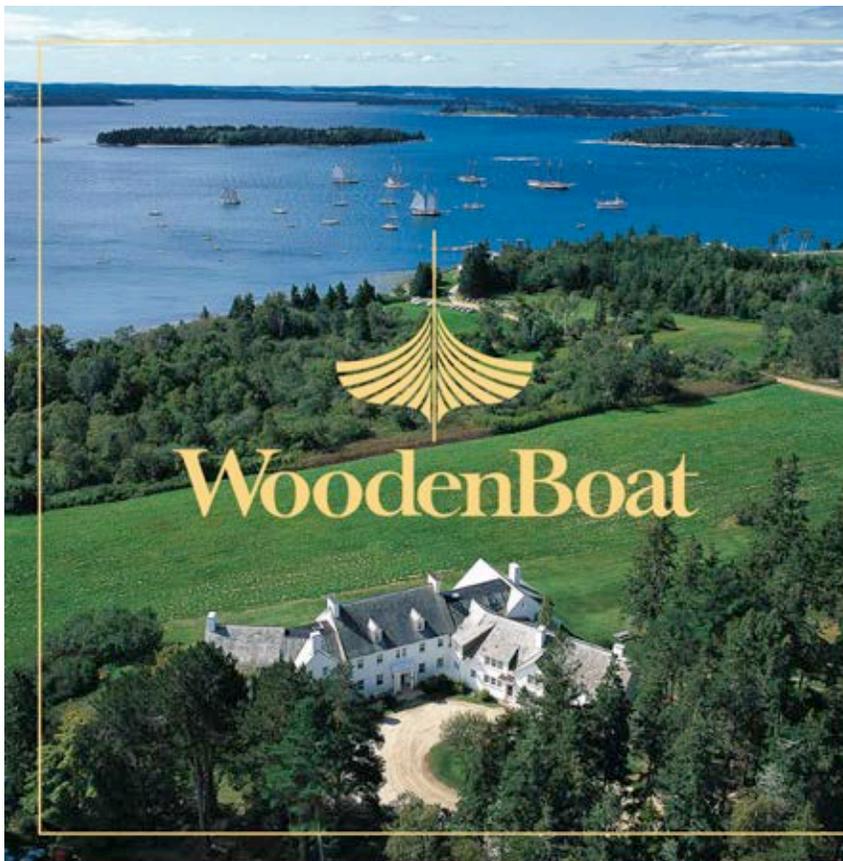
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The Classic Yacht Symposium™ 2016

Schedule

FRIDAY

10.15-12.00 Tour of IRYS & Coronet Project

12.00-13.30 Lunch

13.30-14.15 Visit Loughborough's Marine Interests & SANTANA Project

14.15-14.45 Travel Back to Bristol

14.45-15.30 Visit Block & Becket's AURORA & other projects

15.30-17.30 Visit Bristol Boat Company Restoration Projects

Museum Campus Area

15.30 Model Room Tour with Halsey Herreshoff and Dyer Jones – Sign Up Required

16.15 Model Room Tour with Halsey Herreshoff and Dyer Jones – Sign Up Required

17.00 Registration Opens at HMM

17.30-18.15 Cocktails

18.15-19.30 Panel Discussion:
Breadth & Boundaries of Classic Yachts
John Rousmaniere / Moderator
Matt Murphry / Editor, WoodenBoat
Jim Taylor / Yacht Designer
Donald Tofias / W-Class Yacht Co.,
Developer, Founder & President

20.00 Close

SUNDAY

09.00 Museum Open

9.00-12.00 Boats on Pier and Dock:
Fish Class: SCULPIN
L.F. Herreshoff: BEN MY CHREE
Replica Stuart Knockabout
NY 40: RUGOSA
Sid Herreshoff, Fiberglass Classic, ARION

10.00-12.00 Visit Bristol Boat Company RELIANCE project

10.00 Model Room Tour: Sign Up Required

11.00 Model Room Tour: Sign Up Required

12.00 Symposium Ends



The Classic Yacht Symposium™ 2016

Schedule

SATURDAY

- 08.30 Morning Program Begins – Opening Remarks
- 08.40-08.45 **Herreshoff Centennial Yachts of 1916.** Thematic overview, Moderator: John Palmieri
- 08.45-09.30 **Fighting 40s**
presented by Halsey C. Herreshoff
- 09.30-10.15 **The Herreshoff Fish class: 100 Years**
presented by Alec Brainerd
- 10.20-10.50 Morning Coffee Break
- 10.50-11.00 **L. Francis Herreshoff Yacht Designs.** Thematic overview, Moderator: Matt Murphy
- 11.00-11.30 **GLORIA OF HOBART: A Modern MOBJACK**
presented by Anatoli and Josephine Jaworsky
- 11.30-12.00 **Darling Of My Heart: BEN MY CHREE And The Stuart Knockabout**
presented by Amy Ballentine Stevens
- 12.10-13.30 Lunch Break
- 13.35-14.05 **Herreshoff's Special 30-Foot Class: Newport 30**
presented by Adam Langerman
- 14.05-14.35 **The William Fife III Cork Harbor One Design of 1896**
presented by Patrick Dorgan
- 14.45-15.15 Afternoon Coffee Break
- 15.15-15.20 **Antique and Classic Motoryachts & Powerboats.** Thematic overview, Moderator: Jan Davison
- 15.20-15.50 **The In Water Fleet of the Antique Boat Museum**
presented by Brian J. Lawson
- 15.50-16.20 **The Restoration of RITA**
presented by Tom & Laurie Leiser
- 16.30-16.35 **Large Restoration Projects.** Thematic overview, Moderator: Dyer Jones
- 16.35-17.05 **Trans-Atlantic Learnings In Restorations: TRADEWIND & ADVENTURESS**
presented by Sam Chamberlin
- 17.05-17.35 **DORIS HMCo #625 – Early Days in a Major Restoration**
presented by David Snediker
- 17.45 **Closing Statements**



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Herreshoff Centennial Yachts of 1916

Moderator: John Palmeri

- The Herreshoff Manufacturing Co. (HMCo) operated from 1878 to 1944. HMCo built and designed yachts and boats in a fully vertically integrated organization and excelled in technology, innovations and performance. The founding partners were the brothers John Brown (JB, President & Treasurer) and Nathanael Greene (Capt. Nat., Designer & Superintendent of Works) Herreshoff.
- In the early years, including the ten years before incorporation, 70% of production was in steam powered fast launches where they became a world leader. HMCo successfully applied its innovations to the US Navy's early torpedo boats.
- Sail became an increasingly important part of the business following the breakthrough success of GLORIANA (full keel) in 1891. Fin keel yachts and one design classes followed. By 1900 Herreshoff was the established leader in yacht design, construction from hull to fit-out, to rigs and sails.
- A twenty year (1896 – 1916) formed the most exciting and productive years for HMCo. Production in steel and metal alloys ramped up with power and sailing yachts including the great steel racing schooners. The end of this high period was marked by the start of WWI and the untimely death of JB in 1915.
- From this setting then, 1916 was a hectic and climactic year with the delivery of some 70 new built vessels, a 500 person workforce and company reorganization with the passing of JB. Production included the steel schooner MARIETTE, JP Morgan's 115' steam yacht NAVETTE and the 12 NY 40's and 3 Fish we celebrate today.



The Classic Yacht Symposium™ 2016

The Fighting 40s

Author Halsey C. Herreshoff

Herreshoff Designs Inc.



Figure 1 – RUGOSA racing in the 2014 Herreshoff Regatta. *Photo by Svetlana Cutler*

Abstract

Very appropriate, this centenary year, is a presentation of the iconic history of the Herreshoff New York Yacht Club Forty Footers that came out of the Herreshoff Shops in spring 1916. Following from the notable success of the Herreshoff one-design NY 30, NY 70, and NY 50 class yachts, Club members desiring intermediate size yachts turned again to the genius of Captain Nat Herreshoff. Responding to the expressed wishes of members, NGH designed rugged yachts for cruising or racing. The overall hull length of the boats was 59 ft. with the waterline length of 40 ft. At that time, predating the advent of “Marconi rigs,” the sloops had tall jib headed gaff mainsails. Particularly after the addition of bowsprits, these yachts were distinguished by very competitive class racing plus in later years victories in the Bermuda Race, America’s Cup Jubilee, and numerous special race series such as those held at San Tropez each fall of the year.

Included in the presentation are details concerning the New York Yacht Club process in establishing the order for a run of the first ten New York 40 yachts. There is considerable detail about Captain Nathanael G. Herreshoff’s design and his supervision of construction at the Herreshoff Manufacturing Company. Also set forth for the purposes of example and inspiration are experiences from the author’s stewardship of his own NY 40 RUGOSA. This involved considerable rebuilding of the yacht, later proven effective by a 26,000 nautical mile cruise across the Atlantic to Britain, the Baltic, Mediterranean and Caribbean.



About the Author

Halsey C. Herreshoff is a Naval Architect & Marine Engineer trained at Webb Institute of Naval Architecture and Massachusetts Institute of Technology and by his late father, A. Sidney DeWolf Herreshoff. His designs of both power and sail craft were many times replicated for many thousands of boats built. He is a veteran of four America’s Cup competitions and other notable races. Halsey was Chief Executive of Bristol government and later a member of the Town Council. He participated with Sid and Becky Herreshoff in founding the Herreshoff Marine Museum and pioneered the America’s Cup Hall of Fame and Classic Yacht Symposium. His presentation this year of the keynote paper about the centennial New York Yacht Club 40 Footer Class follows particularly from his 30 year ownership of NY 40 RUGOSA which raced and cruised in many venues including the Baltic, Mediterranean and Caribbean. *Photo by Ed Gifford.*



The Classic Yacht Symposium™ 2016



Figure 2 – In order bottom to top: RUGOSA (#983), MARY ROSE (#954) & MARILEE (#955) under construction in the North Shop. February, 1926. *Photo by Tom Brightman*



Figure 3 – MISTRAL, HMCo #774. *The Mariners Museum.*



Figure 4 – NY 40s racing in a squall. *Photo by Edwin Levick.*

The Classic Yacht Symposium™ 2016



The 2016 Centennial Herreshoff NYYC 40 Class

Halsey C. Herreshoff
Herreshoff Design, Inc.



Photo 1) NY 40s racing in a squall. Photo by Edwin Levick

Dating from original construction in 1916, the Herreshoff New York Yacht Club 40s became an iconic competitive one design class. A number of the yachts continue to thrive in competition and cruising, some 100 years from their original construction.

ABSTRACT

Very appropriate, this centenary year, is a presentation of the iconic history of the Herreshoff New York Yacht Club Forty Footers that came out of the Herreshoff Shops in spring 1916. Following from the notable success of the Herreshoff one-design NY 30, NY 70, and NY 50 class yachts, Club members desiring intermediate size yachts turned again to the genius of Captain Nat Herreshoff. Responding to the expressed wishes of members, NGH designed rugged yachts for cruising or racing. The overall hull length of the boats was 59 ft. with the waterline length of 40 ft. At that time, predating the advent of "Marconi rigs," the sloops had tall jib headed gaff mainsails. Particularly after the addition of bowsprits, these yachts were distinguished by very competitive class racing plus in later years victories in the Bermuda Race, America's Cup Jubilee, and numerous special race series such as those held at San Tropez each fall of the year.

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PROLOGUE

Nathanael G. Herreshoff and the Herreshoff Manufacturing Company produced numerous one design classes, the most significant of which were organized by the New York Yacht Club for whom the Herreshoffs also produced all America's Cup Defenders from 1893 until 1934. So in 1915, New York Yacht Club leaders, responding to member urgings, ordered a new 1916 class to be relatively rugged cruiser racers. The NY 40s were LOA 59' LWL 40' Beam 14' and draft 8' 6". Their scantlings were relatively rugged given the request for a versatile yacht for competitive racing and open ocean cruising. The one-design racing that ensued was tremendously competitive and successful. Some of those yachts and others built as late as 1926 still ply the oceans and harbors of the world.

I have always admired the NY 40s as did my Dad, A. Sidney DeWolf Herreshoff, who was both involved in the 1916 constructions and who designed modern Marconi rigs for the subsequent 1926 NY 40s built in Bristol. My particular experience has been owning, racing and cruising one of the latter, RUGOSA (formerly RUGOSA

II), built in 1926. Over the last 30 years, we have raced on the US. East Coast, in England, the Baltic and Mediterranean. Both before and during my tenure, RUGOSA has moved on her own bottom between the Caribbean and Sweden and across the ocean for adventures including many guests in European waters.

The particular virtues of these boats are their fine sailing and handling, ruggedness, accommodations, and racing superiority. RUGOSA was the champion of the 2001 America's Cup Jubilee Class of 58 Classic Yachts in the Solent off the Isle of Wight. Another NY 40, ROWDY, was for three years, the "Boat of the Year" at the competitive Voiles de San Tropez regattas.

THE NY 40 DESIGN AND CONSTRUCTION

By 1915-16, Captain Nat Herreshoff had pretty much settled upon his chosen sailing yacht hull construction concept. Later, he generously wrote, for publication by the New York Yacht Club, the "Herreshoff Scantling Rules" which have ever since been a guide book for builders desiring efficient strong wood hull construction without unnecessary weight. However, perhaps somewhat curiously, the scantlings of the hulls of NY 40 yachts were relatively larger, occasioning some modest additional weight of structure. This in comparison to the smaller NY 30s (42' LOA) and the larger NY 50s (72' LOA). Below are some dimensions of NY 40 elements:

Frame Spaces: 16"

Keel Plank: 3 7/8"

Stem sided: 5 3/4"

Timbers: Head 2 1/8" X 2 1/8" increase both ways 5/64" per foot for 6 1/2' then parallel

Planking: Bottom 1 3/8 yellow pine single to below turn of bilge, then 3/4 yellow pine and 5/8" cypress double planking above

Clamps 3 3/4" square

Deck beams: White oak 1 7/8" X 3 3/4"; with larger frames at stress locations sized 2 3/8" X 3 3/4".

Crown of deck: 5 3/4" in 14' 3"

Floor: 7/8"

Rail: 1 3/8" X 2 3/4" high Mahogany

To control the possibility of hull racking under load, there were generous diagonal bronze or steel straps fitted to framing surfaces of the hull and deck. In typically efficient Herreshoff practice, the principal construction features with extensive annotated notes were set forth on a single complete construction drawing from which the HMC yard could build the boats for all but fitting details.

Of course, since Marconi (no-Gaff) rigs did not come into practice until 1920, the original NY 40 boats had tall gaff rigs with staysails and jib topsails. The 1926 boats, MARILEE and RUGOSA II, were yawl rigged to design

of Sid Herreshoff. Spars were Douglas fir. It was the practice of the Herreshoff Manufacturing Company to produce, in its versatile shops, all elements of the yachts including spars, cast bronze fittings, cleats, winches, anchors, sails and all rigging to name just a few of the many elements. All of this for a 59 ft. overall sailing yacht, delivered to their NY Yacht Club owners, whose original orders produced ten 1916 boats. The selling price in 1916 was \$10,000 per yacht delivered complete afloat at the Herreshoff pier.

Later in this paper, we shall describe the reasons and results of modifying rigs by the addition of bow sprits immediately after the 1916 racing season.

ORIGINS OF THE 40s

The New York Yacht Club has a proud tradition of competitive racing of fine yachts owned by generally affluent members with sailing experience from childhood. An example of that is the incident of the basis of the Herreshoff 12 ½ Footers, originally described as “Buzzards Bay Boys Boats.” Afterguard Members of the Herreshoff America’s Cup Defender RESOLUTE, associating considerably with Captain Nat, told him there was a need for a proper small yacht in which their respective sons could learn to sail and to race. Thus, Capt. Nat carved the elegant half model for the 16 ft. (Overall Length) boats that became a significant class for youth, much admired and still being copied in concept or direct duplication. In the Nathanael Herreshoff “Recollections” book, he makes a statement to the effect that the purpose was to teach youngsters to sail in preparation for the larger yachts they would later own and sail as adults.

Club members were aware of the elegant Herreshoff NYYC 50s (72 ft. overall) which were established as a great racing class a few years before 1916. But, certain club members requested a smaller, somewhat less expensive yacht, both in purchase price and in operating costs, which could be both a class one-design racer but also a family cruising boat. This author has made a detailed study of the New York Yacht Club records of correspondence and memos that transpired between members seeking those purposes. In examining the correspondence, one is impressed by the earnestness, brevity, punctuality and courtesy displayed by the gentlemen involved. Of course, as needs to be the case in any new enterprise, the suggestion was made to shop around for the design and construction of the new class. But N.G.H. and the Herreshoff Manufacturing Company had the exemplary record of then five successful defenses of the America’s Cup for which Mr. Herreshoff had been accorded by the Club Trustees Honorary Life Membership in the New York Yacht Club. Furthermore, the existing Herreshoff NYYC one-design classes were admired by all. So it was an easy decision of the members

and committee of the club to just turn to Mr. Herreshoff to envision and produce the new class. The reader may be interested to refer to the Appendix of this paper for documents bearing upon the interesting process of selection.

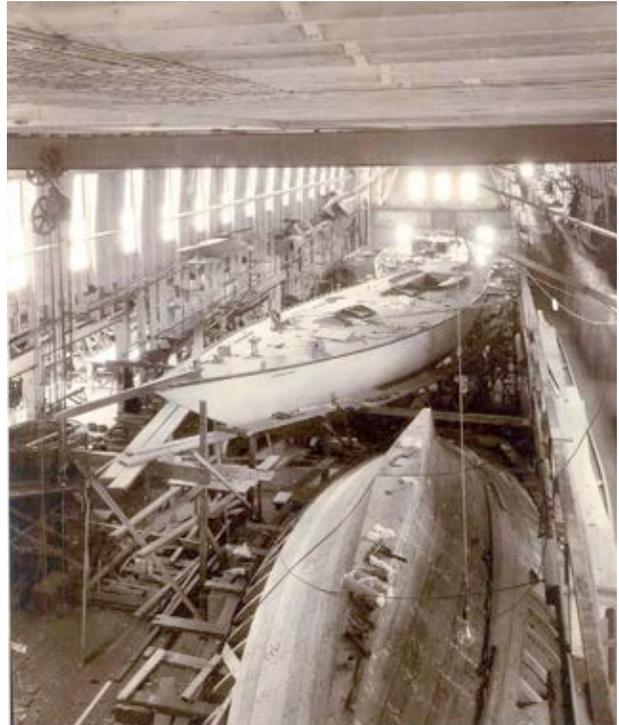


Photo 2) In order bottom to top: RUGOSA (#983), MARY ROSE (#954) & MARILEE (#955) under construction in the North Shop. February, 1926. Photo by Tom Brightman

FURTHER TO THE NY 40 DESIGN AND CONSTRUCTION

My collection of 500 design half models, loaned to the Museum, represents the world’s only large collection of hull design half models contrasting to the more common decorative half models at yacht clubs. The more usual practice in design is to produce on paper matching orthogonal views of waterlines, buttocks, sections and diagonal curves for which considerable effort is required to match the views into a resulting shape. Instead, Capt. Nat just had in his mind’s eye a sense of the shape desired needing to be translated to a physical object, the model, for measurement and scaling to full size. My uncle, Gid Herreshoff, described to me his observation of his father carving the model of the great America’s Cup defender RELIANCE. This proceeded without hesitation over a period of two evenings from solid block of white pine wood to a finally finished and shellacked scale half model. Of course, during the process, as shape evolved, Capt. Nat several times traced sections with a pantograph, calculated respective immersed areas, and integrated longitudinally to calculate weight and center of buoyancy. It is interesting to observe that the present day design

practice of yacht hull shape done on a computer is conceptually similar to the long practice of NGH. Both he and the computer naval architect are afforded views from any direction during the process of design of shape. Probably, Captain Nat's view of a physical three dimensional object was more revealing than the view accorded today on a two dimensional computer screen. But the computer N.A. has a distinct advantage over the earlier process in that now instant calculations of displacement (weight), centers of buoyancy/floataction, and hull coefficients are available, while Capt. Nat had to calculate those things by hand successively during his design process.

In the NGH process, there is no need for the standard "Lines Drawing." Instead his figures of paired height and offset of salient positions on the model hull were listed in a small notebook for the set of molds to be built full size with appropriate allowance for thicknesses of frames and outside planking of the hull. For the NY40s, the usual practice of building hulls upside-down was followed. See the 1926 picture of MARILEE vertical during latter stages of construction while the RUGOSA II is seen in the inverted position as her hull planking is being complete. (In the background is the schooner MARY ROSE also nearing completion). Ninety years later, all three of these classic yachts are thoroughly restored, well kept, and actively racing with successes.

Credit for these fine yachts is usually extended to the Mr. Herreshoffs, but let us not forget the marvelous team of skilled craftsmen who built yachts at the Herreshoff Manufacturing Company. They toiled long hours, six days a week in busy times, and achieved a no-nonsense harmony of purpose that would be the envy of any trade shop. Honesty was a hallmark. Each man had his own set of tools and could leave them ready for action at any job site and find them just so upon returning. Today, while many marvel at the quality of construction, they likely do not recognize the efficiency of the building process. This is proven by the accomplishment of producing ten New York 40s in the winter/spring of 1916 for delivery on budget ahead of schedule even though much other new work was accomplished concurrently.

The Herreshoff mold loft exhibited exceptional value. For it was not enough that Captain Nat provided hull dimensions of exceptional fairness; those virtues could be lost but for the very skillful "laying down" at the Herreshoff mold loft. Molds were made for every frame, spaced 16" for the NY 40s. Also important was accurate, consistent set-up of the molds. Then, white oak frames were steamed and bent over the molds and clamped in place to the athwartships floors. Consulting battens stretched over the framing, craftsmen planed the oak bevels to insure near perfect contact of planks to accurate paying surfaces of the framing.

Double planking was fastened generally above the waterline and single planking of yellow pine was applied below the waterline. A possibly tedious chore of big boat wood construction is the step to plane fair and smooth the fastened planking. My father said that was generally done during the final half hour of the work day with a group of perhaps 20 men scrambling over the upside-down fresh hull. Just imagine having available twenty men of sufficient skill to work together as a team to knock off this step to near perfection in 30 minutes. After this finish and the filling and prime painting of the hull, it was inverted to upright. This was quickly accomplished utilizing overhead cranes tightening or slacking respective support lines stretched both clockwise and counter clockwise about the hull.

Deck beams of sawn oak were then installed for deck planking of white pine with payed seams. It was practice to construct deck houses and hatches in a designated shop off the boat; this was part of the cost and time efficiency of construction. While all this was ensuing, Captain Nat inspected all work during his rounds twice each day. Rather than upset routine by direct instruction to individual workmen, he would beckon the foreman to convey corrections or additions to the work. This might entail a sketch made by Captain Nat right there on site. Such conveyed in the morning would be completed before the afternoon inspection so that a continuous process of improvement occurred.

It is interesting to consider all the latter stages of Herreshoff yacht construction. Coordination of numerous trades plus effective stock room scheduling were hallmarks of success. Pattern shop, foundry, machine shop and other combinations of trades worked together simply and expeditiously. My father told me that they could think up a new fitting early in the morning, prepare a drawing in the drafting room, get the pattern shop to make a pattern, cast the fitting in bronze at noon, send the part through the machine shop for clean-up and drilling and then bolt it down to the yacht deck prior to the close of work that same day. As a child answering the phone at our home, I often heard "Tom (Brightman) calling Sid" to elicit immediate advice from my father with no delay.

THE 1916 SEASON

The ten NY40 yachts bought by NY40 members were delivered just one hundred years ago in the spring of 1916. They immediately proved strong, wholesome, well-sailing vessels. Being ever so evenly matched by identical construction and accessories, the NY40 class promptly became highly competitive on the race course. Thus was coined the description "Fighting 40s" for the highly competitive nature of the yachts and especially of their owners striving so hard to win.

The only difficulty of the new boats was excessive weather helm. Always in most polite and respectful terms, the 40s owners pointed out the trouble to Captain Nat Herreshoff. His reply was to the effect, "I'll fix that." So in the fall of the year 1916, all ten yachts returned to Bristol to be fitted with bowsprits and appropriately enlarged headsails. Captain Nat's diary for the trial trip of the 40 footer first fitted with a bowsprit simply notes a test sailing trial with the brief remark that all was satisfactory. Thus, Capt. Nat quickly put that problem to rest and went on with his other innovative design work.

In the yachting press of the day, there abounded many descriptions of that year's most prominent new class. Generally these were complimentary regarding sailing and competitive prowess. But a number were critical of the somewhat boxy appearance of these boats with their wide beam, fairly high weight for length, short ends and ample freeboard. Of course, comparison was made with the elegance of the previous NY 50s and even with the highly admired NY 30s of 1905. It is not known what Captain Nat thought about these criticisms. I feel sure that he did not much concern himself with such stuff, but, who knows, perhaps he was subliminally influenced toward the form of numerous elegant yachts that followed. From my experience, either at a boat show in Kotka Finland, at Cowes, or racing in the Mediterranean gratifying compliments were generally applied to my NY 40, RUGOSA.

SUCCESSOR NY 40s BUILT A DECADE LATER

By 1926, my father, A. Sidney DeWolf Herreshoff, generally addressed at the Herreshoff Company as "Mr. Sid", had pretty much taken on the designing and construction supervision of yachts, especially when Capt. Nat wintered in Bermuda or Florida. Sid's redesign of the 40s applied mostly to the rig, a highly practical yawl Marconi design. The mast was much taller and made hollow by utilization of individual glued staves reminiscent of barrel construction. All was held together by the animal glue of the day, which really is not waterproof so good varnish protection must be maintained. A double head-rig of staysail with a club boom was joined with a jib topsail set from the same bowsprit as on the retrofitted boats of a decade earlier.

Sailed by the senior Bob Bavier, the NY40 MEMORY won the Bermuda Race of 1926. And RUGOSA II, with its then modern rig, won the Bermuda Race of 1928 with her owner Russell Grinnell at the helm. Then 'til now New York 40s have consistently been winners of numerous competitions.



Photo 3) RUGOSA racing in the 2014 Herreshoff Classic Regatta. *Photo by Svetlana Cutler.*

PRESERVATION AND UPKEEP EVIDENT FROM MU STEWARDSHIP OF RUGOSA

An old saying is that nothing quite matches the pleasures of just "Messing about in Boats." True as that may be, the challenge is financially quite considerable for classic yachts approaching the century mark. It was my good nephew, Halsey C. Herreshoff II, who by repeated injunction got me to purchase my NY 40 in 1986. For this I have alternately praised him for the great adventures made possible by the yacht, but sometimes damned him for getting me into the cycle of upkeep and repairs that can be quite expensive.

After a long succession of owners of varying means and seamanship skill, the old girl was in rather rough shape when I purchased her. The mast (not at all original) was weak and coming apart, the engine was on its last legs, and just about every function screamed for restitution. Being particularly occupied with business, I delegated to some friends the sail of RUGOSA north from St. Petersburg Florida. They made the mistake of neglecting proper guidance from weather forecasts and encountered a severe easterly gale in the Atlantic. Amazingly, they negotiated an entry into a very rough Georgia inlet, even without functioning power. Then, they quit. So, I assembled a few loyal friends for the adventure of sailing the rest of the way to Bristol. We, too, had some bad weather, lost all electric power and the main engine stopped again requiring a tricky entry to shelter under sail including landing alongside a leeward pier. After repairs, including placing strapping around sections of the mast that I feared would splinter, we again ventured to the ocean only to experience rupture of the line to the exhaust pipe; luckily I had a fiberglass repair kit aboard which I used to patch the leaking pipe while underway. Some of the crew were leery of embarking around Cape Hatteras in such an unfit yacht until I inveigled a crusty old fish boat Captain to give us an unjustified optimistic weather forecast.

Despite a further few difficulties, the rest of the sail north went well. Coming alongside Block Island at midnight with a stout beam wind, I marveled how well the RUGOSA sailed and from then on have loved the boat. But obviously many deficiencies needed correction if we were to sail properly.

My first extraordinarily good luck was in locating a perfect set of original 1926 NY 40 spars from a yacht gone defunct at Jacobson Shipyard in Oyster Bay, NY. My nephew, Halsey, and a capable driver of a large truck successfully fetched the masts and booms to Bristol. I redesigned the mast staying for double spreaders with new rigging. All this proved decidedly easy to fit. The hopeless engine was thrown out and replaced by a good second-hand Lehman Ford diesel. All new plumbing and electrical systems plus additional cosmetic improvements, enabled us to have several early seasons of decent sailing. Good friend Gary Gregory had given me the cast-off winches from his Twelve Meter yacht; these have proven superb. I designed numerous new fittings for the running backstays (replacing horrible and dangerous high-field levers), mast, boom reefing etc. These were fabricated by Microweld Company of East Providence and have proven totally reliable in service.

But, much more was needed. An Achilles heel of venerable wooden sailboats is the connection of frames to inside keel. RUGOSA leaked considerably owing to deterioration of fastenings and wood there. A totally authentic fix would have been to replace deteriorated frames and floors. But feeling that would be costly work beyond my means, we elected instead for some sister framing and connection across the keel by stout stainless steel auxiliary floors. Also, we were troubled by an unfortunate 1926 decision to replace the original specification of diagonal bronze strapping with less expensive steel straps. Those had severely rusted negating much of their function to resist racking of the hull surfaces. So, after removing temporarily the interior, we replaced the original ceiling (planking inside framing) with double layers of 1/4" marine plywood joined by epoxy. This provides great racking resistance, every bit as effective as the original strapping had been.

Out of respect for history, we remained faithful to RUGOSA's original form in all other respects. The restored interior was reassembled on board with minimal changes to more modern equipment in the galley and head. Thus, of all the remaining 40s, ours is probably the nearest to original form of deck houses and interior.

But our troubles (and expenses) were far from over. The crew and I decided to enter the Bermuda Race of 2000 hoping for some limited success, then 72 years after the yacht had come in first on corrected time in Bermuda. Early spring time sailing and racing in preparation

revealed further problems. My notice of this came initially from our star navigator Pete Lawson lifting his feet so as not to get them wet at the chart table down below. Several times I said to Pete, "Don't worry, she will swell up." But the leaking did not stop. So abandoning setting out to Bermuda, we put RUGOSA in the yacht hospital. My next good luck was at Pilots Point Boatyard in Connecticut in acquiring the services of Bob Cunningham, a master carpenter undaunted by any problem. The deteriorated stem and also the horn timber were replaced. Much of the old yellow pine planking remained excellent, but we did need to replace garboards and first broad planks (actually redone twice over my ownership of RUGOSA). The Pilots Point job under only Bob and his wife working took from Fourth of July until Thanksgiving of 2000.

The results of Bob Cunningham's work permitted by Rives Potts at Pilots Point made us totally confident of the yacht's fitness for any challenge. The next event of this chronicle was a large January party of friends and crew in New York City. After much urging by my best friend, Ben Sanders, I vaguely recall saying long after midnight "Okay, sure, we can sail across the Atlantic to England next summer!" Actually this careless declaration followed from abortive efforts to charter a yacht in England to compete in the America's Cup Jubilee on the occasion of the 150th anniversary of the first race for the America's Cup. Much better to go in our own yacht, on her own bottom across while other competitors crossed aboard the Dock Express. So in June seven of us made a fine crossing in 18 days to Falmouth. There were three gales, including one quite severe, but only one dangerous near accident. Owing to much steering in rough following seas, the key linking the steerer to the rudder stock nearly ouchted out. This dangerous emergency was saved by the quick wit and action of John Goff to pound the key back down. (Now there is a bolted cover at the top of the shaft to present this very dangerous eventuality).

As stated before, RUGOSA proved the champion of the classics at the Jubilee where every challenge seemed to go our way. Even better, this satisfaction presaged four great years of sailing adventures in the Baltic (including a visit to St. Petersburg, Russia), the British Isles (including Belfast Ireland), west coast of Europe, the Mediterranean (featuring the Greek Islands and presence at the 2004 Olympic Games in Athens), and finally a great sail back across the Atlantic to Antigua for a winter in the Caribbean.

PERSPECTIVE ON CLASSIC YACHT STEWARDSHIP

This piece has been for the purpose of recognizing the particularly important centenary of The NY 40 Class. But also the durability of this outstanding design and

craftsmanship plus succeeding efforts to hold all together to this juncture of one hundred years of history provide inspiration for other venerable sailing yachts.

What is it all about? As in the case of a person, boat success is function of heritage, quality, care and conscience to maintain all carefully before any problems might become real bad. That is why I have lead the reader through the trials and tribulations of my RUGOSA.

Classics engender increasing veneration and interest both in the United States and in Europe. The south of France, in particular, has magnificent old yachts, well restored or duplicated and thoroughly kept to high standards. We, in the USA venerate Museum collections like that of the Herreshoff Marine Museum Hall of Boats. But even better is the fact of sailing and race competition of these craft.

This brings to the fore the issue of historic preservation or practical maintenance for safe successful sailing. The former emphasizes faithfulness to history and cosmetics. The latter must emphasize practical considerations for strength and reliability, but also function employing some modern resources not available at the time of construction of the early boats. In this regard, there is controversy about how far one may properly stray from the original to maintain a true classic while also being able to attain success in usage of a vessel.

RUGOSA was recently surveyed for insurance purposes. The surveyor noted my rather unusual additions (metal floor partners, interior rigid ceiling, modern self-tailing winches, electronics, etc. He did not seem to have any issue with engineering and practical viability; in fact those changes might well have contributed to RUGOSA's clean bill of health. However, this surveyor, perhaps appropriately, did point out that my changes were in the face of strict adherence to history. But, why not each of three generations of Herreshoff engineers seeking success by whatever may contribute to that success?

An interesting example of the above situation was my experience with the Italian Measurer for a rating at Cowes. It seems that for European competitions, the measurers are more interested in authenticity of classic yachts than in careful measurements of dimensions. Luckily I was on board. The measurer declared to the effect that this yacht is wrong: wrong Marconi rig, different interior, etc. etc, I had on board my father's original drawings of the 1926 construction. The measurer was pleased to see the authenticity of the rig, and he did not quibble with just the extra main spreaders that I had designed. Then, I got him to examine more carefully the hatches (some restored to original form) and especially the interior arrangement of the boat compared to the 1926 plan that I proffered. All became serendipitous.

Perhaps, that is all as it should be, though strict originalists may always object. My own view is that there should be differing actions between strict museum pieces that will never again sail compared to yachts needing to be durable, workable and safe afloat. In that regard, the important element is to be thorough to accomplish all restoration and changes just right – better to do less work all perfectly that more work crudely.

Anyway, I remain satisfied with our own actions with RUGOSA and anticipate an active 2016 season for the benefit of our crew, friends, and myself. So do come sailing.

ABOUT THE AUTHOR

Halsey C. Herreshoff is a Naval Architect & Marine Engineer trained at Webb Institute of Naval Architecture and Massachusetts Institute of Technology and by his late father, A. Sidney DeWolf Herreshoff. His designs of both power and sail craft were many times replicated for many thousands of boats built. He is a veteran of four America's Cup competitions and other notable races. Halsey was Chief Executive of Bristol government and later a member of the Town Council. He participated with Sid and Becky Herreshoff in founding the Herreshoff Marine Museum and pioneered the America's Cup Hall of Fame and Classic Yacht Symposium. His presentation this year of the keynote paper about the centennial New York Yacht Club 40 Footer Class follows particularly from his 30 year ownership of NY 40 RUGOSA which raced and cruised in many venues including the Baltic, Mediterranean and Caribbean.



Photo by Ed Gifford.



The Classic Yacht Symposium™ 2016

The Herreshoff Fish Class 100 Years

Author Alec Brainerd
Artisan Boatworks



Figure 1 – Fish Class racing 1916. *Photo by Edwin Levick*

Abstract

This paper discusses the origins and history of the Herreshoff 16-foot Class (aka Fish Class) from 1916 to 1938, with particular emphasis on HMCo #816, SCULPIN. It goes on to recount the later history and 2016 restoration of SCULPIN at Artisan Boatworks in Rockport, Maine, and the construction of a new Fish Class replica called TULIP. General sailing characteristics and identification of existing boats are also covered.

Introduction

What strikes me as extraordinary about SCULPIN is the extent to which a simple and humble small sailboat has been embedded in the hearts and memories of so many people over the course of one hundred years. Although this paper contains many dates and technical details, it is the stories of the individuals who affected this design, and who were affected by this particular boat, which we endeavor to preserve by restoring and maintaining an otherwise insignificant assemblage of wood, bronze, and lead.



About the Author

Alec Brainerd - After many years working in boatyards as a shipwright and crewing on large classic yachts around the world, Alec, a Maine native, founded Artisan Boatworks in 2002. He lives in Rockport with his wife and two daughters. Alec and his family enjoy skiing and the Camden Snow Bowl in the winter months, and sailing their Sparkman & Stephens yawl NORA in the summer. For more information about restorations and construction of new replicas at Artisan Boatworks, please visit www.ArtisanBoatworks.com.

Photo courtesy of Luke Boelitz

The Classic Yacht Symposium™ 2016



The Herreshoff Fish Class 100 Years

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ABSTRACT

This paper discusses the origins and history of the Herreshoff 16-foot Class (aka Fish Class) from 1916 to 1938, with particular emphasis on HMCo #816, SCULPIN. It goes on to recount the later history and 2016 restoration of SCULPIN at Artisan Boatworks in Rockport, Maine, and the construction of a new Fish Class replica called TULIP. General sailing characteristics and identification of existing boats are also covered.

INTRODUCTION

What strikes me as extraordinary about SCULPIN is the extent to which a simple and humble small sailboat has been embedded in the hearts and memories of so many people over the course of one hundred years. Although this paper contains many dates and technical details, it is the stories of the individuals who affected this design, and who were affected by this particular boat, that we endeavor to preserve by restoring and maintaining an otherwise insignificant assemblage of wood, bronze, and lead.

ORIGINS OF THE FISH CLASS

The year 1914 marked the beginning of World War I in Europe, the introduction of Henry Ford's Model T, and the opening of both the Cape Cod and Panama Canals. At the same time, members of the Seawanhaka Corinthian Yacht Club (SCYC) of Oyster Bay were racing a fleet of Clinton Crane-designed fifteen-foot waterline knockabouts built back in 1903 (Fig. 1).

That same summer, former SCYC commodore Elias Cornelius Benedict had taken delivery SADIE (Fig. 2), a 26' 7" LOA keel/centerboard knockabout that Herreshoff Mfg. Co. (HMCo) had launched for him on May 25th as a near-sister to ALERION, the personal boat of his friend, Nathanael Greene Herreshoff (NGH). SCYC members, having seen SADIE, began to consider acquiring a class of full-keel daysailers with similar qualities. The Crane fifteen-footers, eleven years old by then, were considered passé.

On August 11 (the day before Great Britain declared war on Austria-Hungary), George Nichols wrote a letter to NGH inquiring about a new design, to which NGH proposed a 19' LWL keel sloop (24' LOA) that could be built for \$1,075 if ten or more were ordered. HMCo plan 130-122 of September 1914 (Fig. 4) shows this to be a slightly smaller full-keel version of SADIE. As a less expensive alternative, NGH also mentioned that full-keel Buzzards Bay 15s such as FLICKER (#674) could be built for \$900 (Fig. 3).

Later that fall Mr. Nichols wrote to NGH that cost was a big factor because of the "prevailing hard times," but that he had ten potential orders. He'd been sailing in SADIE and found that she "handles beautifully and sails fast," and suggested they talk it over.

In October of 1914, the SCYC minutes of the trustees meeting stated that, among several designs submitted, including a 17' LWL boat by Nevins for \$673, the 19' LWL SADIE derivative recommended by NGH had been chosen. Formal solicitation was then sent to club members promoting this design:

"Mr. Herreshoff, particularly during his winter vacations, for several years past, has developed a new type of sailing boat, which he considers distinctly superior to what has heretofore been built, in that it produces a boat that is comparatively dry and easy in a sea and at the same time much faster than the old long-ended type, in light weather, and can be driven with a much smaller sail spread in proportion to displacement."

Due to a financial depression, however, these boats were never ordered; but 15 months later, on January 6, 1916, a

special committee consisting of William H. Appleton, Daniel Bacon, Henry R. Hayes, George Nichols, and Franklin Remington sent out another solicitation for a new 16' LWL design from NGH described as "short-ended, able little vessels, with all their 1,200 pounds of ballast outside, a large open cockpit, and a watertight bulkhead forward of the mast." The committee pointed out "they were ideal for teaching children to sail, pleasure sailing, and Saturday racing."

The happy result was that 17 members signed up within four days and six more came in later that year for what would become the beloved Fish boats.

DESIGN OF THE FISH (AKA THE #788 CLASS)

Up until 1914, racing yachts with long overhangs and full forward sections were heavily favored by the reigning Seawanhaka Rule that penalized waterline length. NGH's America's Cup defender RELIANCE of 1903 was an obvious example, measuring 201' 6" from the tip of her bowsprit to the end of her boom, but with a waterline length of only 90'. According to Halsey Herreshoff, the New York Yacht Club wanted no more of "these dangerous, expensive yachts," and so adopted NGH's Universal Rule that balanced displacement against waterline length and sail area. The shorter-ended America's Cup defender RESOLUTE, designed in 1914, was one result of this new measurement rule. More such improved designs would follow.

For the new SCYC Fish boats, NGH chose to enlarge the short-ended and highly successful "Buzzards Bay Boys Boats" (popularly known as 12-1/2 footers), also of 1914. Although smaller, both the 12-1/2 and the Fish boats were direct descendants of NGH's ALERION and E.C. Benedict's SADIE—but less expensive to build not only because of their size but also due to their full keels, flat transoms and outboard rudders.

NGH had carved the half model (Fig. 5) that he used for the 12-1/2 at a scale of 1"=10", resulting in a model length of 18.6". For the Fish Class, the sections of this model were scaled up to 1"=12", and its length further increased to a scale of 1"=13". Finally, the Fish boat's stemhead was tipped forward 3-1/2". (NGH had made a similar increase in the bow overhang of SADIE compared to ALERION to reduce the former's weather helm.)

There are some who believe the Fish came before the 12-1/2, but NGH's personal handwriting is clear in the offset book (Fig. 6): October 28, 1914 for the 12-1/2, and January, 1916 for the Fish. Had the Fish come first, the deck overhang at the stem would likely have duplicated the model, and not have been extended 3-1/2".

The final particulars of the Fish are as follows:

LOA – 20' 9"
LWL – 16' 0"
Draft – 3' 1"
Beam – 7' 1"
Displacement – 2,850 lbs
Sail Area – 265 square feet

CONSTRUCTING THE 1916 FISH BOATS

HMCo set up #788 (to be named MANATEE) on February 11, 2016. Planking began on February 15, and the hull was turned upright four days later on February 19. #788 was moved out of the shop on March 16, only 34 days from when she was begun.

Between February 11 and April 17, records show a new Fish boat was set up every three or four days, and overlapping dates suggest that two sets set of molds were in use. The first three hulls required eight days each from set-up to turn-over; the next two took six days each; the following three, five days; and the remaining twelve were down to only four days apiece. The average time from set-up to completion remained about four weeks per boat, and records show that HMCo rolled 20 Fish boats out the door in about three months—between February 11 and May 19.

These were days of non-existent labor laws and excellent labor management, with flawless materials on-hand. The 500 employees of HMCo worked ten hours per day, five and a half days per week in 1916, and the construction of the Fish boats was a relatively small portion of their work that year. Also built in 1916 were seventeen dinghies, four 12-½s, six Buzzards Bay 15s, four power launches, three large power yachts, twelve 59' LOA New York 40s, and the 138' LOA steel schooner MARIETTE. With over a million pounds displacement delivered, the Fish boats represented only about 6% of HMCo's output.

Needless to say NGH himself was very busy in 1916, not only as HMCo's designer and superintendent, but because his brother and partner, John Brown Herreshoff, died the previous year and NGH was now acting president of the firm.

RACING AT OYSTER BAY

The names of the 19 Seawanhaka Corinthian Yacht Club (SCYC) Fish boats ordered in January of 1916, and their owners are as follows:

SHARK – J. P. Morgan
POMPANO – W. H. Appleton
SKATE – H. L. Smith and John Good
GRUNT – Samuel T. Shaw

MANATEE – Albert Strauss
PERIWINKLE – Henry R. Hayes
BLUEFISH – Howard C. Smith
COD – H. S. Shonnard
ANCHOVY – F. M. Weld
WHITEBAIT – Alexander M. White
BARRACUDA – De Forrest Hicks
VOLODOR – Daniel Bacon
SNAPPER – W. Emlen Roosevelt
SHRIMP – W. A. W. Stewart
SABALO – A. R. Whitney Jr.
SARDINE – Bertram G. Work
PORPOISE – R. T. Crane, Jr.
TARPON – Dr. L. F. Bishop
BONITA – Charles R. Crane

According to the HMCo construction records, four more orders were placed on April 21, 1916. These were:

EEL – Cecil O. Stewart
NAHMA – David Duncan
AMBERJACK – R. Watts
SCULPIN – F. Remington

EEL and NAHMA were delivered in May, 1916 along with the first nineteen, and the HMCo vessel index card (Fig. 10) in the Hart Nautical Collections states that SCULPIN was built on speculation ('for stock') as SQUID by the HMCo. She was then sold on September 18, 1916 to F. Remington. SCYC has no record of a Fish boat called SQUID, and in 1917 Franklin Remington was sailing a Fish called SCULPIN, so it can be surmised that the boat's name was changed when Remington assumed ownership. It is believed that AMBERJACK was delivered to Woods Hole, and there is no record of her ever racing at Seawanhaka.

The new Fish boats were an immediate success at the SCYC, and nearly every Saturday a dozen or more boats competed. During that first summer PERIWINKLE won the First Series and the Leland Cup, and GRUNT won the second and third series and a Maxwell Cup. The Ladies' Race was won in BARRACUDA. Of particular excitement was on June 17, 1916 when the worst squall to strike Oyster Bay in years came through, resulting to damage to many of the Fish Boats. TARPON was sunk, and GRUNT lost her mast.

In January of 1917 the final three SCYC Fish Boats were ordered from HMCo., bringing the total to 26. They, along with their owners, were:

MINNOW – F. S. Williams
COCKLE – G. C. MacKensie
TUNA – T. Scudder

These boats were delivered on May 23, 1917, along with a fourth boat that was probably SCULPIN.

According to John Parkinson, Jr. in his book: *Seawanhaka Corinthian Yacht Club: The Early Twentieth Century: 1897 – 1940*, the annual fee SCYC charged Fish boat owners was \$20 to haul, store, and launch in the spring. The fee included a mooring rental, but a new cradle (Fig. 20) was extra at \$13 and a winter cover \$23.

SCULPIN's owner, Franklin Remington, was born in 1866 and in 1911 built an estate named "Driftwood" on 12 acres of Centre Island. His great uncle Eliphalet Remington founded the E. Remington Arms Company. Franklin Remington went into partnership with Zalman Sholes and founded the Remington-Sholes Typewriter Company. He later headed the Foundation Company, a major construction company specializing in large-scale industrial foundations.

To give a sense of the scope and scale of yachting in 1916, at the SCYC Spring Regatta on June 24 there were New York 50s, New York 40s (which were brand new that year) and New York 30s all racing, as well as P boats, Sonder boats, a Handicap division, Larchmont Interclubs, Glen Cove Jewels, Star and Outlaw class sloops, American Yacht Club dories, the Orienta class, the Fish class, and the new Stamford one-designs.

This era of unimaginable wealth exhibition and class separation in the United States was never to be seen again. High society members of the New York and Seawanhaka Corinthian Yacht Clubs were America's version of royalty, with their racing results regularly reported in the *New York Times*, even down to small one-designs like the SCYC Fish boats.

When the US entered the war with Germany in April of 1917, an immediate halt to major yacht racing took place. After the war grand yachting would continue, but to never to the full prior extent, having been further diminished by the income tax first levied in 1913. Smaller and more affordable yachts became the trend after the war.

The *New York Times* reported that Franklin Remington made his first appearance with SCULPIN on August 18, 1917, when he won the third race of the third Fish boat series. That summer, which the *Times* referred to as a "wholly pathetic apology for a yacht racing season," he went on to win the Alfred Roosevelt Memorial Cup; the prize money that year was donated to the Red Cross.

Remington raced SCULPIN through the 1922 season, winning both the second and third summer series in

1920. In 1922 he sold her to Nelson B. Burr and upgraded to an S boat called PERNEB.

Nelson Beardsley Burr (1871–1928), a longstanding vice-president of the St. Louis Southwestern Railway Company, raced SCULPIN at SCYC in the 1923 through 1925 seasons, after which he sold her to Parkman D. Howe of Mattapoisett, MA.

RACING IN MATTAPOISETT

Yacht racing in Mattapoisett can be traced back to 1874, and from 1899 to 1909, regattas were conducted under the auspices of the nearby Beverly Yacht Club. In 1900 a group of Beverly Yacht Club members in Mattapoisett decided to form their own localized club and went to designer BB Crowninshield for a class of nine, 18' LOD skipjack knockabouts.

These skipjacks only races for two seasons until they were replaced by Starling Burgess-designed 15' WL knockabouts – which also only raced for two seasons until 1904. By 1905 the Herreshoff designed Buzzards Bay 15s from Beverly were becoming universally accepted throughout Buzzards Bay.

XIPHIAS, Herreshoff Fish #826 was built for Mattapoisett resident F. Gilbert Hinsdale in 1919, and #820 COCKLE arrived from Seawanhaka around the same time; together racing in the handicap class. In 1926, in an attempt to revitalize one-design racing which had slowed during WWI, the club ordered a fleet of twelve clinker built dinghies from Abeking & Rasmussen in Germany. Also in 1926 more Fish boats shifted from Seawanhaka to Mattapoisett (eleven in all), and in 1927 they split from the handicap class to form their own group.

XIPHIAS was the only Fish boat built specifically for Mattapoisett. She is believed to be the first with a molded oak sheer strake and the last to be gaff rigged. Today XIPHIAS belongs to Rick Meyer, who wrote the 1991 History of the Fish class for its 75th anniversary.

Parkman D. Howe, who became vice commodore of the Mattapoisett Yacht Club in 1928 and later owned DORIS (the largest sailing yacht of wood ever built by HMC_o), raced SCULPIN through about 1930. According to Edward Wood in his book *Sailing days at Mattapoisett 1870 - 1960*, all but two of the Fish boats at Mattapoisett were gaff rigged until the 1930 sailing season when a general conversion to Marconi took place. SKATE and TARPON remained gaff rigged, creating some inconclusive controversy whenever they raced with the others.

The Mattapoissett Fish boats usually raced over long courses to the extremities of Buzzards Bay, and were considered well adapted to the notoriously steep chop. At least two Fish Boats, MORRHUE and SHARK, were swamped during races, putting their forward watertight compartments to the test. W. Mason Smith, Mattapoissett owner of WAHOO, states in a 1973 letter to Robert Pittaway that "the boats had a very wide cockpit and a narrow deck, which made it difficult to sit up to windward when it was blowing hard or to brace oneself across the cockpit. Accordingly, most of the boats were modified by widening the deck (Figs. 27–29) and narrowing the cockpit by about a foot. We thought this made a great improvement."

The Fish Class remained active until 1938 when the Great Hurricane destroyed many of them and signified the end of racing in Mattapoissett.

RACING AT WARWICK

The Warwick Country Club (WCC) of Rhode Island was founded in 1925 and according to William Nixon in his book *Warwick Neck - A Collection of Memories*, on Saturday, July 4 of that year they held their first Annual Regatta. This event was "open to yachts enrolled in any organized yacht club."

Five Fish boats were ordered from HMCo in time to participate (for a cost of \$1,750 each) and seven more new boats joined the WCC fleet the following season, this time for \$1,900 each. All twelve WCC boats had Marconi rigs and molded oak sheer strakes, and all were named for cartoon characters.

They included:

SASSY SALLY – Edward R. Bancroft & Francis M. Smith

KATRINKA – Roderick F. Makepeace & Emerson P. Smith

AUNT EPIE – Charles M. Smith, III & E. R. Trowbridge

TARPOON II – Halsey DeWolf

RAGGEDY ANN – R. F. Haffenreffer, III

FELIX – William C. Huntoon & John C.B. Washburn

MAGGIE – Byron A. Waterman

MICKEY – F. S. Parsons

TOMBOY – Charles E. Trowbridge

ANDY GUMP – Malcolm E. Read

BROWNIE – Harold Hoffmann

STARLING – C. B. Rockwell, Jr.

The Warwick Fish boats raced for only a short time before the members decided to replace them with Atlantics—larger sloops designed by W. Starling Burgess. Most of the WCC boats were sold to members

of the Cold Spring Harbor Beach Club on Long Island, only three miles from the home of the first (SCYC) fleet.

RACING AT COLD SPRING HARBOR

The Cold Spring Harbor Beach Club (CSHBC) was established in 1921, and its first fleet consisted of nineteen 20' LOD knockabout sloops designed by B. B. Crowninshield, fourteen of which were delivered in 1922 and six more by 1928.

According to [*History of*] *The Cold Spring Harbor Beach Club* by Julia F. Fairchild and Arthur M. Crocker, in the "Flush Days" of 1929, the Yachting Committee of CSHBC was under pressure to expand the racing program with different types of boats. Committee chairman Allen Klots boiled it down to three choices: Acquire a fleet of five-year-old Fish boats from Warwick at 60% of their original cost, build a new fleet of Herreshoff S Boats at \$4,500 each, or develop a new class of 25' LWL racer/cruisers at \$6,000 to \$7,000 apiece.

Fish boats won out not only because of their more modest cost, but also because members were more interested in a comfortable, family-type boat than in racier ones. Nine Fish boats were therefore purchased from WCC members in 1929, and five more, including SCULPIN from Mattapoissett, arrived in 1930.

1930 also marked the arrival of thirteen Atlantic Class sloops—built in Germany at \$2,500—which were much less costly than S-boats would have been. Built of wood originally, Atlantics were eventually converted to fiberglass and continue to race at CSHBC to this day.

By 1932 the CSHBC Fish class fleet was 21 boats strong, made up of Marconi boats from WCC and Mattapoissett, and gaff-rigged boats that had remained behind at the nearby SCYC. SCULPIN was purchased from Parkman D. Howe by CSHBC member John Foster Dulles (Secretary of State under Eisenhower from 1953 to 1959) in 1930 and relocated from Mattapoissett.

According to CSHBC member and yacht designer Clinton Crane who owned TUNA, there was little difference in performance between the two rigs.

From 21 boats of the 1932 - 36 years, the fleet gradually declined and finally disbanded with the onset of WWII. According to Joe Stout, the decline may be partially attributed to Dave Noyes—one of the best young Fish boat sailors—who is quoted as having said to his father on the dock one day, "Daddy, I want an Atlantic."

John Foster Dulles sold his SCULPIN in 1937 to German H. H. Emory of Southport, Connecticut, who re-

named her WEST WIND. The name SCULPIN, however, carried on. Perhaps coincidentally, that same year the keel was laid at the Portsmouth Naval Shipyard for another SCULPIN, a 310-foot Sargo-Class submarine.

THE HURRICANE OF 1938 AND WWII

The last two HMCo Fish boats were built in 1936 and 1937. Both had molded sheer strakes, were trimmed with mahogany, and brought the total number of fish boats built to 41.

German Emory soon moved SCULPIN, renamed WEST WIND, to his beloved summer home in Brooklin, Maine, where the weather was cooler and the winds more predictable (Figs. 21-23). This move was a lucky break for WEST WIND, because she escaped the fury of the Great Hurricane of 1938 that destroyed much of the coast between Long Island and Massachusetts.

With the onset of World War II on December 7, 1941, WEST WIND was safely tucked away in the Emory's boathouse and remained there until the War's end. Although German Emory's son, Ben, was born too late to experience WEST WIND firsthand, he recalls his father saying that she was the best boat he had ever owned, and that he wished he had never had sold her.

But sell her he did, in the fall of 1946 to R. Keith Kane of the Wickford (Rhode Island) Yacht Club. Mr. Kane, a Harvard educated lawyer from New York, found the narrow Wickford channel a challenge, but according to his daughter, Shelah Kane Scott, family members agreed that WEST WIND handled better than any other boat they had sailed, and that just looking at her sitting at her mooring had been a delight. The Kanes sailed WEST WIND at least three times around Jamestown Island and frequently up and down the length of Narragansett Bay.

By 1968 WEST WIND had become frail, and sailing her was problematic for an aging Mr. Kane whose four daughters' help was no longer readily available, so he donated her to Mystic Seaport (Fig. 24). She didn't remain there for long.

Kenneth Cook (aka Cookie) worked as a shipwright at Kahle & Flag Marina on the Housatonic River. He purchased WEST WIND from Mystic Seaport in October, soon after her donation, and spent ten years (with the help of his son James) restoring her in his spare time. James Cook wrote a letter asking about the Fish Class to L. Francis Herreshoff in 1970 (Appendix 6), to which LFH replied "...that these are much better boats than any built since."

Cookie added a second set of steam-bent frames and floor timbers in between the originals and replaced the cockpit, cabin and coamings with an arrangement that loosely resembled the cruising version of the Fish called the Marlin (Fig. 25). When launched, Cookie renamed the boat FRIAR TUCK, and then later when his wife accused him of spending more time sailing than with her, they renamed her MISTRESS. Unfortunately, declining health made it impossible for him to sail alone (given the lack of auxiliary power and strong tidal current on the river) and Cookie sold the boat only a few years after completing the decade long restoration.

Kenneth Cook sold MISTRESS in 1979 to Robert W. Nelson who kept her at Brown Boat in Stratford, Connecticut. Bob worked as a flight engineer on the Rockefeller family's airplane, and re-named the boat LITTLE TYCOON. As it turns out, Bob Nelson's father had been a chauffeur for a member of the Seawanhaka Yacht Club—often crewing on the Fish boats (Fig. 14). Bob only had LITTLE TYCOON for three years, before selling her to his friend Peter Carlin in 1981.

Peter Carlin and his wife Caroline purchased the boat on October 4, 1981 and changed the name back to WEST WIND. They, along with their children sailed her from the Housatonic Boat Club in Stratford for ten more years, venturing as far as Middleground Light in the middle of Long Island Sound. They continued to store her in the off-season at Brown Boat until 1992 when she was considered no longer seaworthy. Bringing her home, his plan was to restore the boat himself—so he erected a tent, pulled off the garboards and broad strakes, removed the deck and cockpit, and stripped the paint to bare wood. The original Herreshoff spars were hung in the basement, and the sails and hardware were carefully boxed and put away.

Over the next ten years WEST WIND lay dormant. Tarps being added to shed snow and rain after the tent decomposed. For most wooden boats hauled out like this and left idle, it could be the end of their story. And for a boat expected to last no more than twenty or so years, seventy-six was a pretty good run.

RESURRECTION AND RESTORATION

While I was displaying a replica Fish boat at the 2009 Wooden Boat Show that Artisan Boatworks had just completed (Fig. 73), Peter and Caroline happened by and we struck up a conversation. By then, Peter had reluctantly abandoned the idea of restoring WEST WIND on his own, and was intent on finding her a good new home. We had already rebuilt an original Fish (HMCo #976) in 2003, and we were familiar with the design and its history. So I agreed to take possession and

store her under cover until a suitable owner could be found and a proper restoration undertaken. A year later, in July of 2010, the pine trees that had grown up around the boat were cut down and she was jacked onto a trailer and brought to our shop in Maine.

She remained with us for six years until January of 2015 when we were introduced to Mr. William Marshall. Bill summered on Nantucket, was looking for a special anniversary gift for his wife, and so decided that restoring an original Herreshoff Fish boat would be just the thing. We came to an agreement to thoroughly restore the boat with the goal of completing and re-launching her as SCULPIN in time for her 2016 centennial.

We agreed that, given SCULPIN's historical significance, she should be restored as authentically as possible—and practical. If time had demonstrated obvious deficiencies in the original construction they would be corrected, but otherwise most new pieces would be made like the original ones, meaning, in part, that a 1916-style steam-bent white oak cabin and coaming would replace Kenneth Cook's of the 1970s, and the side-decks (widened at Mattapoisett) would be returned to their original width.

Because good quality butternut that Herreshoff specified was almost impossible to find, we substituted Honduras mahogany for the seats and bulkhead staving. The Marshalls favored bare teak over the original painted cedar for the cockpit sole. To insure she would not lose her shape over the next hundred years, and to maintain the watertight integrity of the forward bulkhead and deck, we substituted epoxy-coated marine plywood for the original softwood deck and bulkheads. The new deck would then be covered with canvas to look as it did in 1916.

Being in the first fleet of 1916, SCULPIN was originally gaff rigged, and then underwent the wholesale conversion to Marconi carried out by HMCo in 1930. That rig and the hardware that went with it is genuine HMCo and will remain. It was our aim to reuse as much of the other original material as possible. This included the ballast keel, deadwood, rudder, tiller, mast and planking—except for the sheer strakes and garboards.

Structurally, all of the frames, floors, transom, sheer clamps, deck frame, and all the screws and bolts that held them together would have to be renewed.

The goal was for SCULPIN to emerge from Artisan looking as she would have appeared in 1916, including low-sheen paint.

RESTORING THE SHAPE

SCULPIN came into the shop in late July and was immediately stripped down to a bare hull. Within hours the house and deck were in the dumpster, and the sheer clamps, cockpit sole, and deck frame were not far behind. Peter Carlin had previously stripped all of the exterior hull paint, exposed the screws, and removed the garboards, and broad strakes.

After we took out the secondary set of frames and floor timbers that Kenneth Cook had installed, four molds from the original offsets were made and inserted into the hull (Fig. 30). The boat's sectional shape came back very easily with minimal coercion during this operation. We then focused on the longitudinal shape, which left much to be desired. To achieve the necessary flexibility we removed every other original frame which allowed the bow and stern to be pushed up while the ballast keel anchored the midsection down to the floor. The ends of SCULPIN were then carefully jacked up and the bilges leveled side to side until the hull matched a laser line shot through all of the lofted points of an imaginary waterline above the boat (Fig. 31).

RESTORING THE HULL

With the hull shape now back where it should be, the Artisan crew began by replacing the transom (Fig. 33) and simultaneously removing, restoring, and reinstalling the stem (Fig. 34). While the original floor timbers were still in place, all of the steam-bent hull frames were replaced after we first filled the screw holes in the planking with West System epoxy thickened with 407, the filler additive which most resembles the properties of wood. Next, the original floor timbers were replaced (Fig. 32) and fastened to the heels of the new frames with large copper rivets and 3M 5200. They were temporarily clamped to the original plank keel.

We found the plank keel not deteriorated as badly as the floor timbers, but when viewed next to all the freshly primed new wood, it became clear that this timber was not up to another hundred years. Consistency is one of the most important factors in a successful restoration, and given the inaccessibility of the plank keel once the ballast keel and floor timber bolts were renewed, we felt it irresponsible not to replace it now.

We located a beautiful piece of quarter-sawn white oak, twenty feet long, twelve inches wide, and two inches thick, and carefully shaped and steam bent it against the underside of the floor timbers to form the new plank keel. After cooling, it was removed, sanded, primed, and bolted back into place with silicon bronze carriage bolts (Fig. 36).

While this was going on, a matching pair of new white oak sheer strakes was installed and beveled to the camber of the deck (Fig. 35). New sheer clamps were then steam-bent into place, the cedar garboards and broad strakes made anew and installed, and soon SCULPIN was almost ready for caulking (Fig. 37).

The topside seams were in good condition and had not opened up significantly. The new seams at the rabbet, garboard, and broad strake could also be caulked because they were new. But there were four seams on each side of the boat that were too wide for caulking.

To fix these seams, in order to preserve SCULPIN's original plank lines and plank widths, we decided to fill the space by gluing in full thickness 3/8" cedar splines, and then caulk the rest of the hull by rolling in strands of cotton (Fig. 38).

One of the improvements over HMCo's practice was to thoroughly paint every surface both inside and out with two coats of primer and two coats of oil-based enamel (Fig. 39). Surface preparation between coats is critical and we feel that no two pieces of wood should be joined together without thorough bedding. In SCULPIN, each new piece was primed prior to installation, and then the entire inside of the hull received the remaining coats.

The bilge got two coats of grey Interlux Bilge Coat, and the inside of the hull above received a mix of eight-parts flat white to one-part gloss cream that closely matched the color and sheen of the white paint that would have been used in 1916.

We struck off the painted waterline with a laser level, puttied the topside seams with traditional seam compound, and the bottom with a mix of underwater seam compound and roofing tar. Low spots and surface imperfections were filled with Thickened West System epoxy, and the entire hull primed with two coats of Interprotect primer. Finish coats of topside enamel and anti-fouling bottom paint would come later.

As mentioned earlier, half-inch-thick, epoxy-coated marine plywood was used for the forward watertight bulkhead and the forward face of the aft seat, both fastened to the frames with bronze screws and 3M 5200. Having swamped a similar-sized Herreshoff daysailer, I felt strongly that the forward bulkhead should be absolutely watertight, and that securing the aft seat bulkhead would help hold hull shape there.

The cabin bulkhead is non-structural and made up of tongue and groove, V-matched mahogany (Fig. 40). The deck frame is of white oak, painted before being installed. The deck itself, once scarfed together in place

as a unit, was removed for epoxy coating and painting its underside.

Before the deck frame and deck went in permanently, the cockpit and cabin soles were made and installed, the goal being to do this work while the hull was wide open, before the deck and coamings interfere with egress.

After the soles and deck come the coamings. After they've been patterned and steam-bent in place, they were removed for pre-finishing. The deck was epoxy coated, allowed to cure, and canvas was stretched over it, bedded in latex-lagging adhesive (Fig. 41).

Once the canvas was painted, the coamings were permanently installed, along with the toerails, cabintop, and hardware.

In doing research for this paper I reached out to James Cook, the son of Kenneth Cook, who had helped with the 1970s rebuild. As it turns out he was in possession of SCULPIN's original cabin doors and several pieces of original hardware – which he graciously donated to the cause.

In May of her 100th year, with her original name back on the transom for the first time in 79 years, SCULPIN will return to her Bristol, Rhode Island, birthplace where she has been invited to join her sisters and cousins on display at the Herreshoff Marine Museum. She will be there for the Museum's bi-annual Classic Yacht Symposium to celebrate the centennial of the New York 40s and the schooner MARIETTE as well as her own.

Following the Classic Yacht Symposium, SCULPIN will make her way to Nantucket where she will begin her next hundred years under the care of Tracey Marshall.

BUILDING A NEW REPLICA

In 2010, before restoring SCULPIN, Artisan Boatworks was approached by Peter and Kathy Wagner, who owned a Haven 12-½ that they liked very much but found that the four-knot tidal current where they lived was beyond a boat this small. They needed a bigger and faster boat with auxiliary propulsion to safely bring them home on a foul tide. They'd still be daysailing, but looked forward to longer sails in more exposed waters. After considerable thought and research, they decided that a Fish boat with auxiliary power would be ideal.

HMCo had once installed inboard engines in Marlins, so there was precedent. We proposed the same arrangement, consisting of an engine in the cockpit whose box also functioned as a small "coffee table" and proved advantageous for standing upon when furling the

sails. For shorter-legged passengers, it could serve as a foot brace as well.

The Wagners decided to have Artisan build a new replica and, not being constrained by restoration criteria, had some latitude in picking and choosing details from various incarnations of the Fish boat design. They could also consider alternate construction methods using modern materials and adhesives.

Laminated epoxy (cold molded) construction was discussed as an option, but the Wagners wanted to still see the closely-spaced, steam-bent frames and other structural components important to the boat's character. They decided that the varnished mahogany transom and molded sheer planks used on the final two HMCo Fish boats would look nice, and that a gaff rig would be preferable to Marconi. Time was spent studying Mystic Seaport's 1936 Fish boat MARY HELL, HMCo #1379, which was the next-to-last one built. She became the benchmark for the Wagner's new replica—all but the rig.

Hardware would all be bronze, and they opted to go with J.M. Reinecks's cam cleats for the sheets and halyards—an item developed by Jim for a Buzzards Bay 15 replica built by Artisan in 2008.

Construction would be traditional except for edge-gluing the seams of the cedar planking instead of caulking them conventionally with cotton, and the bulkheads and deck would be of epoxy-coated marine plywood.

The new boat's hull shape was carefully lofted using original offsets, scaled as discussed earlier, but instead of building an individual mold for every single frame as was done by HMCo back in 1916, the crew at Artisan have concluded that for a single boat it is more efficient to set up molds for every third frame, spaced such that the three permanent bulkheads would fall on mold frames (Fig. 53). In this manner there are only eight temporary molds instead of twenty-two. Stiff longitudinal ribbands were bent around these molds, creating a "basket" into which the oak frames were steam bent (Fig. 54).

The new replica, named TULIP (which is a kind of Fish), was launched in May of 2011 and made her public debut at the Wooden Boat Show in Mystic soon afterwards (Fig. 73). It was at this show that TULIP's presence caught the eye of Peter Carlin, thus initiating the SCULPIN project.

SAILING PERFORMANCE

Through interviews with past and current owners of Fish boats, including former owners of SCULPIN, the

recurring comment is that their Fish was the best boat they ever owned.

Given the number of early one-design sailboats produced over the past hundred years, and the rate at which one-design classes were coming and going during that era, the fact that 24 of the original 41 Fish boats, are still accounted for is remarkable.

In an April, 2015 video from OffCenterHarbor.com about a Fish boat called PERCH, narrator Eric Blake describes the Fish as being "simple, and lovely from every angle—large enough to take a family across the bay in style, yet nimble enough to take off on the mere suggestion of a breeze. She is in every respect, a three-generation boat."

Indeed, there have been faster boats, and there have been boats with more accoutrements. But for 100 years, the Fish has never fallen out of fashion because there is nothing exceptionable about her. She does exactly what she needs to do, with efficiency and grace.

In an interview with the well-known sailmaker Nat Wilson, who has owned and sailed an original Fish boat since 1975, he pointed out that the proportions and angles of the rig were consistent with Herreshoff's most successful designs. Nat's gaff-rigged Fish boat, he's discovered, can-out sail many similar-sized modern Marconi-rigged boats. When asked about the Fish boat's rumored weather helm, Nat vehemently declares, "it's simply not true!" In tacking up and down the Damariscotta River he is in complete agreement with L. Francis Herreshoff and many other Herreshoff Fish Class owners in claiming that "*these are much better boats than any built since.*"

IDENTIFICATION OF ORIGINAL BOATS

Of the 41 Fish boats (Appendix 1) built by HMCo, according to the online Herreshoff Registry, 24 are known to exist today (Appendix 2). Of those 24, only 12 can be traced back to their original HMCo hull number. Our hope is that readers of this paper will share it with their friends and relatives who might have memory of Fish boats. Any information about boat names, past owners, sail numbers, and the fate of boats listed as "unknown" will greatly aid existing owners in attempting to recreate their boat's provenance. One clue to identifying boats may be roman numerals carved into the base of spars. These numerals correspond to sail numbers, but at which club is inconsistent.

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Bray, Maynard; N.G. Herreshoff's Hollow-Bow Boats; WoodenBoat Magazine #138, September/October 1997

Hasselbalch, Kurt; Guide to the Haffenreffer-Herreshoff Collection; Francis Russell Hart Nautical Collections, MIT Museum, Cambridge, MA 1997

Van der Linde, Claas; The Herreshoff Catalogue Raisonné (web site) December 2015 – March 2016

Thank You to:

Claas van der Linde
Maynard Bray
John Palmieri
Rick Meyer (owner of XIPHIAS)
Nat Wilson (owner of KATHY)
Steve Nagy
Teeter Bibber
Jim Reineck
Bill Beardsley
Halsey C. Herreshoff
Dan Harper
Ben Emory
William Nixon – Warwick Neck
Gary Knap – Cold Spring Harbor Beach Club
Kurt Hasslebalch – Hart Nautical Collection, MIT
Shelah Kane Scott (daughter of R. Keith Kane)
James Cook, Jr. (son of Kenneth Cook)
Robert Nelson (owner of SCULPIN 1979 - 1981)
Peter Carlin (owner of SCULPIN 1981 - 2009)
William and Tracey Marshall (current owners of SCULPIN)
Peter and Kathy Wagner (owners of TULIP)
Jane Kurko

ABOUT THE AUTHOR:



Alec Brainerd - After many years working in boatyards as a shipwright and crewing on large classic yachts around the world, Alec, a Maine native, founded Artisan Boatworks in 2002. He lives in Rockport with his wife and two daughters.

Alec and his family enjoy skiing and the Camden Snow Bowl in the winter months, and sailing their Sparkman & Stephens yawl NORA in the summer. For more information about restorations and construction of new replicas at Artisan Boatworks, please visit www.ArtisanBoatworks.com. (Photo courtesy of Luke Boelitz)

APPENDIX 1 – Original Herreshoff Fish Boats

HMCo #	Original Name	Built For:	Contract Date	Fleet	Cost	Trim	Rig	Sheer	SCYC Sail #
HMCo #788s	Manatee	Strauss, Albert	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	1
HMCo #789s	Cod	Shonnard, H. S.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	7
HMCo #790s	Bluefish	Smith, Howard C.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	5
HMCo #791s	Shark	Morgan, J. P.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	6
HMCo #792s	Volador	Bacon, Daniel	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	12
HMCo #793s	Whitebait	White, Alexander M.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	10
HMCo #794s	Anchovy	Hayes, Francis M.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	8
HMCo #795s	Snapper	Roosevelt, W. Emlen	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	14
HMCo #796s	Shrimp	Stewart, W. A. W.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	15
HMCo #797s	Pompano	Appleton, W[illiam] H.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	16
HMCo #798s	Porpoise	Crane Jr., R. T.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	13
HMCo #799s	Grunt	Shaw, Samuel T.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	9
HMCo #800s	Sabalo	Whitney, A. R., Jr.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	17
HMCo #801s	Tarpon	Bishop, Dr. L. F.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	2
HMCo #802s	Periwinkle	Hayes, Henry R.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	4
HMCo #803s	Barracuda	Hicks, DeForrest	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	11
HMCo #805s	Bonita	Crane, Charles R.	1/10/16	Seawanhaka	875	Oak	Gaff	Plain	3
HMCo #807s	Sardine	Work, Bertram G.	1/21/16	Seawanhaka	875	Oak	Gaff	Plain	18
HMCo #808s	Skate	Smith, H. L.	1/21/16	Seawanhaka	875	Oak	Gaff	Plain	19
HMCo #811s	Eel	Stewart, Cecil P.	4/21/16	Seawanhaka	875	Oak	Gaff	Plain	20
HMCo #812s	Nahma	Duncan, W. Butler	4/21/16	Seawanhaka	925	Oak	Gaff	Plain	21
HMCo #814s	Amberjack	Watts, R.	4/21/16		925	Oak	Gaff	Plain	
HMCo #816s	[Squid] Sculpin	STOCK - Purchased by Remington, F.	4/21/16	Seawanhaka	925	Oak	Gaff	Plain	22
HMCo #819s	Minnow	Williams, F. S.	1/2/17	Seawanhaka	925	Oak	Gaff	Plain	24
HMCo #820s	Cockle	MacKensie, G. C.	1/5/17	Seawanhaka	925	Oak	Gaff	Plain	26
HMCo #821s	Tuna	Scudder, T.	1/5/17	Seawanhaka	925	Oak	Gaff	Plain	27
HMCo #826s	Xiphias	Hinsdale, F. G.	1/30/19	Mattapoisett	1700	Oak	Gaff	Molded	
HMCo #939s	Sassy Sally	Bancroft & Smith, Edward R. & Francis M.	1925	Warwick	1750	Oak	Marconi	Molded	
HMCo #940s	Katrinka	Makepeace & Emerson, Roderick F. & Emerson P.	3/10/25	Warwick	1750	Oak	Marconi	Molded	
HMCo #941s	Aunt Eppie	Smith III and Trowbridge, Charles M. & E. R.	3/10/25	Warwick	1750	Oak	Marconi	Molded	
HMCo #942s	Tarpoon II	DeWolf, Halsey	2/21/25	Warwick	1750	Oak	Marconi	Molded	
HMCo #943s	Raggedy Ann	R. F. Haffenreffer III	1925			Oak	Marconi	Molded	
HMCo #972s	Felix	Huntoon & Washburn, William C. & John C. B.	11/9/25	Warwick	1900	Oak	Marconi	Molded	
HMCo #973s	Maggie	Waterman, Byron A.	11/12/25	Warwick	1900	Oak	Marconi	Molded	
HMCo #974s	Mickey	Parsons, F. S.	11/17/25	Warwick	1900	Oak	Marconi	Molded	
HMCo #975s	Tomboy	Trowbridge, Charles E.	11/17/25	Warwick	1900	Oak	Marconi	Molded	
HMCo #976s	Andy Gump	Read, Malcolm E.	11/17/25	Warwick	1900	Oak	Marconi	Molded	
HMCo #977s	Brownie	Hoffmann, Harold	11/17/25	Warwick	1900	Oak	Marconi	Molded	
HMCo #978s	Starling	Rockwell Jr., C. B.	1925	Warwick		Oak	Marconi	Molded	
HMCo #1379s	Mary Hell	Lautmann, H. M.	6/10/36		1800	Mah.	Marconi	Molded	
HMCo #1380s	Scup	Newlock, F. D.	6/3/37		1500	Mah.	Marconi	Molded	

APPENDIX 2 – Extant Herreshoff Fish Boats

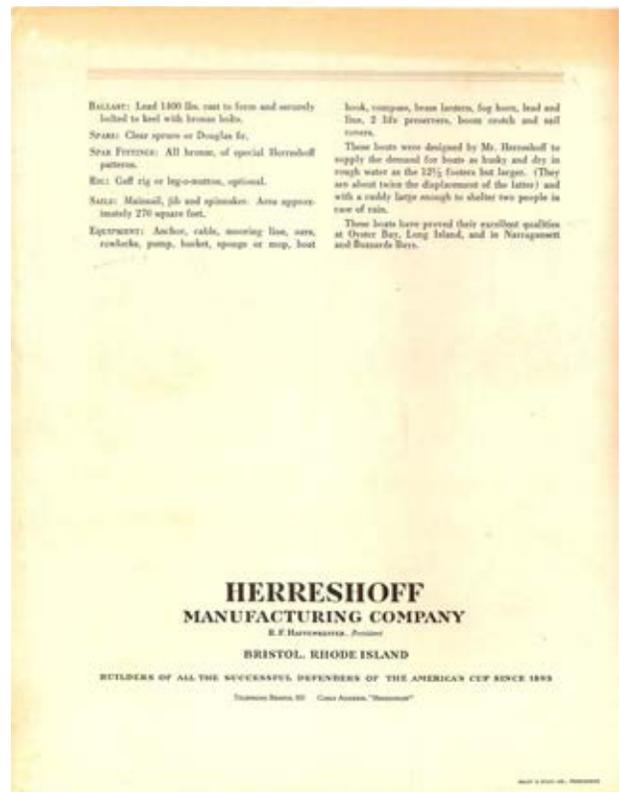
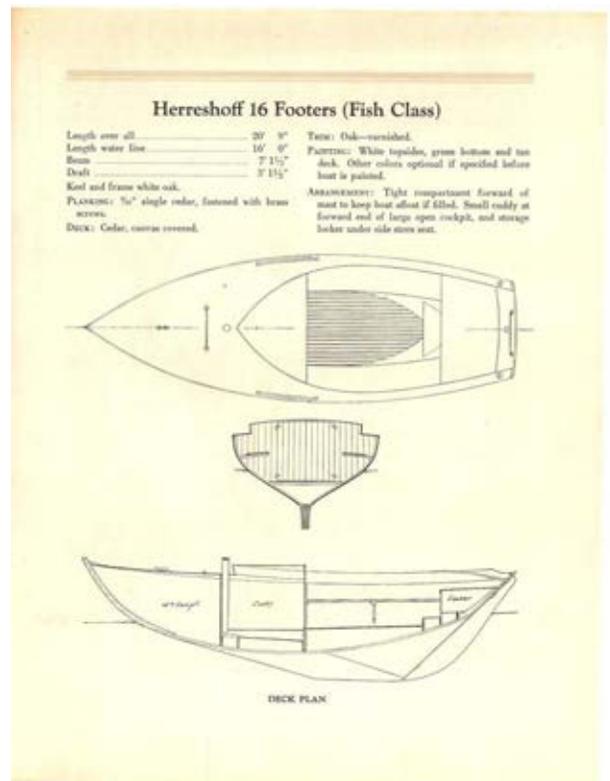
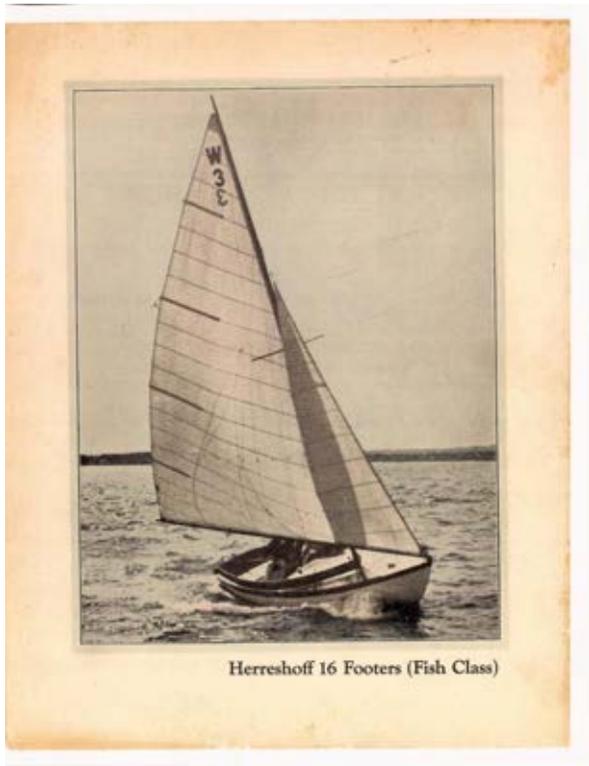
Extant Identified Boats	Current Owner	Carved #	Sheer	Notes, previous names, previous owners, etc.
HMCo #790s	BLUEFISH	Herreshoff Museum		Plain
HMCo #791s	SHARK	Jean De Fontenay		Plain May be a different Shark? Now called Capria?
HMCo #794s	ANCHOVY	IYRS		Plain
HMCo #797s	POMPANO	David Snedaker		Plain Previously BUTTERFLY?
HMCo #802s	PERRIWINKLE	Dan Harrison		Plain
HMCo #807s	SEA ROBIN	Nicholas Long		Plain
HMCo #812s	WHIM	Paxson H. Offield		Plain
HMCo #814s	HERRING	W. McDonald & R. Schell		Plain Didn't go to Seawanhaka
HMCo #816s	SCULPIN	Tracey Marshall		Plain Restored by Artisan Boatworks in 2015, previously WEST WIND
HMCo #826s	TEA CUP	Rick Meyer		Plain Remained Gaff
HMCo #941s		Steve Frary		Plain
HMCo #976s	PARACLETE II	Negley		Plain Restored by Artisan Boatworks in 2002, previously LOUISE
HMCo #1379s	MERRY HELL	Mystic Seaport		Mah.

Extant Unidentified Boats	Current Owner	Carved #	Sheer	Notes
	JOHN DORY	Dan Shea	3	molded Previously Marcia Too, was owned by Peter Quigley
	PERCH	Ben Emory	7	molded Previously WANDA, restored by MP&G
	FFELICITY	Jim Newman		
	SHAD	Barbara Kingsland		
	CHUM			Restored by MP&G
	KATHY	Nat Wilson	10	plain
	WAHOO	Adam Wronowski		
	PATCHES	John Howard		
		Rodger Stokey		
	SUSAN ALICE	Richard Shrodder		
	BUTTERFLY	Walter Fisher		also owned by Colin Downey
	DOLPHIN	Seth Hagen		From HMM, previously owned by Philip Green. (daughter Jane Bartram)
	RUSALKA	Hirschmann		Ballast Keel only, previously owned by Alexander Wessel Shapleigh

Missing Unidentified Boats	past Owner	Sail #	Sheer	Notes, previous names, previous owners, etc.
	SKIPPER	Benjamin Young	3	CSHBC 1932
	BARQUE	Stanley Rumbough	6	CSHBC 1932
	SAIL FISH	Gerald M. Livingston	7	CSHBC 1932
	WINDWARD	Joseph Strout	10	CSHBC 1932
	SHANDY GAFF	Artuur Paine	11	CSHBC 1932
	SEA ROBIN	Leslie T. Webster	18	CSHBC 1932
	SHINER	George Crocker	21	CSHBC 1932
	NAUTILUS	Lansing P. Reed	25	CSHBC 1932
	MORRHUE	James Stoddard		Mattapoisett 1926-1938
	NAUTALIS	E.C. Storrow		Mattapoisett 1926-1938
	WAHOO	Wm Mason Smith		Mattapoisett 1926-1938
	MISCHIEF	Kim & Steve Clark		Rick Meyer 1991 list
	HERRING	Roseland Scheel & Will McDonald		Rick Meyer 1991 list
	KABRILLA	Mary Fortress		Rick Meyer 1991 list
	HARBINGER			Padanam, destroyed in boatyard fire
	HOPE			Padanam

If you have information pertaining to any of these boats, please email Alec@ArtisanBoatworks.com

APPENDIX 3 – Original Herreshoff Advertising Brochure



APPENDIX 4 – Letter from German H. H. Emory to Robert A. Pittaway

GERMAN H. H. EMORY
260 MADISON AVENUE
NEW YORK, N. Y. 10016

January 7, 1974

Mr. Robert A. Pittaway
6 Broad Street
Stonington, Conn. 06378

Dear Mr. Pittaway:

In the "National Fisherman", I read of your collecting data for a history of the Herreshoff "Fish" boats. At one time I had one.

Mine was, I think, No. 16; but I am uncertain about that. Anyhow, I bought my boat, which was named "Sculpin" (not too attractive a fish), from John Foster Dulles, who kept her at the Cold Spring Harbor Beach Club, Cold Spring Harbor, L.I., N.Y., which is on Oyster Bay. That was in the spring of 1937, I believe.

I renamed the boat "West Wind". That first summer, I kept her at Southport, Conn. but in the fall moved her to Brooklin, Maine (Eggemoggin Reach), where we sailed her until 1950. We sold her to Mr. R. Keith Kane, a New York attorney, who kept her at his summer home on Narragansett Bay for a number of years. In the end, I believe she wore out, but I know no details.

She was a great boat!

Sincerely,

German H. H. Emory
German H. H. Emory

TRE
TO
LOC 14 TB
RH

APPENDIX 5 - Letter from L. Francis Herreshoff to Dr. Roy C. Gumpel

Class - Hull / Sail No. 7 (Must had #4 on tier)
Hull No. 794 ANCHOVY

FISH FILE

THE CASTLE
MARBLEHEAD, MASSACHUSETTS

January 13, 1970

Dr. Roy C. Gumpel
The Rye Medical Group
269 Purchase Street
Rye, N. Y.

Dear Doctor:

In answer to your letter of January 7, I will say first: thank you for your kind words about some of my writings.

The Seawanhaka Corinthian Yacht Club Fish Class boats were built for wealthy middle aged-members of this club, many of whom had or had had larger yachts. The gentlemen of those days were very different from the boatmen of today. These Fish Class boats which were ~~designed~~ in 1916 by the Herreshoff Manufacturing Co. in 1916 had a small cabin with short settees on both sides so that a gentleman could keep some sailing clothes or particularly white trousers so that when he came aboard in his city clothes he could make a change of shoes and clothes before enjoying an afternoon sail. These boats were designed by my father, particularly for that purpose and to give as comfortable and pleasant sail as was possible in a lively feeling, dry little craft. Although they were built to the Universal Rule they were in no way rule cheaters but had very comfortable cockpits with seats at just the right angle and the combing angled to make a comfortable backrest.

This may have been the last class that decently dressed ladies and gentlemen who appreciated the beautiful landscape sailed for many years. I only wish I could give a better description of this refined class but I learned to appreciate them in delivering one or two to the above mentioned yacht club from the builders. If these boats had had good care all their life, they should still be in good shape. As for their performance, they were fast in light weather and perhaps the best sea boats of their size which had open cockpits that I for one have ever seen. Enclosed is a copy of a brochure describing the Fish Class.

As to the other boat you spoke of and said was quite wide: If she is planked with mahogany, she is probably a small sail boat that Mr. Morton Plant had built for his son when quite young, I believe the son did not care for her so my uncle, J.B. Herreshoff took her in trade for a larger yacht and this mahogany sailboat was turned over to JB's daughter and granddaughters. This boat was called the DAD and was built in 1906.

Yours truly,

L. Francis Herreshoff

APPENDIX 6 - Letter from L. Francis Herreshoff to James Cook

THE CASTLE
MARBLEHEAD, MASSACHUSETTS

September 18, 1970

Mr. James Cook
122 Sims Street
Bridgeport, Conn.

Dear Mr. Cook:

In answer to your letter about the so-called Fish boat which you acquired from the Mystic Museum, I would say in the first place that these are much better boats than any built since.

They were designed to fit the ~~standard~~ ^{universal} rule and I think rated 14 $\frac{1}{2}$ '. They were called Fish boats because they were all named for fish of various varieties.

I am sending you two pages of a HMCo brochure which shows these boats.

N. G. Herreshoff never drew lines of boats but had them built from a model he had made and in most cases the sail plan was only drawn in pencil and he took from this plan the dimensions for the sails and made up the rigging list. So, unfortunately the lines and sail plan are not available but I think you can get the construction plan from Mr. William H. Baker, Curator, Hart Nautical Museum at Mass. Inst. of Technology, Cambridge, Mass. and that construction plan would probably show enough sections to make a model and the sail plan could be taken from the enclosed brochure. (For your interest, a Dr. Roy C. Gumpel, The Rye Medical Group, 269 Purchase St, Rye, N.Y. (summer place in Mystic) has recently refurbished the Anchovy built in Jan. 1916. Might be worth your while to contact him.)

You may think I am old-fashioned but I will suggest that you use a small jib as is shown for it is these present large jibs which have spoiled pleasant sailing as they require winches and many sizes of head sails with different jib leads together with foolish expense.

I delivered some of these boats when they were new and I quite agree that the deckhouse should have been bigger but originally they were never planned to sleep anyone but were used by the wealthy people who lived near the Seawanhaka Corinthian Yacht Club for afternoon sailing.

Yours truly,

L. Francis Herreshoff

APPENDIX 7 – *New York Times* article, April 29, 1916

NEW ONE-DESIGN YACHTS.

Score of Novel Boats in Seawanhaka-Corinthian Fleet.

Twenty one-design yachts for members of the Seawanhaka-Corinthian Yacht Club are now receiving their finishing touches in the yards of the Herreshoff Company at Bristol, R. I., and will be added to the fleet of the club at their Oyster Bay anchorage about the middle of next month. These new craft are the latest design by Mr. Herreshoff for the so-called knock-about type. While the design in construction was to secure seaworthiness and safety rather than extreme racing speed—a sort of kindergarten racer for the younger of the amateur helmsmen—Mr. Herreshoff has assured the members of the club that the form under water is one which will give such an amount of speed with small sail area as to furnish the liveliest kind of sport with absolute safety to the skippers, as the crafts are unsinkable, even if filled with water.

The new class will make its first appearance on May 30. All the craft have been named for some one of the fish tribe, that owned by Albert Strauss, which has been christened Manatee, after the Florida amphibian. The complete list of owners and names of the craft are:

Commodore Howard C. Smith's Bluefish, ex-Commodore Daniel Bacon's Volador, W. H. Appleton's Pompano, Dr. L. F. Bishop's Tarpon, Charles R. Crane's Bonita, R. T. Crane, Jr.'s Porpoise, Henry R. Hayes's Periwinkle, De Forest Hicks's Barracuda, J. P. Morgan's Shark, W. Emlen Roosevelt's Snapper, Samuel T. Shaw's Grunt, H. L. Smith's Skate, Cecil P. Stewart's Eel, W. A. W. Stewart's Shrimp, Albert Strauss's Manatee, H. S. Shonnard's Cod, Francis M. Weld's Anchovy, Alexander M. White's Whitebait, A. R. Whitney, Jr.'s Sabalo, and Bertram G. Work's Sardine.

The boats measure 16 feet on the water line and 21 over all, and have a beam of 7 feet and a draught of 3 feet 3 inches. They carry 262 square feet of sail and are ballasted with 1,200 pounds of lead, all on the outside. Spinnakers of the usual proportions will be carried. The craft cost \$875 each, and were assigned by lot to the twenty owners, who took the output from the design and then selected the names for their craft.

The New York Times

Published: April 29, 1916

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APPENDIX 8 – *New York Times* article, May 2, 1916

NEW 16-FOOTER TRIED.

Captain Herreshoff Pleased with the Latest Seawanhaka Class.

Captain Nat G. Herreshoff, designer of the new sixteen-foot "fish fleet," for members of the Seawanhaka-Corinthian Yacht Club, himself made the first trial spin with one of the boats in Bristol Harbor last week. A light westerly wind was blowing, and Captain Herreshoff had an excellent opportunity to try out the new knockabout boat, with mainsail and forestaysail set.

Word was received here yesterday that the new craft was very slippery in both running and reaching, and that in beating to windward the little boat was as clever as anything of her size could be. He was so thoroughly satisfied with the trial that he sent word to Commodore Smith that the little boats would not only do all that he had promised when he designed them, but somewhat better than he had hoped for, and would furnish a fine lot of racing craft for the coming season. Captain Herreshoff had the unnamed boat out for over an hour, and will give her another trial today before letting her and her companions—others of which will be ready this week—sail for Oyster Bay.

The New York Times

Published: May 2, 1916

Copyright © The New York Times

APPENDIX 9 – Provenance

Provenance, Herreshoff Fish #816

Herreshoff Builders Records, #816 SQUID commissioned April 21, 1916.

HMCo Vessel Index Card: SQUID built “for stock” sold to F. Remington Sept 18, 1916

22nd Fish boat built for SCYC, the last of the 2nd batch, delivered in May 1917

“The History of the Seawanhaka Corinthian Yacht Club 1897 - 1940” by John Parkinson, Jr., Page 109, Franklin Remington is listed as racing a fish boat named *Sculpin* in 1917 and 1918.

As there is no record of a fish boat named *Squid* ever having existed, it concluded that Remington renamed #816 *Sculpin* when he took possession.

The following information is copied from research by Rick Meyer in August of 1991.

- | | |
|----------------|--|
| 1917 - 1922 | Franklin Remington, renamed <i>Sculpin</i> , SCYC, Sail #15 |
| 1923 - 1925 | Nelson B. Burr, SCYC |
| 1926 - 1932 | Parkman D. Howe, Mattapoisett, MA, Sail # 22
Converted to Marconi rig in 1930 |
| 1932 - 1937 | John Foster Dulles, Cold Spring Harbor, NY, Sail #15 |
| 1937- 1950 | German H. H. Emory, Southport, CT, moved to Brooklin, ME,
renamed WEST WIND |
| 1950 - 1968 | R. Keith Kane, Wickford YC, Narragansett Bay. |
| 1968 - 1968 | Mystic Seaport |
| 1968 - 1979 | Kenneth Cook, converted for cruising, renamed FRIAR TUCK,
then MISTRESS |
| 1979 - 1981 | Robert Nelson, renamed LITTLE TYCOON |
| 1981 - 2009 | Peter Carlin, renamed WESTWIND |
| 2009 - 2015 | Alec Brainerd / Artisan Boatworks |
| 2015 - Present | Tracey Marshall, rebuilt and renamed SCULPIN |

FIGURES REFERRED TO IN TEXT



Fig 1) Miss Roosevelt on board GRILSE, one of the Clinton Crane designed 15' WL knockabouts raced at SCYC beginning in 1903

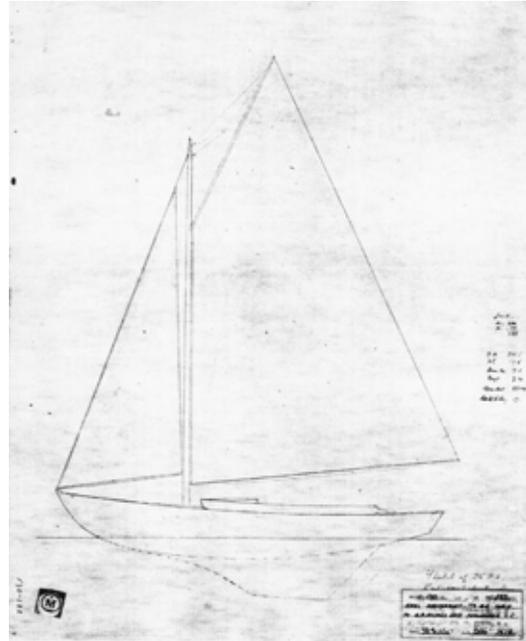


Fig. 4) 24' one-design for Seawanhaka based on SADIE. Proposed by Herreshoff in 1914 but never built. (Courtesy Hart Nautical Collection)



Fig 2) Herreshoff design #732 SADIE, built for SCYC member E. Cornelius Benedict in 1914. (Image courtesy Kathy Bray)



Fig. 5) Builders model for Herreshoff for 1914 12-½ and 1916 Fish Class (Courtesy Herreshoff Marine Museum)



Fig. 3) Herreshoff design #674 of 1907. This full-keel version of the Buzzards Bay 15 was proposed to SCYC as a replacement for the Clinton Crane 15 footers - at a cost of \$900 each. (Image courtesy Kathy Bray)

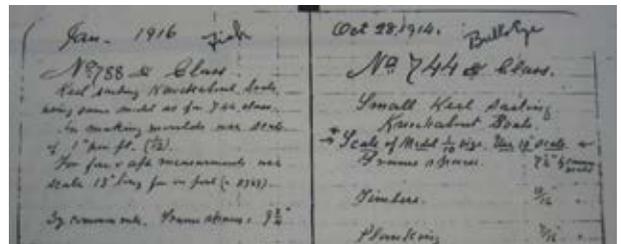


Fig. 6) Excerpt from Herreshoff offset book for 1914 12-½ and 1916 Fish Class (Courtesy Artisan Boatworks)

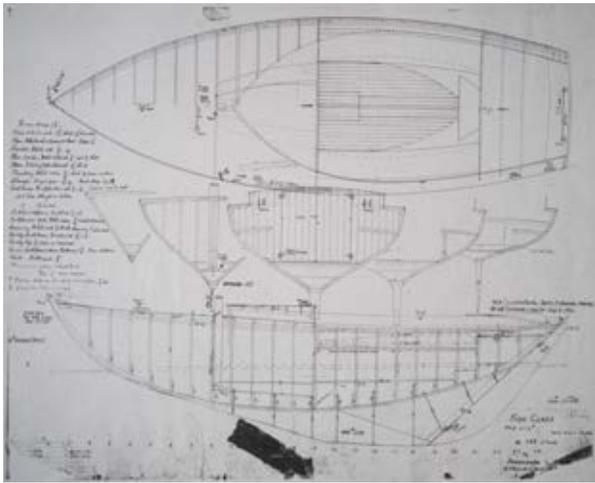


Fig. 7) Construction Drawing for Herreshoff 16' Class, 1916. (Courtesy Hart Nautical Collection)



Fig. 8) Herreshoff Fish Class Sail plan 1916 (Courtesy Hart Nautical Collection)



Fig. 9) Herreshoff Construction shop, 1916. New York 40 in foreground, with Fish Class to left. (Courtesy Herreshoff Marine Museum)

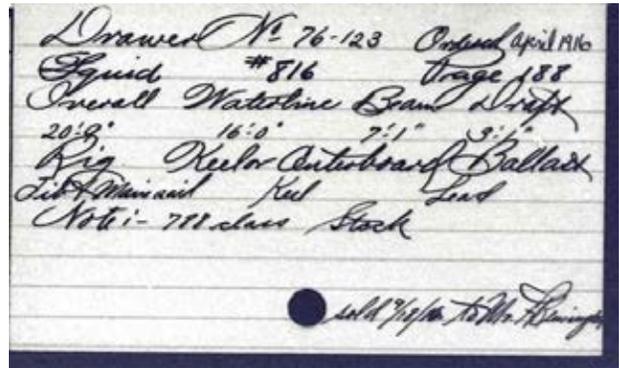


Fig. 10) Vessel Index Card for HMCo # 816 (Courtesy Hart Nautical Collection)



Fig. 11) Seawanhaka Fish Boats racing. (Courtesy Herreshoff Marine Museum)



Fig. 12) BLUEFISH underway



Fig. 13) POMPANO sailing at Seawanhaka



Fig. 16) Fish Boats sailing



Fig. 14) Robert Nelson's Father aboard a Seawanhaka Fish Boat with the owner. (Courtesy Robert Nelson)



Fig. 17) Fish Boat sailing



Fig. 15) BONITA underway



Fig. 18) SCULPIN sailing with her original gaff rig



Fig. 19) SCULPIN sailing with her original gaff rig



Fig. 22) SCULPIN sailing in the 1940s on Eggmoggin Reach. (Courtesy Ben Emory)



Fig. 20) Early Fish Boats on land



Fig. 23) SCULPIN sailing in the 1940s on Eggmoggin Reach. (Courtesy Ben Emory)



Fig. 21) SCULPIN sailing in 1940s on Eggmoggin Reach. (Courtesy Ben Emory)



Fig. 24) WEST WIND (SCULPIN) at Mystic Seaport in 1968



Fig. 25) SCULPIN as she appeared after the 1970s rebuild



Fig. 28) SCULPIN awaiting restoration in 2009



Fig. 26) SCULPIN awaiting restoration in 2009



Fig. 29) SCULPIN awaiting restoration in 2009



Fig. 27) SCULPIN awaiting restoration in 2009

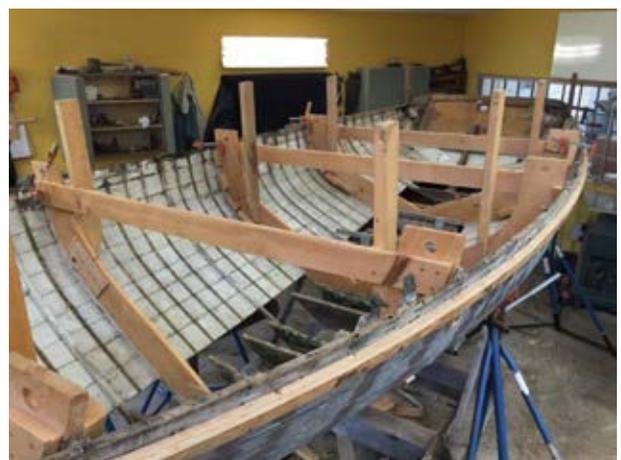


Fig. 30) Temporary molds are used to restore hull shape



Fig. 31) Temporary molds are used to restore hull shape



Fig. 34) Original stem restored



Fig. 32) New floor timbers with limber holes for drainage



Fig. 35) New oak sheer planks



Fig. 33) New frames and floors installed, transom removed



Fig. 36) New plank keel



Fig. 37) New transom and bottom planks



Fig. 40) Coamings and Main Bulkhead installed



Fig. 38) Caulking, four seams splined



Fig. 41) Canvass glued down with latex lagging adhesive



Fig. 39) Aft compartment before seat



Fig. 42) Tim Jacobus, Anders von Aschwege, and Abe Goodell



Fig. 43) Deck paint and varnish



Fig. 46) Topside paint



Fig. 44) New seats with integral outboard trays



Fig. 47) Original Merriman halyard winch



Fig.45) Fitting the original tiller through the new transom



Fig. 48) Aft seat compartment with original main halyard cleat



Fig. 49) Finished



Fig. 52) Finished



Fig 50) Running backstay rack and toe rail termination



Fig. 53) Setup of new Fish with a mold or bulkhead at every third station



Fig. 51) Original aft docking eyes



Fig. 54) Temporary LVL ribbands form “basket” for steaming remaining frames



Fig. 55) Stem and keel plank are laminated iroko



Fig. 58) Hull upright with molds in place.



Fig. 56) Edge-glued cedar planking spiled and tapered in the traditional manor.



Fig. 59) Interior paint, sheer clamps, and deck beams



Fig. 57) Hull fairing. Mahogany sheer planks are hung full thickness and then shaped in place.



Fig. 60) Ballast plug and deadwood



Fig. 61) Engine beds, ready hull ready for plywood deck



Fig. 64) Sheer planks molded and varnished



Fig. 62) Plywood deck with glass cloth, coamings and housesides.



Fig. 65) Topside paint

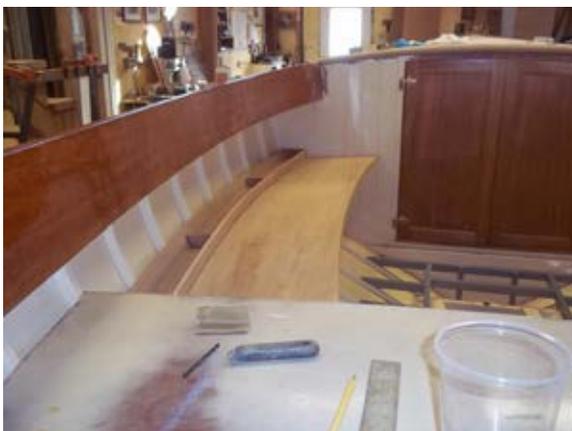


Fig. 63) Seats, doors, and sole beams



Fig. 66) Young sailors at the Maine Boatbuilders Show in Portland, March 2011



Fig. 67) Spars and rigging at the shop.



Fig. 70) TULIP Underway



Fig. 68) Launching



Fig. 71) TULIP Underway



Fig. 69) TULIP, in the water



Fig. 72) TULIP's owners Peter and Kathy Wagner



Fig. 73) TULIP at the Wooden Boatshow in Mystic, June, 2011



Fig. 76) Rudder and transom



Fig. 74) TULIP on her trailer at Artisan Boatworks



Fig. 75) TULIP on her trailer, showing engine box in cockpit



The Classic Yacht Symposium™ 2016

Joys of Owning a Herreshoff Fish Personal Reflections

Author Ben Emory



Figure 1 – PERCH ready for 2016 season, mesmerizing as masterpiece of art and craftsmanship. *Photo by Ben Emory*

Abstract

Sailing the Fish PERCH (1925 build, restored by MP&G 2005) has given me detailed knowledge of the superb sailing characteristics of the Fish class. Ownership of her has reinforced my appreciation of these boats as masterpieces of art and craftsmanship.

The Fish SCULPIN, just restored by Artisan Boatworks, is part of my heritage too. She once belonged to my father, at the time named WEST WIND.

I have sailed a wide variety of boats, including extensive sailing in original Herreshoff 12 1/2s and a Cape Cod Bulls-Eye. I have learned how the longer waterline, twice the displacement, and the relatively larger mainsail make the Fish a different feeling boat from the 12 1/2. Smoother, drier, and much more powerful, it also is better – in fact, very good – in light air. The boat is an absolute delight to sail and a true privilege to own.



About the Author

Ben Emory is a life-long avid sailor who splits his time between Salisbury Cove and Brooklin, Maine. A graduate of Harvard with a M.B.A. from Dartmouth, he served as a destroyer officer in the U. S. Navy and is a member of the Cruising Club of America. When not on the water he remains very active in Maine conservation issues, having been engaged in land conservation both professionally and as a volunteer for over forty years.

Photo by Jamie Schapiro

The Classic Yacht Symposium™ 2016



Joys of Owning a Herreshoff Fish -- Personal Reflections

Ben Emory

Fish owner, bemory770@gmail.com



Fig. 1: PERCH ready for 2016 season, mesmerizing as masterpiece of art and craftsmanship. *Photo by Ben Emory*

ABSTRACT

Sailing the Fish PERCH (1925 build, restored by MP&G 2005) has given me detailed knowledge of the superb sailing characteristics of the Fish class. Ownership of her has reinforced my appreciation of these boats as masterpieces of art and craftsmanship.

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make the Fish a different feeling boat from the 12 ½. Smoother, drier, and much more powerful, it also is better – in fact, very good – in light air. The boat is an absolute delight to sail and a true privilege to own.

INTRODUCTION

Owning a Herreshoff Fish sloop I find an enormous privilege – especially while this extraordinary class celebrates its hundredth anniversary. How can I be so lucky? I grew up hearing my father rave about his Fish WEST WIND. She originally sailed as SCULPIN and has just been restored by Alec Brainerd's Artisan Boatworks. Dad's having sold her the year after I was born, I had no direct experience with the boat. I have been fortunate, though, to have had a lifetime of sailing many different types of boats of various sizes coastwise and offshore. My sailing has included most pleasurable life-long experience with original Herreshoff 12 ½s, the forerunner in design and smaller sister of the Fish, and with a Cape Cod Bulls-Eye, the first fiberglass derivative of the 12 ½.

I do a great deal of daysailing in small boats on Maine's Eggemoggin Reach and Jericho Bay -- for many years in the Bulls-Eye and in an Uffa Fox-designed Flying 15, the latter one of the earlier very lightweight, planing keel boats. These two very different boats have given me enormous fun and, for me, the vital rejuvenation of spirit offered by good sailing boats on inspiring waters. For the past decade and a half, though, my mind has occasionally gone back to the family stories of the old Fish Boat that I never knew. Sporadically, I kept my eyes open for the possibility of finding a used one in decent condition. I even conversed over several years with Alec Brainerd about commissioning him to restore SCULPIN, which sat forlornly in his shed.

In the spring of 2014 on the Yachtworld website I spotted a listing for the Fish PERCH, magnificently restored when named WANDA by MP&G of Mystic, Connecticut, in 2005. I bought her sight unseen based on conversations with Tyler Fields at Ballantine's Boat



Fig. 2: Author's father's WEST WIND (originally and again SCULPIN) in 1937 after conversion from gaff. *Photo courtesy Ben Emory*

Shop, which had the listing, and with Andy Giblin at MP&G, sailmaker Nat Wilson, also a Fish owner, and Steve White at Brooklin Boat Yard, which would take over the professional care of the boat. Very influential in deepening my interest in the Fish class were the enthusiasm and perspective of two Brooklin, Maine, friends and neighbors, Jon Wilson of WoodenBoat and renowned Herreshoff expert Maynard Bray. Tyler sent me photographs and detailed descriptions, yet when the boat arrived, I was flabbergasted by her absolutely pristine condition. In the nine years since restoration three successive owners had maintained her to perfection. Into my ownership had arrived a work of art and craftsmanship beyond my dreams.

BRIEF HISTORY OF PERCH

The history, stories, and people associated with classic boats make up much of the pleasure of ownership. PERCH lacks her original builder's plate with the hull number, but she has a molded oak sheerstrake, which old photographs show as being on her in 1967 when named SAIL FISH. (see Fig. 3). It was almost certainly original. She has a marconi rig. The combination of the marconi rig and molded sheerstrake and some historical records make it almost definite that she was built in 1925 as one of the fleet delivered to

Warwick Country Club owners. Until 1919 Fish were built without the molded sheerstrake, and the marconi rig did not appear on new Fish until 1925. Prior owners have delved into the boat's history, and a mass of information came with the boat. The original hull number and name remain unknown, but it is known that by 1932 the boat was sailing under the name SAIL FISH at Cold Spring Harbor, NY. By process of elimination I believe that she is one of four, possibly five, Fish built in 1925 -- #939 SASSIE SALLY, #973 MAGGIE, #974 MICKEY, #978 (no name), or, possibly, #944, which the Herreshoff building records show as a question whether ever built. I would be ecstatic if any readers could help narrow the field!



SAIL FISH

1967

Fig. 3: PERCH, then SAIL FISH, at Oyster Bay, NY, in 1967. Note varnished sheer strake, almost certainly original. Photo from records of C. A. "Chick" Smith, purchaser in 1967.

In Cold Spring Harbor PERCH raced with the sail number 7, which she still sports, but, interestingly, there is a 7 carved into the boom scissors and on the underside of each spreader. That may have been done at Cold Spring Harbor. If sail numbers were so incised on Warwick Country Club boats while there, if sail numbers at Warwick correlated to order of build, and if hull #944 was indeed not built, the seventh boat built for a Warwick Country Club owner would have been MICKEY for Edmund S. Parsons -- tantalizing, meaningful historical trivia that someone may yet be able to confirm.

A 1976 letter and 1992 handwritten note suggest that PERCH was one of probably nine Fish Boats towed, most likely no later than 1929, from Rhode Island to Cold Spring Harbor. Her Cold Spring Harbor owner was Northern Pacific Railway heir Gerald M. Livingston, a stockbroker and sportsman with strong interests in hunting dogs. He gave or bequeathed the boat to his daughter, and the boat reportedly stayed year-round in the Livingston boat house at Oyster Bay for at least a couple of decades until being pulled out and sold in

1967. Perhaps she was never launched after World War II until the 1967 sale to C. A. Smith. He launched her and sailed her even through a winter, but by 1972 he had her in his garage and then driveway to pick away at restoration. I am not yet sure whether, despite additional ownership changes, she was ever launched after 1972 until bought for the restoration accomplished by MP&G in 2005. Three consecutive owners enjoyed her following the restoration before, named PERCH, she arrived at Ballantine's Boat Shop in Cataumet, Massachusetts, to be sold. I was the fortunate buyer and brought her to Brooklin, Maine. My wife Dianna, who has fond memories of enjoying perch fishing on Maine's Sebago Lake as a child, persuaded me to keep the name.

SAILING AND HANDLING CHARACTERISTICS

I find PERCH exceptionally pleasurable to sail. Most of my sailing is alone, although, as Alec Brainerd said to me, these boats are "social boats". Indeed, the spacious cockpit is most comfortable and delightful for several people enjoying the combination of good sailing and pleasant conversation.

Wonderful as is the 12 ½, far better in many ways is the Fish despite the nearly identical hull lines. With almost twice the displacement the Fish is far more powerful feeling and much smoother and steadier through waves. Powering into waves and chop in a stiff breeze PERCH is relatively dry, at least in the aft end of the cockpit -- a welcome change from the cold showers of spray hitting the helmsman in rough conditions in a 12 ½. The bigger boat means that the waves must be larger for equivalent amounts of spray, but the fact that Herreshoff extended the bow overhang from the 12 ½ shape may help throw water more to the side.

I have done and still do a lot of steering fin keel, spade rudder boats, including the fast Scandinavian cruising/racing sloop which Dianna and I currently own. The course-holding qualities of the Fish with its full keel underbody I enjoy as a change from much more squirrely boats, no matter how much fun to sail the modern hulls are. Overtrimming the jib and easing the mainsheet as far as possible enable the boat to self-steer indefinitely on a beam reach with no one at the tiller, a feature also common to 12 ½s and much appreciated, if alone, when some task to do on board requires leaving the helm.

Originally designed for Long Island Sound racing, not as a Buzzards Bay boys' trainer like the 12 ½, the Fish has, relative to its size, a larger mainsail. I have been very surprised by how good is the light air performance of the Fish, far beyond what I anticipated. During Maine summers light air is common, and I find I love the

delicate, yet speedy feel of PERCH in those conditions. To my surprise I enjoy PERCH in light air as much or even more than my light air speedster, the Flying 15. I never expected that. With my weight to leeward she starts moving in the slightest zephyr, and, thanks to her weight, once moving she tends to keep moving. An island protects our harbor from winds from the southerly quadrant, summertime prevailing directions. PERCH is marvelous at gliding in and out of the crowded harbor without stalling in the lee of the island. In contrast, I find that light displacement boats simply stop in those conditions.

I had heard from a couple of sources that Fish have heavy helms. From others I heard the opposite. As the wind picks up, there is, of course, increasing tug from the tiller – and more than on a 12 ½. The greater speed, and hence pressure, of water past the rudder on the larger and consequently faster boat and the greater square footage of the rudder presumably make the tug more noticeable, but when I compare to a 12 ½ the angle of the rudder from centerline for a given wind condition, I cannot detect a difference. I truly like the feel of PERCH'S helm as she drives to windward in a breeze. The amount of tug is just right for my taste, although others may prefer the more modern feel of a very light, almost balanced helm. One reason that the feel of the helm is pleasurable to me and with less pull than some people had led me to expect may be that my mainsail draft is relatively flat.

The sail is, of course, even flatter when reefed. Reefing reduces the tug of the tiller to being light and adds a reassuring sense of the boat's remaining under good control. I find that when the wind gets to the roughly thirteen to fourteen knot range, I am happier with a reef. My first reef is thirty inches at the luff and thirty-two inches at the clew against a full luff length of about twenty-five feet six inches.

My marconi-rigged Fish is somewhat more tender than I expected for a traditional long-keeled hull -- good reason to reef early. I have wondered whether the gaff-rigged Fish Boats have a lower center of effort and may,



Fig. 4: Family fun -- author's daughter Kristin Emory enjoys steering PERCH upwind. *Photo by Ben Emory*

therefore, be slightly stiffer. Fish Boats were built to race with three people, I believe. I do not have that kind of weight to put to windward on my mostly solo sails. The unreefed mainsail on the tall mast and overhanging boom has considerable heeling force, and the relatively slack bilges do not make for a lot of form stability. These features add to her light air slipperiness but also to the heel angle. Having once swamped a Bulls-Eye under life-threatening conditions, I am well aware of the awful feeling of watching water pour over the lee coaming of a large cockpit as one realizes that the boat is not coming back. I favor the old adage that if you think about reefing, do it. I have double reef points but have never used them nor the storm jib, which came with the boat and shows on the Herreshoff sail plan. I would just as soon not stress either the boat or myself when those might prove necessary. For those kinds of conditions I want a boat with a smaller cockpit.

In this age of jiffy reefing I do not find tying in a traditional reef at the mooring any chore, but without jiffy reefing I cannot reef easily underway – and I bear that in mind. It would be possible to rig jiffy reefing with appropriate lines and blocks, perhaps detracting in the eyes of purists from the appealing simplicity of the original rigging arrangements.

Maynard Bray makes the point that if feeling overcanvassed, one can reduce heel angle by overtrimming the jib to increase backwind into the mainsail and easing the mainsheet. This technique does work to a useful degree if caught out with more sail area than one would prefer.

Another comment about sailing in higher wind strengths is that if I am unsure of the weather, I choose to sail the Bulls-Eye. Yes, it is smaller and lighter than a Fish, but

its wide side decks similar to the Fishers Island version of the wood 12 ½s allow me to sit on the rail. Being able to get my weight farther outboard than on the Fish and the fact that my poundage is a higher percentage of the boat's weight are big advantages. Also, the aluminum spars of the Bulls Eye provide roller reefing of the mainsail that is easier to deal with than traditional reefing after one is off the mooring.

In all weather the Fish is far faster than a 12 ½, expected given the three and half feet greater waterline length. That allows for covering more ground in a given number of hours of daysailing, adding considerably to the pleasure of sailing in such places as among Maine's lovely coastal islands, where enervating vistas are constantly changing and exploration opportunities are always at hand. The only problem with being able to go farther is that one may be becalmed farther from home if not attentive to forecasts and the look of sea and sky. (For propelling the boat in no wind, as well as turning the bow quickly maneuvering in a crowded mooring field, I find a carbon stand-up paddleboard paddle quicker to grab and easier to use than a much heavier oar or oars – even if far from traditional!).

The simplicity of sailboats of the Herreshoff era is a pleasure, only the bare minimum of hardware and few lines to adjust. Having a self-tending jib is a delight. Enhancing the simplicity are the slides on the mainsail luff instead of a luff rope in the groove of an aluminum mast. PERCH'S sails, beautifully made by Nat Wilson, are of soft sailcloth that is a joy to furl after years of fighting stiff, slippery sailcloth.

I had wondered whether I would find the running backstays a nuisance, but I do not. Mine are handled by a line on each to a Herreshoff-style jam cleat. I leave both set up going to windward, for with the mainsail trimmed for windward work, it does not touch the leeward running backstay. Easing and tightening the backstays I find no problem during tacks and, if the wind is not too strong, during jibes too. If alone in heavy air, I either am very careful during a jibe or, frequently, opt to tack instead.

One addition that I made for solo sailing which has proved very beneficial was installing one of the Herreshoff-style jam cleats just below the opening to the lazarette. I bring the jib sheet aft to that so that I can easily reach it. It is no problem to step over the sheet when I shift sides. When someone else is aboard with me, I cleat off the jib on its usual cleat on top of the cuddy.

MASTERPIECE OF ART AND CRAFTSMANSHIP

To see what a masterpiece is PERCH one need only look at the extraordinary cover photograph on Benjamin Mendlowitz's 2016 Calendar of Wooden Boats, which shows Dianna steering on Eggemoggin Reach at sunset of a September evening. Or watch offcenterharbor.com's superb short video *A Three Generation Dreamboat – the Herreshoff Fish Class Sloop PERCH*. Or look at the Mendlowitz photographs accompanying my article about the Fish class in the 2015 Boat Show issue of *Maine Boats Homes and Harbors*. The calendar photograph captures the mesmerizing shapes of hull and deck especially well.

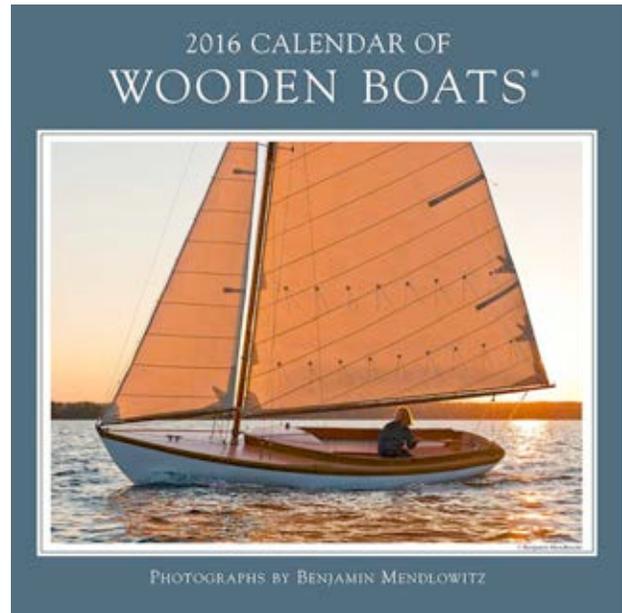


Fig. 5: Author's wife Dianna sails PERCH at sunset on Eggemoggin Reach. *Photo by Benjamin Mendlowitz*

The shapes of superbly designed wooden sailboats, the enhancement of those shapes by skilled application of paint and varnish, and the visual appearance of structural elements and fine craftsmanship reward my eye and my brain's pleasure sensors beyond any other form of art. When I row away from PERCH on a sunny day, I am entranced by the interplay of light and shadow on the lovely curves of her white topsides and the gleaming of her varnished wood. The case has been made that art is therapeutic for the soul. In a troubled world and contending with the inevitable ups and downs of one's own life and of the lives of family and friends a person needs opportunity for personal rejuvenation and reinvigoration. For me that means the out-of-doors, nature's beauty, ocean waters – and beautiful sailboats!

I find on PERCH that I examine the actual wood with much deeper scrutiny and enjoyment than in the past on other boats – the grain, the condition and defects, and the use of different species for different purposes. I have learned to understand the role of wood in carbon capture and storage, and as I feast my eyes on PERCH, I fully appreciate the use of this material from nature that can be and should be managed sustainably.

PERCH'S beauty adds a whole dimension to the enjoyment of sailing. I find that I not only am enjoying all the usual pleasures of being afloat -- the boat's movement through the water, the boat handling, the watching sea, sky, scenery and wildlife, the feeling of weather, but I also gain endless reward from the boat's visual beauty. I even find that Dianna, who enjoys daysailing but enjoys our cruising even more, accompanies me on daysails on PERCH more than she has on other boats – testimony by her own admission to the joy of sailing such a beautiful craft.

TRUE PRIVILEGE

I am hugely privileged to have found and acquired PERCH. She has added new dimensions to our lives – the connection back to family heritage that included a Fish Boat, the wonderful sailing pleasures of a simple, superbly designed boat, the ownership of a magnificent work of art and craftsmanship, and the fun from all the attention that the boat has received in the two seasons that we have had her in Brooklin, Maine. I grew up on wooden boats and have over the years treasured friendships with many people far more tied to wooden sailboats than I have been as an adult, but now I have truly joined this wonderful fellowship. With PERCH I feel more steward than owner, planning to enjoy her as long as possible and, with the vital skilled assistance of Brooklin Boat Yard, to maintain her to the standard that she deserves.



ABOUT THE AUTHOR:

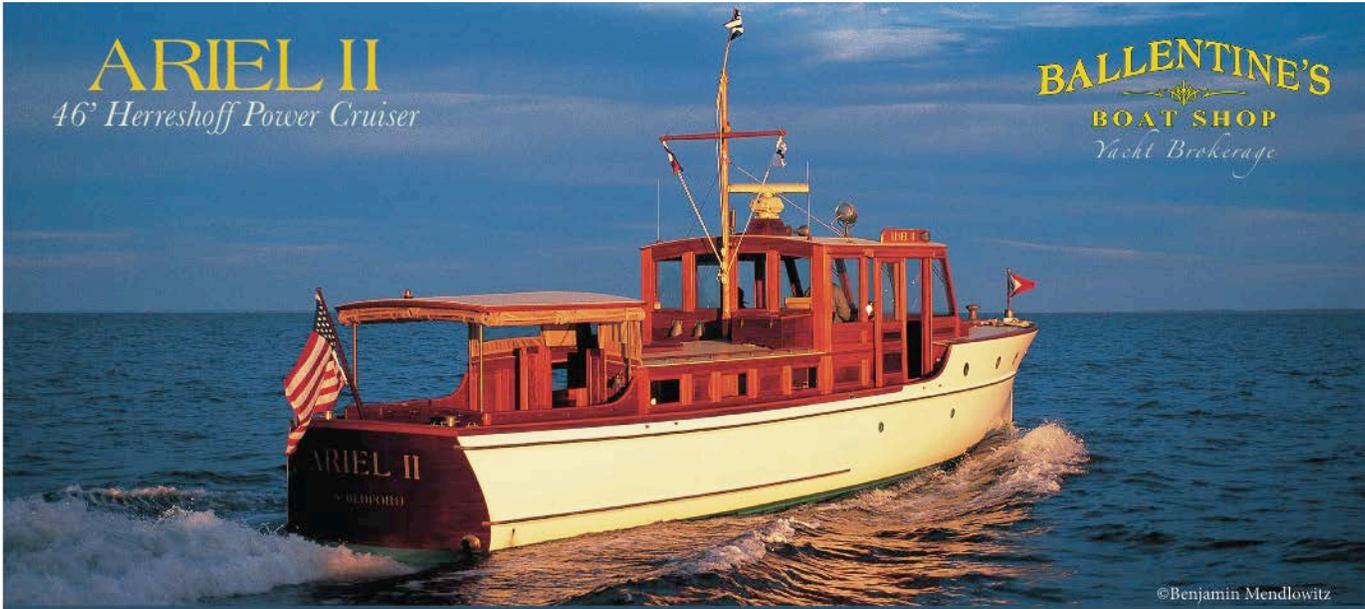
Ben Emory is a life-long avid sailor who splits his time between Salisbury Cove and Brooklin, Maine. A graduate of Harvard with a M.B.A. from Dartmouth, he served as a destroyer officer in the U. S. Navy and is a member of the Cruising Club of America. When not on the water he remains very active in Maine conservation issues, having been engaged in land conservation both professionally and as a volunteer for over forty years.

Photo by Jamie Schapiro

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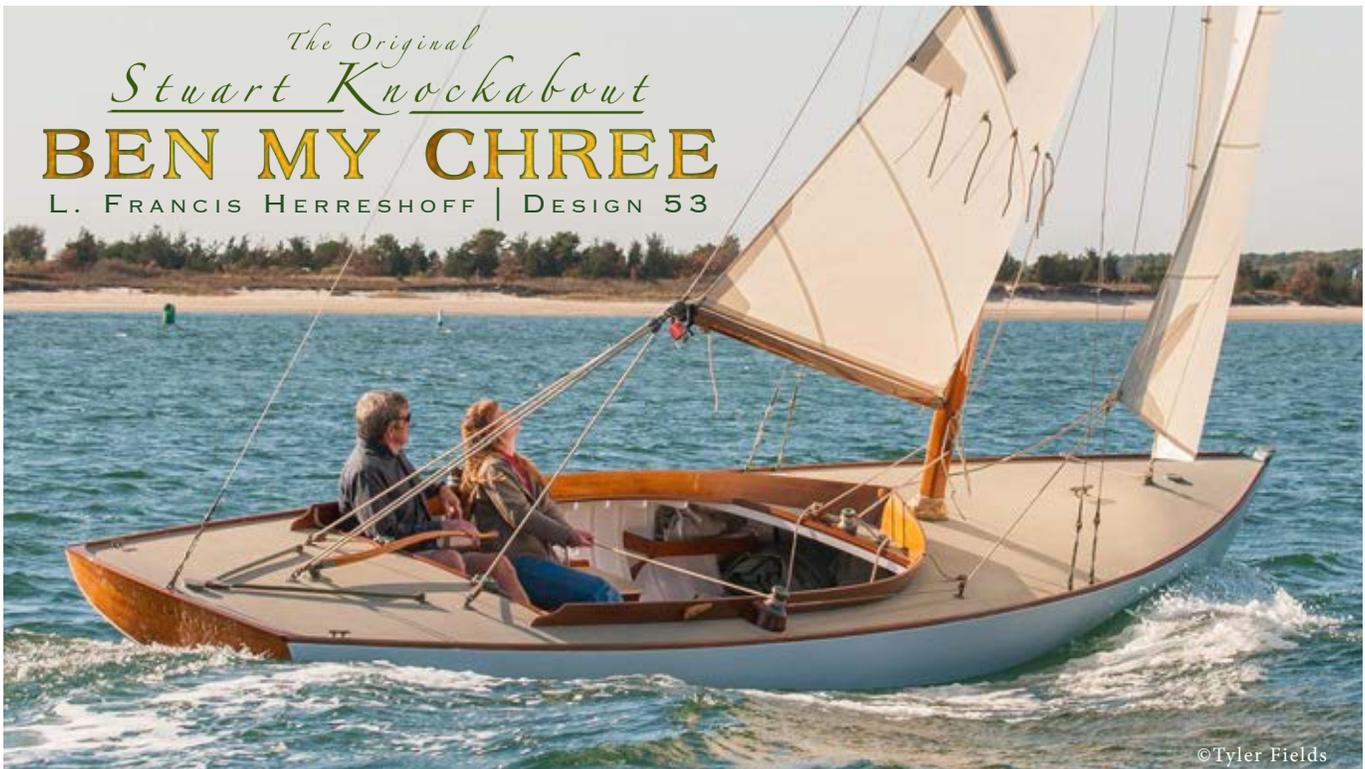
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The Classic Yacht Symposium™ 2016

L. Francis Herreshoff Yacht Designs

Moderator: Matt Murphy

- L. Francis Herreshoff (1890 – 1972), designer and writer, created a range of designs distinguished by their clean graceful sweeping lines, elegance, and simple hulls and rigs.
- Son of Nathanael G. Herreshoff, L. Francis perpetuated his family's genius in design. But while his father's major designs were derived from engineering principles and half-hull modeling, L. Francis brought an intuitive and artistic grace to his best-known creations.
- L. Francis, at heart, was a minimalist who is best remembered for his simple, wholesome cruisers meant for shorthanded sailing. But in his early career, he also designed radical racing yachts to the Universal Rule. While some of his designs incorporated signature features of his father's work, such as hollow bows and precisely engineered bronze hardware, his style was all his own. He also ventured beyond his father's influence, particularly with his exploration of the canoe-hull form.
- As a writer of books and articles for *The Rudder* magazine in the 1940s and '50s, L. Francis did much to convey his thinking, insights, and opinions on design and construction. These works continue to provide readers with a great wealth of practical knowledge.



The Classic Yacht Symposium™ 2016

GLORIA OF HOBART: a modern MOBJACK

Authors “Tolly” and Josephine Jaworsky



Figure 1 – GLORIA OF HOBART

Abstract

GLORIA OF HOBART is a 45' L. Francis Herreshoff (LFH) ketch of his MOBJACK design #63. The paper describes the 25 year construction effort with a sustained commitment to the fidelity of the design concepts, the long term focus in acquiring the best of materials and the construction process through to her sailing. The original MOBJACK was designed for sailing in the Mobjack Bay area in the US East coast Chesapeake region in 1935. GLORIA OF HOBART was built with the options for open ocean sailing off Tasmania, Australia, and as such a light strong laminated hull with Lloyds 100 A1 Classification was designed and planned for in construction. The challenge was to maximize strength, meet survey specifications, minimize weight and to stay faithful to the original designs concepts of LFH. The authors conclude with key learning's which include perspectives on the sustained intensity of effort, working with daily interruptions and the immense value of a good building space with access to expertise and equipment. The MOBJACK design is one of the finest examples of LFH's artistry, functionality and wholeness with sea and wind of this great designer.

The balanced lines of her hull and sail plan are both a great beauty to behold and a powerful long term motivator for the completion of such a large undertaking. GLORIA is now sailed and cruised by her originators Anatoli (Tolly) and Josephine Jaworsky on the coast of Eastern Tasmania.



About the Authors

Tolly was a mining diesel mechanic and later an abalone diver. A passionate spear fisherman and angler all his life, he was encouraged to move to Tasmania to dive professionally. This gave him access to boat building knowledge and timber which led to the creation of GLORIA OF HOBART. **Josephine** has sailed since she was 4, daughter of a mining engineer with a passion for ocean racing. The Ryan family once owned a Wilson-built boat called CASCADE which is how Tolly and Josephine met in 1999. They have one son aged 26 and live between their Hobart home, a beach cottage south in Dover and the glorious GLORIA which they love sailing in the beautiful waters of south east Tasmania.

The Classic Yacht Symposium™ 2016



GLORIA of OF HOBART: a modern MOBJACK

Anatoli (Tolly) and Josephine Jaworsky



ABSTRACT

GLORIA of OF HOBART is a 45' L. Francis Herreshoff (LFH) ketch of his MOBJACK k design #63. The paper describes the 25 year construction effort with a sustained commitment to the fidelity of the design concepts, the long term focus in acquiring the best of materials and the construction process through to her sailing. The original MOBJACK was designed for sailing in the Mobjack Bay area in the US East coast Chesapeake region in 1935. GLORIA OF HOBART was built with the options for open ocean sailing off Tasmania, Australia, and as such a light strong laminated hull with Lloyds 100 A1 Classification was designed and planned for in construction. The challenge was to maximize strength, meet survey specifications, minimize weight and to stay faithful to the original designs concepts of LFH. The authors conclude with key learning's which include perspectives on the sustained intensity of effort, working with daily interruptions and the immense value of a good building space with access to expertise and equipment. The MOBJACK design is one of the finest examples of LFH's artistry, functionality and wholeness with sea and wind of this great designer.

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INSPIRATION

For twenty five years my husband has lived and breathed the genius of L. Francis Herreshoff. As a young diesel mechanic in New Guinea, Tolly looked up one day to see the wonderful sight of a L. F. Herreshoff BOUNTY sailing into Port Moresby and from that moment, his infatuation with Herreshoff yachts began.

He read every book about the famous Herreshoffs that he could find and dreamt on for many years until the opportunity arose to become a professional diver in Tasmania (Tasmania where the best boat building timbers and skills in Australia are found) and Tolly was inspired to take on the building of something similar. For practical reasons, he chose a 1935 L.F. Herreshoff MOB JACK as it promised to be a bit easier to handle than a BOUNTY.

Initially Tolly continued working and saving hard then at 40 odd yrs of age realised if he did not start now, he would never do it. He investigated most of the local boatyards and it was 1988 that he approached Noel Wilson and came to an arrangement with the Wilsons Brothers boatyard of Cygnet in the Huon Valley of SE Tasmania. The agreement was to build the boat allowing him to work alongside when he was free but not before making him build a pair of horses to see if he was any good with tools.

Noel and Keith were still alive then, just Noel survives today. These Wilsons were fourth generation boat builders of the Huon region, who had built some of the most famous trading ketches in the early colonial days of Hobart. Tolly sourced copies of the original plans from the Mystic Seaport Library through Muriel Vaughan whom Tolly found to be both charming and helpful. The plans cost \$1000 AUD in 1987.

TIMBERS

For two years Tolly and the Wilsons crew concentrated on obtaining endemic Tasmanian timbers; they did nothing but source timber, cut it with the old 18' bandsaw, dress it and stack it for drying. The Wilsons still had a fishing vessel being completed in the shed so this gave Tolly time to prepare.



1) Bradshaw's timber yard, Queenstown, TAS.

The L.F. Herreshoff (LFH) original Mobjack yacht was built in 1935 of yellow pine and white oak so the closest they could find to these timbers with similar density and weight ratios were the prized King William Pine, Celery Top Pine and Huon Pine.

King William Pine, known colloquially as King Billy, is a very light, very rot resistant timber, similar to American cedars. Used for planking, it has very good gluing qualities. King Billy is also very old growth timber; up to 1700 years. Tolly was fortunate to acquire excellent old growth, faultless flitches of the best quality. King Billy is no longer available to be cut in the forest; it is all set aside in reserves or the south west Tasmanian Wilderness World Heritage Site.

Huon Pine is the most famous Tasmanian timber, extremely rot resistant, very slow growing and used extensively for centuries in boat building. Huon was used for all our bulwarks, combing and interior trim. Being a very oily timber it entails taking extra precautions when gluing or varnishing demanding lots of cleaning off, similar to teak.

Celery Top Pine was chosen for framing as a replacement for the American white oak. Celery, which has similar density to White Oak, is very strong and is pleasing to work with. Tolly sourced all this timber on the remote, rugged west and north-west coast of Tasmania.

The main timber supplier was the legendary Bern Bradshaw, a descendant of an early 'piner' family from the wild West Coast of Tasmania. Throughout the building process there were five main orders of timber to his remote timber yard in Queenstown; one of King Billy, three of Celery and two of Huon. The process of ordering timber was a test of patience for Tolly as to

obtain the right quality some orders took two years to be completed.

FIDELITY

A naval architect was found in Melbourne who began converting the plans to incorporate modern necessities. It was decided that the best way to increase the strength of the hull was to cold mould and laminate the timbers as it was to be built to Lloyd's specifications Classification 100 A1 - in case the fishing industry ever collapsed and Tolly had to make the boat earn its keep.

The plan was to keep the yacht as close to the original Mobjack but with ocean going integrity, therefore of a higher standard. Upton's original Mobjack was not designed to cross oceans; it was just a weekend boat. Most modern adaptations of Design #63 appear to finish too heavy so the challenge was to build a boat stronger but not overweight *and* to meet modern survey requirements.

As the boat progressed, Tolly and crew saw the beauty of the boat design, they realised it was going to be a huge job as the boat deserved a high standard - in all aspects – throughout the build. In building the boat, it was essential to keep faithfully to the original design, *without compromise*, which was very hard to do. The only big change to the boat design was rearranging the interior below. Tolly was resistant to heavy pressure from all around to make tweaks here and there because he wanted to maintain the shape and profile as close as possible to original perfect design. Sticking to this creed through thick and thin, Tolly maintained LFH's shape and proportions though there were suggestions by others to do otherwise such as ten bunks and ten toilets!

LOCATION

Building a boat in Cygnet is not easy as it has long severe winters and very short summers. It was necessary to fit in with the seasons in the construction as they were working from a dilapidated, unheated waterfront shed. It made for a very, very short painting season. Dampness made gluing a challenge so heat boxes and tent-arrangements were used constantly. In fact the epoxy mixing hot box was rarely turned off. The Wilsons shed was isolated so anything needed had to be sourced from interstate or overseas. The Cygnet shed also entailed thousands of car trips into town to get materials, sometimes two or three return trips in a day. This was all in the days of writing letters, overseas banks drafts arranged over the bank counter and

pushing coins into telephones but mainly, it was a pleasure to work beside the waters' edge observing the seasons, the wild life and passing boats. It was a slightly remote location but the time used up chasing materials balanced out well as the Wilsons shed was quiet, secure and affordable.

THE START OF THE BUILD



2) The first summer in the Wilsons shed began with melting the lead for the keel and lofting.

They made their own 10,600 lb keel, first melting the scrap lead in the shed to purify it, then melting and pouring the keel in a single pouring. With Noel Wilson, fourth generation boat builder, his son Michael, and Warren Innes, also descendant of a famous local boat builder Viv Innes, the building of the hull went smoothly and fairly promptly but as many of you here would know, it doesn't take long to build a hull, it is the fit-out and trim which takes a long time. This was particularly true for Tolly as he was aiming for a high standard.

They commenced lofting, then the lamination and hand shaping of the keel, stem, ribs and stern posts – with gallons of epoxy... Due to shed size restraints, they built hull first then spars after as they could not fit in both so first the hull shell was constructed upside down on a raised floor frame.

The hull took shape with four layers of King Billy, each layer faired and coated in epoxy. The hull was then sheathed in 6oz glass cloth for protection due to the softness of the King Billy Pine then painted with white epoxy primer. The hull shell was easily rolled over, probably only weighing 2 ton at that stage but it was an anxious, nerve-wracking procedure.



3) Framing the hull in the Wilsons shed.

The team took great care setting the sheer of the hull to the original LFH drawings. In all stages in construction Tolly fought to keep it as close as possible to LFH's deck and cabin design by not altering her profile in any way. They *had* to get it right. Many here will recognise this is very hard to do in the confinement of an enclosed shed as one cannot stand back. The shape and curve of the wineglass stern tuck took a lot of effort in relation to the sheer but after three attempts; they thought they got it pretty right.

Then came the fitting of the bulkheads of marine ply and the fitting of the clamps and shelves which hold the ribs and deck beams together. Then the deck beams and cabin sole beams, all multiple-laminated celery pine. This resulted in a beautiful job but was fairly wasteful of the timber as there is much material lost in the process of planing down. Also, it is very time consuming therefore costly.

The entire hull, internal and external, was coated in a minimum of three coats of West System epoxy. The Wilsons shed used a standard 18" planer, a very old 18' bandsaw outside and a 4' bandsaw inside; a few basic machines but mostly simple good-quality hand tools.



4) First of four layers of planking

At all stages of the construction of the hull, weight was kept to a minimum as if it were a modern boat. All the way through, Tolly was acutely aware of and always calculating the accumulating weight. He was always of a mind to maintain the concept of the original LFH boat, constantly trying to build her as close to her original design as possible for aesthetic and proportional reasons.

For the same reason Tolly did not succumb to altering the offset propeller layout though offset propellers can lead to difficulties reversing. He stayed with LFH design as to bulk up the stern post for a centreline propeller would have resulted in altering the fine underwater lines.

However Tolly and his team did consider changes to LFH's fuel tank and water tank arrangement under the decks. They decided to shift them down closer to the keel to give the vessel a better ballast ratio.



5) Looking aft, the cabin sole goes in.

CONSTRUCTION

The deck was constructed from rotary maple ply, a northern Australian timber. A dynel-sheath layer over that meant it had very little movement. A sprung-teak was placed on top for a traditional look and laid with sikaflex – a very messy and very slow job. Great care was taken to ensure water proofing of the plywood.



6) Hanging knees and chain plates.

The majority of cabin top and lodging knees were comprised of grown Huon pine – quite rare then and extremely rare now. Deck knees were laminated celery pine for strength – up to 54 laminations per knee; one cannot find grown celery knees as the trees grow dead straight. The cabin sides were superb clear boards of King Billy which took eighteen months to acquire from initial order. They were clothed in 4oz cloth as King Billy is a light but soft timber. Each piece of timber used in the hull structure and in lamination was repeatedly tested for moisture content which was ideally 12 – 14%.



7) False piece and trail boards fitted.

All the bulwarks and rails were comprised of Huon pine for its rot resistance but sheathed in 4oz fibreglass for extra protection. The cabin sole was an underlay of ply overlaid with teak and silver ash inlay. The teak bulwark capping (some lengths steam bent) and cabin top trim were fitted and later received 22 coats of varnish over the four coats of epoxy as Tasmania ultra violet is fierce. Their next job was to put the stem false piece up in celery to match the sheer. Fabricating and fitting up the trail boards was good fun, a challenging artistic process, as was the lamination and shaping of the Oregon bowsprit.

Having a master craftsman in Warren meant that the joinery of the boat was top quality, all joints were a dry tap-fit. The interior fit-out took ages; all the while designing it to be practical and uncluttered. The entire interior trim was coated liberally with epoxy due to the oiliness of some of the timber prior to varnishing.



8) Hatches completed.

Varnishing especially was a very long and time consuming process, mostly due to the local weather conditions but partly due to the intricacy of the countless beautiful curves of the design. With predominantly dusty conditions in the dirt-floor shed, all the small paint & varnish spraying operations were set up outside.

One example of the challenges faced was the varnishing of the big forward teak hatch; the boys set up, the weather was good, they waited for the optimum time of the day, started spraying and then the Forestry Commission lit a burn-off in a nearby coupe which meant falling ash marred the beautiful wet varnish. Just another day in the pursuit of perfection...



9) Huon cabinetry.

The saloon table was made from a flawless old-growth piece of Huon Pine which came from an unpromising burnt-out butt, estimated age approximately 1000 years. The most beautiful and rare piece of timber in the boat is in fact on the head door.

The basin in the head was inspired by the local use of Huon Pine – all the old Georgian houses in Tasmania had Huon troughs, some still in use today. Using a neighbour's lathe, Tolly made his own from a solid block of Huon.

The companionway plan created complications; after very careful consideration they designed a bridge deck arrangement to facilitate more access in the engine room and though complicated to build, it works beautifully. Noel retired about now, Michael went off building houses so it was just Tolly and Warren making steady progress.

The engine room behind one of two water tight bulkheads in the boat, houses a Perkins Prima 50hp diesel and a fire suppression system. The engine room was laboriously sound proofed and carefully thought out with future maintenance in mind.



10) Celery deck beams.

SOURCING FITTINGS

All this fitting out of the vessel was in the days before the internet so there were many late nights perusing literature, poring over the adverts in the back of the Australian yachting magazines, *WoodenBoat* magazines and corresponding with people undertaking similar projects who had leads of where to acquire parts. There were not many people building boats like this in southern Tasmania in those days. In this protracted way, Tolly gradually sourced all the bronze fittings such as port lights and dead lights from NZ, cleats from Melbourne, brass cabinet fittings and lamps from England, etc...



11) View of the shed interior.

It was necessary to go through the complex process of getting patterns made for all the underwater bronze fittings such as propeller shaft glands, tubes and the rudder gudgeon. Fortunately there is an excellent foundry in Hobart which could produce high quality bronze castings to survey requirements. All the critical high-load castings were then x-rayed for flaws. The Lloyds inspector was from Melbourne so he had to be

flown down to carry out periodical inspections of the hull, electrics and machinery.

The fastenings used were of silicon bronze, monel and 316 stainless steel; all very hard to get in Tasmania and a fair quantity of duds were returned. It was hard work but rewarding as a yacht slowly took shape with the gradual completion of the steering, the engine room, the galley, the deck and the anchoring system.



12) Approaching completion.

ELECTRICS

Tolly was blessed to find a very skilled marine electrician who took great pride in his work. The two men worked weekends together for years (well, there is no set work week for Tolly, every day is a work day) on the electrics and switches. Many vessels have problems with electrics later in life so they took a lot of care.

When the electrician rolled up with huge drums of heavy-walled fire retardant cabling, the boys nearly fell over backwards wondering where they were going to fit it all. But they did, and beautifully. Considerable time was utilised working out how to hide the cabling where possible.

The name of the boat took three years to decide upon. Tolly was still burning the midnight oil scrutinising magazines, books, the internet, the Australian Shipping Registry, anything he could examine for ideas in the months before the October 2006 launch. Space restrictions and lettering size requirements made the choice even more problematic. Eventually, in a tribute to N.G. Herreshoff's GLORIANA, he chose GLORIA OF HOBART.

LAUNCH

Following the hull and cabin tops being spray-painted, the moment for launching approached but the

weather was against Tolly, Michael (now back) and Warren. The boys built their own slip just as Wilson's always had with a simple cradle on wooden rails greased with tallow.

The Wilsons were real boat builders, the yard a relic of the old trading ketch days when they started with a dirt floor, built a boat and it went one way – out into the water. Rarely did any come back up.



13) The doors open.

Wilson's had been building boats on that spot for 90 years and before that since 1863 on the other side of the wide Cygnet Bay where the current sailing club is. The bay had silted up considerably in nearly 150 years so it needed to be a long slip and the launch needed a high tide. Tolly had to float the slip using drums, out into the bay and then sink it in the appropriate position – in the middle of winter, using a snorkel.

When the big shed doors over the water opened for the first time in two decades, the locals gathered as if by magic. How they knew, we'll never know as the launch was not advertised.



14) Where did the people come from?

The list of last minute, vital preparations was long but finally GLORIA was ready and the forecast was fair. A few words, some champagne and the chocks were knocked out.

Nothing happened for a few seconds then she gained momentum. GLORIA shot out of the shed with four men hanging onto the braced wheel and strapped-down emergency tiller so the rudder did not slew and tear off. One hears terrible stories of launchings but this one though fast was perfect...

Of course this was the moment of truth; how heavy was she? It was a delightful surprise that GLORIA proved to be slightly lighter than anticipated which lead us to include considerable trim before she sailed to our satisfaction. The boat was effectively mothballed on a mooring near home. The local Doyle's sail loft made huge heavy covers to protect the boat and Tolly went to work on the masts.



15) A very quick launch.

5 SPARS AND 4 SPREADERS

During the previous fifteen years Tolly had been going through numerous avenues in Australia trying to source timber for the spars. Initially he tried to acquire Sitka spruce but could not purchase the quality desired so chose old growth Oregon Pine through an agent.



16) Oregon boards being sorted.

It was hard waiting to acquire the wood and even harder relying on the vagaries of the fishing industry to meet the funding of ongoing construction, weekly wages and the constant forward purchasing of materials for the next stage. The 900 super feet of fine-grain, old-growth Oregon Pine was delivered two years before the mast build began. It was dressed and stacked on drying racks high on the shed walls.

The masts would eventually take six years to complete as by then the Wilsons crew had started another boat, an 8 Metre replica called VARG, so it was mostly up to Tolly and his trusty TA, his wife. VARG was to be the last boat built by the Wilson's.

You've heard that from the beginning it was Tolly's intention to try and maintain as close as possible the concept of LFHs original Mobjack. It would have been so quick and easy to buy aluminium masts, even the painted carbon fibre masts that look like wood but Tolly held firm as nothing can match the elegant taper and finesse of real wooden spars the way LFH designed them.



17) The spar plank puzzle – a very important reference.

Or nearly as LFH designed them; considering the more boisterous weather of the Southern Ocean, the masts and booms were increased a little in section; the main mast by 7%, main and mizzen booms by 15% and the mizzen mast stayed as the original design.



18) Preparing for gluing the 3rd stave of mizzen mast.

Plus after years of being at sea in aluminium masted fishing boats Tolly had developed a loathing for the piercing sound of a Southern Ocean gale whistling through hollow metal masts; it was timber or nothing. Before anything else, they built a dead level floor then a series of racks so the spars would end up true and straight. They sorted through all the planks,

meticulously examining them and decided where best to use them by numbering them on a plan.



19) Rounding of the main mast.



20) Gluing of final mizzen stave.

The gluing of the staves was straightforward; it was the laborious hand shaping that took time. There were 120 clamps on hand but no matter how many clamps one has, it is never enough.



21) Gluing the 4th stave of the main mast

Against the tide of advice to use modern fixtures, Tolly also painstakingly designed and had fabricated traditional bronze fittings for the masts, lucky to have the services of a wonderful master pattern maker whom he coaxed out of retirement.

Trying to glean tiny details from the scant Herreshoff drawing was hard; like nautical archaeology. As there was little detail in the supplied mast drawings of the Mobjack, Tolly pored over magazines, web pages, a lifetime collection of *Wooden Boat Magazine* (which we referred to constantly over the years) and Herreshoff books with a magnifying glass to find the fine details of the fittings and fixtures he wanted. By now Tolly's copy of LFH's *Sensible Cruising Design* was tattered and torn after thousands of referrals.

An outstanding feature of GLORIA's masts is the quality of the bronze fittings. Tolly sourced half-hard bronze from Germany and had the supplier water-jet cut the sheets into the required tang shapes. It was an exciting day when the heavy wooden crate was dumped on the driveway. The complicated pieces were then bent and riveted locally.



22) Coating the spars.

Through the long design process of the traditional bale and gooseneck fixtures, Tolly had to make many drawings and numerous intricate wooden patterns. The favourite pattern making timber then was the incredibly rare and valuable King Billy Pine as it is stable and easy to shape. The local foundry produced high quality castings but a lot of time and labour was spent polishing them up to a high quality.



23) Main mast gooseneck and bronze winch base plate.

It was a struggle to find traditional deck fittings so Tolly conceded in discreetly using modern equipment and rigging to suit but where possible kept the deck layout true to the original design of LFH. Where possible the boat is fitted out with bronze fittings, many from Port Townsend, W.A., and then stainless where necessary. The Italian alloy sail track system with Teflon cars has proved to be a wise choice for ease of sail handling.

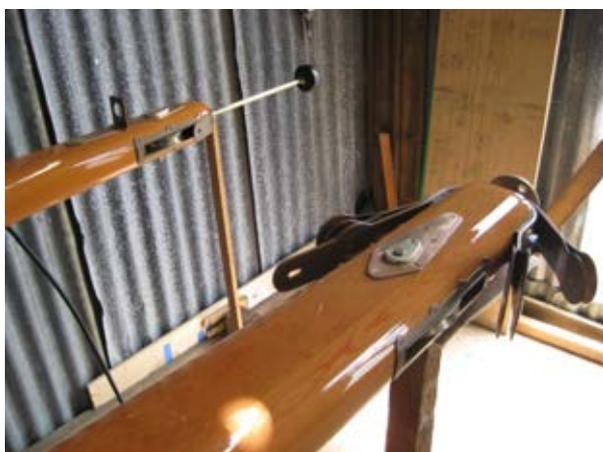
PAINTING THE SPARS

For four years there were several identical Oregon panels painted with various varnishes sitting on the roof of the old shed being tested for UV resistance. The better of the test samples proved to be Coelan and 2-pack polyurethane varnish, both far superior to anything available at the time. Over the four layers of epoxy, we painted the spars laboriously by hand with

13 coats of the honey-like Coelan, a new German product. Working weekends to keep out of the way of the 8 Metre build going on alongside, we were gradually enthralled by the emerging beauty of the lovely timber under the varnish.

Much time was spent filing, grinding and polishing the bronze fittings which were carefully installed. Drilling the through-holes for the spreader gunbolts was a delicate operation and entailed designing a special drilling jig.

An experienced and highly regarded rigger was coaxed out of semi-retirement and rigging plans were carefully drawn up, all modern stainless steel wire rope and swaging in lieu of galvanised rigging from LFH's day.



24) Bronze strapping and fittings.

Extracting the masts from the shed proved to be an easy process. Half the shed end-wall was dismantled, a long reach crane was employed and one man with a waist-hung remote control gently lifted the masts out of the shed and onto a truck.

The local Port Cygnet Sailing Club across the bay was chosen to mount the masts – mainly because it was nearest slipway and moving sixty foot fragile masts over the big hills nearby was not an option we wished to pursue. We bought a gold coin to place beneath the main mast step, carefully set in by Warren.

The mast raising, a spectre of horror in our minds for so long, in the end was a perfectly executed operation. Not a scratch on anything or anyone. A thirty tonne crane with a long reach was engaged and drew up in the frosty dawn mid-July 2012 as we were taking protective coverings off the masts. We had many helpers, good friends who toiled all day. It was like a barn raising. By the day's end, Gloria sat high on the

slipway with her fabulous masts standing tall. She looked magnificent. The dream had finally come true.



25) Installation of masts.

SAILING AND CRUISING

Doyles of Hobart were commissioned to make our sails using high quality Dutch cloth in a classic cream colour. Two reef points were incorporated in the main and mizzen. Due to the size of the sails and our age, we did incorporate lazy jacks to assist in sail handling which we find worth the headache of designing them.

GLORIA sails beautifully after the final lead trimming, is easy to handle and has a marvellous motion in heavy seas. We were lucky to secure a large pen in a new marina in Kettering, south of Hobart; a spacious berth was essential due to GLORIA's long overhangs of bowsprit and mizzen and because of her characteristic reversing under motor with an off-set propeller. (Incidentally, there are two other Mobjack's close by; WINDWARD STAR and NEW ZEALAND MAID.)

Protective covers are essential in Tasmania due to the harsh ultra violet light therefore the bright work and sails are covered up when we are not aboard. The covers are chore to remove and replace but thoroughly worthwhile.

In local coastal cruising, the two of us handle the boat without difficulty. Initially she had alarming lateral drift when on the wind but the extra lead has resolved that and she sails satisfactorily into the wind. LFH's original design displaced 38,000 lbs and GLORIA came in at 37,000 lbs – the exact difference amounting to using King William Pine against the original Yellow Pine and the method of construction. The goal through thick and thin was to keep to the LFH design where possible and practical and fully loaded she reaches her design waterline.

GLORIA steers well in all conditions because of her long rudder. We were surprised at how well she sails close hauled at 38 – 40° but in a short confused chop, we find it best to point lower at 50-60° otherwise she labours. Of course, reaching is her strong point; she is at her best on a broad reach in 18-20kts of breeze, easily reaching her hull speed of 7.6kts. We have had some exhilarating rides down the Channel, touching 8.6kts.



26) Sailing in flat waters, Esperance Bay, Dover.

We learnt early not to choke the sails, she is happiest with a little ease in the sheets. The mizzen baffled us at first but after experimenting, discovered it functions well on a broad reach and is a key dynamic in steering close to the wind.

For short passages when there is a stiff breeze, we often sail with the club footed-jib and mizzen alone, finding her well balanced and that we achieve speeds of only a couple of knots less without the mainsail.

We find GLORIA a very forgiving yacht, she sails herself in light airs and is very easy to trim. Yes, of heavy displacement and slow to tack but, once moving, she tramps along.

During the build we feared the reputation of the club foot but now are relieved in that it makes shorthanded sailing a cinch; the key is to keep it choked down when moving around it. We use the engine to charge batteries, to manoeuvre and in light fickle winds but prefer to either sail or motor.



27) Reduced sail.

We are very conscientious of the deployment of the running backstays as they are a critical part of the original LFH rig. In our part of the world we can experience bullets of high wind so we are very cautious with our rig and try to never get caught out over-canvassed. If you're thinking you should reduce sail, it's too late, you already should have! The moment we approach being over-canvassed, the barn door-like rudder lets us know.

We are pleased with the quietness of the rig in all conditions compared to aluminium spars. The beauty of seeing the mighty booms flex under loaded sail never fails to give us a thrill. It was worth it.



28) The patient man.

CONCLUSION

Lessons learned from the past twenty five years are many. Yes, it did take a while to complete GLORIA and it was a huge struggle but Tolly feels strongly the time in creating this beautiful craft was worth it as she is far superior than first envisioned. We remain in awe of L. Francis Herreshoff.

Aside from preferring to build the spars first as we underestimated the complexity, the time consuming-amount of design required and the lengthy process of bronze fabrication, Tolly simply has no regrets; he would not change anything and was passionate every minute of building this boat.

Yes, it was an endurance marathon but equally it required an enormous amount of creativity which is so rewarding. The fine detail of GLORIA was not all in the drawings; Tolly had to make it *all* look good; creating GLORIA was a form of art. The cost, both financial and physical, never precluded his zeal.

Lessons learned:

1. Foremost in the successful outcome of GLORIA was the fortunate choice of builders; having honest, trustworthy, highly skilled and experienced builders who were equally enthused by the design. Tolly would advise anyone thinking of a similar project to arrange to be able to work alongside with their (carefully chosen) builder. Also having a shed which you can afford and won't be pressured to hurrying out of are important
2. A project will always cost more than anticipated.
3. With the intensity of such a project, it was fortunate Tolly was still a bachelor at the start and could devote himself 24/7 all the way to the end. After he retired from diving, the boat build consumed him and it was sheer creative urge which carried him through as the intensity and demands of the project could be at times over powering – ones hears of many divorces, mental break downs and failures.
4. The saying in the Wilsons shed was "Rush and you'll make a mistake". Haste can lead to costly errors and disappointment so a warning to those considering a new build of the enormous time consumed simply by design. For example, planning the wiring throughout GLORIA was a long brain-wracking process. To hide fire-retardant cabling in a small vessel required a huge amount of thought as clumsy placement can ruin classic aesthetics. Another time consuming task essential to success is to always do a mock up, especially during the fit-out of the interior.
5. Another important factor is to beware of is the time lost to interested people. We often spent hours showing the project to curious visitors. Very time consuming when it is a daily occurrence.

6. On undertaking this type of build, be prepared to purchase thousands of sheets of abrasive paper and thousands of feet of masking tape. (And hundreds of boxes of rat poison!)
7. Don't be swayed or distracted from your initial goal. Do not make changes, stand firm.
8. And lastly, when you have a proven design such as a Herreshoff, don't mess with it!

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ACKNOWLEDGMENTS

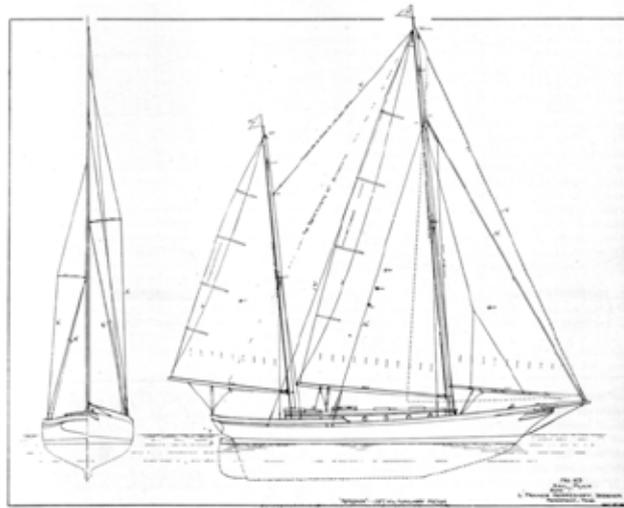
The Wilson Family.
APCO Engineering and Foundry.
Peter Johnson Chandlery.
Ian Brett (rigger).
Peter Pitchek (gilder).
Royce Salter (spray painter)
Eddie Wentorf (artist).
Guy Cole (patternmaker).

ABOUT THE AUTHORS



Tolly was a mining diesel mechanic and later an abalone diver. A passionate spear fisherman and angler all his life, he was encouraged to move to Tasmania to dive professionally. This gave him access to boat building knowledge and timber which led to the creation of GLORIA OF HOBART. Josephine has sailed since she was 4, daughter of a mining engineer with a passion for ocean racing. The Ryan family once owned a Wilson-built boat called CASCADE which is how Tolly and Josephine met in 1999. They have one son aged 26 and live between their Hobart home, a beach cottage south in Dover and the glorious GLORIA which they love sailing in the beautiful waters of south east Tasmania.

TIMELINE



- 1987 – Bought plans
- 1988 – Secured Wilsons shed / procured timber /
- 1989 – Poured lead / prepared timber / laminated stem & ribs
- 1990 – Made laminated stem, keel, stern post, floor timbers / built Oregon building rack on floor
- 1991- Assembled ribs, interior moulds / began planking / fitted tuck
- 1992 – Faired then glassed hull 6oz cloth / primed and painted upside down
- 1993 – Rolled over / fitted lead keel / began fitting shelf, clamps, deck beams, ply cabin sole
- 1994 – Aligned prop shaft / fitted stern tube / copper and cupra nickel plumbing
- 1995 – Bulkheads / 4 water tanks & 2 fuel tanks / bronze skin fittings and sea cocks
- 1996 – Fabrication internal structures (galley, saloon, berths, head)
- 1997 – Laying deck (big job) / covering boards & bulwarks / laminated celery cabin beams
- 1998 – King Billy cabin sides / cabin top / portholes / bowsprit bits / teak hatches
- 1999 – Wiring / painting / engine room (soundproofing)
- 2000 – Companionway & ladder / rubber built, saloon table
- 2001 – Fitted rudder & steering quadrant / laid teak cabin sole
- 2002 – Interior fitting out / galley including refrigeration / gas locker / paint internal bulkheads
- 2003 – Laminated Oregon bowsprit then design and cast assoc bronze fittings / varnish interior
- 2004 – Trail boards fitted / varnishing inside / procured Oregon for spars, dressed & stacked to dry
- 2005 – Deck fittings (tracks, winches, blocks, cleats) / completed engine room / cockpit sole / steering
- 2006 – Spray painted hull & cabin top/ gilding / launch.
- 2007 – Selected planed and dressed Oregon for 2 masts & 3 booms
- 2008 – Built mizzen first, main mast then booms / shaping.
- 2009 – Sanding & varnishing / acquired bronze sheet metal for strappings & fittings / built spreaders
- 2010 – Casting & machining bronze goosenecks & fittings for masts / still sanding and varnishing
- 2011 – Fitting of spar attachments (goosenecks, bales, tracks, wiring)
- 2012 – Installed masts, booms and rigging, spreaders and lights.
- 2013 – Commissioned sails



The Classic Yacht Symposium™ 2016

Darling of my Heart: BEN MY CHREE and The Stuart Knockabout

Author Amy Ballentine Stevens



Figure 1 – BEN MY CHREE in her 80th year, after her restoration at Ballentine’s Boat Shop (ABS)

Abstract

BEN MY CHREE is L. Francis Herreshoff’s Design No. 53, 28’ Knockabout. She is a long sweeping daysailer that exemplifies perfect simplicity. She offers the uninterrupted interaction with the wind and water, and is the perfect boat for “knocking about”. Her refreshing and graceful lines captivate with just a glimpse, but it is her manner on the water that consistently exceeds expectation. With relatively low freeboard, you are close to the water and can enjoy a beautiful shearline reaching forward. The rig is conservative and stress-free to manage, but moves her easily driven hull in a light breeze and ably handles heavy air. She is not only a great daysailer for her owner but also the inspiration for, and foundation of, the Stuart Knockabout, the fiberglass replica of her design. BEN MY CHREE was almost lost to obscurity, but fortunately she has a revival with an extensive restoration, her replication in fiberglass and the development of a class. She is now getting the recognition she deserves and rightly joins the ranks of L. Francis’s best designs.



About the Author

Amy Ballentine Stevens is the owner of Doughdish and Stuart Knockabout LLC and works in the family business at Ballentine’s Boat Shop on Cape Cod, MA. Having graduated from Earlham College in Indiana and attended The Breadloaf School of English, she taught English at the high school level for 5 years before returning home to Cape Cod and boats. She, her husband, and two small children enjoy cruising in the summer, and waiting for the summer in the Winter.

The Classic Yacht Symposium™ 2016



Darling of my Heart: BEN MY CHREE and The Stuart Knockabout

Amy Ballentine Stevens

Ballentine's Boat Shop/ Stuart Knockabout and Doughdish LLCs



Figure 1) BEN MY CHREE in her 80th year, after her restoration at Ballentine's Boat Shop (ABS)

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BEN MY CHREE is L. Francis Herreshoff's Design No. 53, 28' Knockabout. She is a long sweeping daysailer that exemplifies perfect simplicity. She offers the uninterrupted interaction with the wind and water, and is the perfect boat for "knocking about". Her refreshing and graceful lines captivate with just a glimpse, but it is her manner on the water that consistently exceeds expectation. With relatively low freeboard, you are close to the water and can enjoy a beautiful shearline reaching forward. The rig is conservative and stress-free to manage, but moves her easily driven hull in a light breeze and ably handles heavy air. She is not only a great daysailer for her owner but also the inspiration for, and foundation of, the Stuart Knockabout, the fiberglass replica of her design. BEN MY CHREE was almost lost to obscurity, but fortunately she has a revival with an extensive restoration, her replication in fiberglass and the development of a class. She is now getting the recognition she deserves and rightly joins the ranks of L. Francis's best designs.

INTRODUCTION

She was quite aptly named, BEN MY CHREE, Darling of my Heart, for she was the darling of those few who knew her and those who found her. She was adored by her first owner and kept in the family for three generations on an island in Maine. She captured the heart of Bill Harding with just a glimpse in a dimly lit shed, and inspired her replication just 3 years after this encounter. Thirty years later, again in the shadows of a shed, she enticed her current owner away from another boat, and received the restoration that secured her presence for generations to come. It is also appropriate that it is “Ben My Chree” rather than the more widely known and used Irish Gaelic, “Bean Mo Chroi” translated “Woman of my Heart”. “Ben My Chree” is Manx Gaelic, an obscure Gaelic dialect original to the Isle of Manⁱ. The language is recently being revived as it is considered an important part of the islands history and heritage. BEN MY CHREE too has been revived, with her restoration and her proliferation in a fiberglass replica. And she, like the Manx language, would be dead were it not for the few who saw her importance and strove to preserve her.

HISTORY

Design and Original Construction

Willoughby Stuart of Bear Island, Maine, ordered from L. Francis Herreshoff a large shoal draft daysailer in 1932. He wanted a fun and capable boat to enjoy the waters amongst the islands of Casco Bay. L. Francis Herreshoff completed “28’ Knockabout- Design No. 53” and BEN, as she was affectionately called, was built by Britt Brothers of West Lynn, MA in 1933. There is little record of consultation between the owner, designer and builder. A few changes were made to the written plans and unfortunately there is no record of the motivation for the changes.

The biggest difference between the plans and the boat that resulted is the material of trim. The plans specify for White Oak for rail and coaming, however Teak was used. This may have been at the request of Willoughby Stuart or a decision made by the builders due to their preference or availability of materials. At the time of construction, Britt Brothers was also building TIOGA and it is possible that extra materials bought for that project were used for BEN. Other parts that called for White Oak such as the frames, floor frames, stem, deck beams, breast hook and centerboard were in Oak but much of it was of low quality or completed in a less appropriate Red Oak. It is possible that White Oak was at a premium and difficult to secure. Since the trim did not need the structural strength of White Oak, maybe they opted to use their limited supply of White Oak on the structural parts of the boat.

There were also some minor revisions to the design done after launch. She needed the addition of lead pigs from the beginning to make her float on her lines. The

original lead was set as approximately 1775 lbs. There is an addendum on the plans written by L. Francis for the addition of lead to the keel in December of 1934, however he does not specify how much. In a later note to Norman Hodgdon, who was building a near sister, he noted, “The weight of the new keel will be 1950lbs. approximately, and this is more than the original boat had, but she had to have some internal ballast to bring her down to her painted waterline.”ⁱⁱ Additionally, probably after the 1937 season, the position of the forestay was moved forward. In a letter to L. Francis, Stuart notes: “one thing bothers me a bit and that is the Jib when flattened down for a windward mark rubs the shrouds on the leech quite badly at times.”ⁱⁱⁱ L. Francis stood by the design and responded:

In regard to the leach of the jib, since people have been using lapping jibs as large as possible, it is supposed to be desirable to have the leach of the jib come as close to the shroud as is possible and on all of the best racing boats at the time the leach does touch the shroud. If it were not so, the jib would be smaller and you would loose some of the actual area for the measured area. It is possible that the jib is set so the tack is close to the stem head there would be more clearance. However, on all of the best racing boats today the leech of the jib just touches the lower shrouds.^{iv}

Despite L. Francis’ explanation, and perhaps without his knowledge, the headstay was moved. Both the changes to the rig placement and the additional weight would be expanded in her later transformation into fiberglass.

Isolated Island Life

Directly after construction she was moved to her island in Casco Bay, Maine. She became the favorite boat of her owner, who undoubtedly loved her simplicity and exquisite sailing performance. With a boathouse and a railway on the island, there was no need to go anywhere else, and BEN remained on the island, enjoyed by her family, for nearly 40 years. Stuart Pratt remembers: “the Ben was my grandfathers darling and his wife kept her almost like a memorial to him. When she died and the family sold the island (1970) the Ben, which had been left to my mother/me came to me solely.”^v In that time few saw her and BEN had little opportunity to influence others, however two boats did come directly from her lines: KOALA and PALMETTO.

KOALA, BEN’s little sister

Willoughby Stuart asked L. Francis to recreate BEN in a smaller form for his son, Harbourne. Interestingly in 1936, L. Francis wrote to Starling Burgess and shared his intension and drawings for building a smaller version of BEN. “Your secretary sent me a copy of the rules for the Boothbay boats.... Three or four years ago I designed a boat for Mr. Willoughby Stuart for Bear Island, Maine. He now has a son growing up who wants a boat like her

only smaller.”^{vi} The Boothbay Harbor One Design website notes: “Burgess designed several early 20-footers including Bunny [II] in 1935 [designed or built? ABS], which is very similar to the Boothbay Harbor One Design.” The Boothbay Harbor One Design class, while ultimately designed by Hendel, may have been influenced by BEN and KOALA, despite the assertion on their website that the class influenced KOALA: “L. Francis Herreshoff, a frequent visitor to the area, was likely inspired by the designs of his friends Burgess and Hodgdon when he drew Koala, a 22’6” sloop in 1937 [Note: this is the year of launch, not of design, ABS]. She shows a striking resemblance to the early Boothbay daysailers.”^{vii} So BEN, through KOALA, may have influenced the class that still races in Boothbay today.

KOALA, like BEN, was built by Britt Brothers and delivered in 1937. Andrew Britt Jr., son of the builder, wrote in a 2002 WoodenBoat article on Britt Brothers:

KOALA, a 23’ daysailer, was the one which I, as a 12-year-old, drooled over. She was built as a 18th birthday present for Harbourne Stuart. The Stuarts of Boston owned Bear Island off Cundy’s Harbor in Harpswell, Maine; the island

had its own natural anchorage. Britt Brothers had built the 28’ BEN-MA-CREE for them in 1932.... I remember visiting them as a family; we drove out on the dock, tooted the horn of the Buick, and they would come over from the island to pick us up.”^{viii}

Clearly KOALA had the same appeal that BEN did. KOALA captivated even a young boy who was accustomed to seeing the many lovely boats produced in his father’s yard. KOALA was eventually sold to a family on Orrs Island and I do not know where she is today.

PALMETTO, BEN’s near sister

The other boat from BEN was drawn in 1955, upon the original plans of Design 53, when L. Francis drew a keel and a small cabin for Thomas Taylor, esq, of Boston. From letters it shows that the discussion and order of these plans was done over the phone so there is no record of what Taylor’s exact criteria were. There are some small references to a few special requests and how it led to her modifications. It is unknown how L. Francis came to decide that Design No. 53 was the best fit for Taylor as opposed to another large daysailer, or designing him a

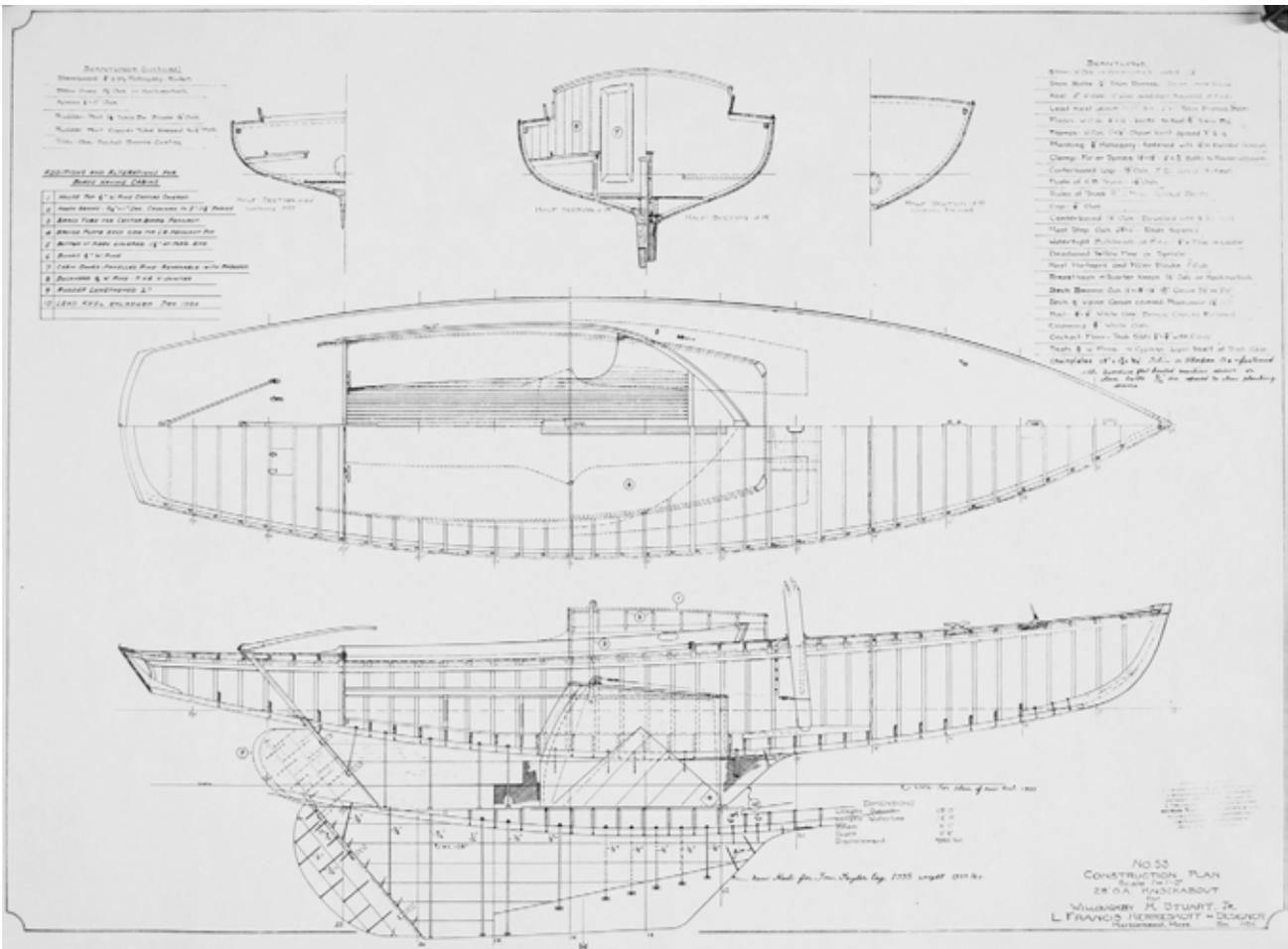


Figure 2) Design No. 53 plans showing the original plans for BEN with the modifications for PALMETTO drawn on top.

custom boat. It is also unlikely that Taylor would have requested that design, as it is also doubtful that he would have ever seen BEN. It seems, from the collection of L. Francis' letters at Mystic, that it was the first and last time that Design No. 53 was suggested to anyone else. Regardless of how it happened, Thomas Taylor chose Design No. 53, commissioned Norman H. Hodgdon Jr. of Boothbay Harbor Maine to build her and named her PALMETTO after his home state of South Carolina. In a letter to Taylor, Hodgdon stated, "The three main qualifications of a fine craft are: a good designer, a fine owner, and a good and interested builder. I am sure we could all work together to turn out a boat we will be very proud of and I will be very pleased to do all I can."^{xix} They all did work together to build and update PALMETTO and the results were well received.

PALMETTO's alterations

The major difference between BEN and PALMETTO is clearly the keel. The centerboard was removed and replaced with a keel. It is possible that this change came at the suggestion of Hodgdon, perhaps partially because of his aversion to centerboards, but likely also to cut costs and to make more room in the boat for some of Taylor's other requests. "The more I looked over the plan and specifications and considering you would be doing away with the Centerboard the more I am in accord with the whole design. I must admit I have always been very unhappy with about any boat with a centerboard."^{xx}



Figure 4) PALMETTO showing keel and cabin. (Courtesy Andrew Reeve)

Abandoning the centerboard trunk gave much more room to accommodate the small cabin and especially the



Figure 3) PALMETTO, possibly on her maiden voyage from the Hodgdon Yard in Maine. (Hodgdon)

addition of a head, which was installed despite the advice of L. Francis. "As for the toilet- I believe a good cedar bucket, properly arranged, it is ever so much the best in a boat of this size. It is easier to use and better all around if the person knows how to use it."^{xi} In 1956 she was launched and Taylor noted in a letter to L. Francis: "She was entirely satisfactory in every way and all my friends thought she was an ideal boat."^{xii}

PALMETTO goes to school

When Thomas Taylor could no longer use PALMETTO, he donated her to the Landmark School in Prides Crossing, MA. They used her in a summer seamanship program. The director of this program noted:

We generally had about 50 students who spent one half of the day in the classroom and the other half on the water. Younger students sailed in the morning (when the wind was lighter) and the older ones sailed in the afternoon. ... In the late 70's or early 80's we were fortunate to receive a very special donation, "Palmetto."...

Palmetto, was the "queen" of our fleet and the favorite of my staff. Everyone wanted to be assigned to sail her everyday. She handled like a dream, fast in even the lightest of air yet she stood up to a blow remarkably well. She was beautiful as well, with her traditional bronze fittings and her glistening brightwork, including her spars. Her cockpit was roomy and comfortable but her huge foredeck and expansive afterdeck were where the kids always chose to lounge. They loved it. To me, the most amazing thing about Palmetto was how delicate her helm

was, it seemed that it rarely took more than a finger on the tiller to guide her. ...

Unfortunately, in the mid 2000's the Seamanship Program came to an end due to a restructuring of the school's summer session....

She was probably the nicest boat I ever sailed. All good things must come to an end.^{xiii}



Figure 5) PALMETTO at the dock, shows her small cabin but she is still strikingly similar to BEN, it appears that her headstay is in the original position as planned.

PALMETTO now

When it was time for her to have a new home PALMETTO, was sold and resided in Shelter Island, New York where she is still sailing today.



Figure 4) PALMETTO sailing in Coecles Harbor, Shelter Island, NY.

PALMETTO did receive a major refit, including new frames and deck and now continues to be in excellent condition and well enjoyed.

With these two small exceptions, little was seen or heard from BEN MY CHREE for decades. She was used and loved by her immediate family and did not have the opportunity to be appreciated by many others. PALMETTO on the other hand, did have a more public existence and she was never replicated either (despite all of Taylor's friends thinking she was "the ideal boat"). Design no. 53 was even un-noticed by Roger C. Taylor when he researched and published Sensible Cruising Designs. "When Muriel Vaughn, assistant to Francis Herreshoff,... let me go through all of them [the plans] when preparing Herreshoff's book Sensible Cruising Designs, the Ben, an unknown boat to both of us, didn't surface. So her plans have never been published."^{xiv} With the sale of the Island in Maine, BEN went to live in Essex with the grandson of her original owner, Stuart Pratt. He recalls: "great story on rigging, launching from the islands boat house and marine railway and then sailing her from Casco Bay to Annisquam...she had not been in the water for over 5 years when she was launched in 1970-swelled up in 12 hours!" She then embarked on the voyage and arrived at dawn on her third day underway, making it to Story's Boat Yard safe and sound. There she was again largely unnoticed until Bill Harding found her 15 years later. BEN was unassumingly tucked in a shed and showing her age.

DISCOVERY: BILL HARDING

It had been nearly 10 years since BEN had been launched and she sat in the back of the boat yard in a shed. Harding was delivering a new boat to the yard and he caught BEN out of the corner of his eye. He says he fell in love instantly and while he did not quite know what she was, he suspected a connection with Herreshoff. "I discovered Ben...in Dana Story's boat yard in Essex, Massachusetts. The shape of her bow and stern and her slender underbody said L. Francis Herreshoff... Research showed her to be indeed a Herreshoff, and the only boat built to the design."^{xv}

Borrowed boat

In May of 1986 Harding contacted the grandson of Willoughby Stuart, Stuart Pratt, less than a year after first seeing her. Already he had tracked down the designer and owner and had thoughts of her reproduction in fiberglass as he had done with the Herreshoff 12 1/2, the Doughdish. All of this interest and planning was done having not sailed her, nor even seeing her in the water. He writes to Stuart Pratt:

In a sense, the building of this boat is a rather unique venture in that she probably has

comparatively limited possibilities in the overall boat market and, therefore, is not the sort of boat most builders could foresee selling in quantity. On the other hand, if beautifully done, we may be able to achieve modest success with her if we assume, going in, the unit of volume of business will be rather small. As in the case of the Doughdish, she should have a great appeal to a comparatively few people. If this assumption is accurate, she is probably just the kind of product for us to undertake.^{xvi}

His instincts told him that she would sail as lovely as she looked, but to confirm, Harding asked to borrow BEN and test her out. “We will want to sail the boat and, as we discussed, if we have her for a time here in Buzzards Bay this summer, it would provide us a great opportunity to assess her capabilities and to make some decisions about how she might best be rigged. Personally, I don’t anticipate much change, but it is too early to predict anything of that sort of thing.”^{xvii}

Some work needed to be done before she could be launched and Harding, who was also a sail maker, had some thoughts on slight modifications to the sail plan. He decided to try the rig with a bit less rake and to move the head stay forward.



Figure 5) Bill Harding sailing BEN (perhaps with Roger Taylor). She is tested with different sails and rig modifications. The headstay is brought well forward and this jib is much larger than the one ultimately decided on. (Harding)

BEN was finally launched at the end of the summer of 1986 and Harding was able to use her for a short time. “we sailed the boat last September, October and November quite a lot and she made a favorable impression on all of us, beyond our expectations in fact.”^{xviii} He noted that she was even better than he had imagined and he liked how she sailed with his rig adjustments. He concluded the summer wanting only to change the lead of the main sheet. “The only further change I wish to make in your Ben is the mainsheet. It’s a terrible bear. I can... provide a four part double-ended sheetline with a cam-cleat on each side of the decking leading to the cockpit. That will cure the whole problem...”^{xix} Interestingly, when building PALMETTO, Hodgdon expressed concern to L. Francis along the same lines: “The main sheet seems to be shown double ended with only two parts to the boom. This does not seem to me as though it were enough purchase.”^{xx} He proposed 3 parts to deck and a single line into the cockpit on centerline. L. Francis responded: “The main sheet is drawn in two parts as I often did on boats at that time as this arrangement takes the place of a traveler.”^{xxi} It seems that she was originally built as Hodgdon suggested, and against L. Francis’ advice.

RE-CREATION: THE STUART KNOCKABOUT

Initiation of the business

With the success of the test sails, Harding decides to move forward with the replication of BEN. Pratt generously contributed the boat and invested in the venture. Ultimately he became the owner of a new fiberglass version of his boat.

The next few years were devoted to getting start up investors by preselling 5 of the boats, it was like an early version of a Kickstarter Campaign. Harding used BEN to take prospective owners/ investors out for sails. In an update letter in 1987 to Stuart Pratt, Harding wrote:

I have sailed her a lot and have had some great experiences. Probably 25 or so prospects have gone out with me and not a single negative comment- all positive. So far, of these, I have only one who would be an “advance purchaser”. But, that makes four in all, and we need only five to complete the “financing”. So, I optimistically expect we’ll have five maybe six lined up by Labor Day. On the strength of this, we may commence building the tooling in September.^{xxii}

There are only about three and a half years between when Harding first sees BEN and when the first Stuart Knockabout is underway, but his letters show his impatience even with this impressive timeline. In that time he secures the boat, tests his adjustments, sells 5 boats (on faith) for start up capitol, builds the molds and establishes promotional materials. For the promotional materials he turned to his friend Roger Taylor who was widely known for his writings on classic boats. Harding takes him out sailing a handful of times and asks him to write an overview of BEN to use for publication. Taylor writes:

It is the person steering who enjoys the boat's good balance the most, of course, but the rest of the crew is very relaxed, noticing how easily and with what pleasure the wielder of the tiller performs that wonderful art. The Boat has a fine feeling of steadiness on the helm combined with lively responsiveness...

Her motion, like her balance, combines steadiness with liveliness. There is no question of ever being thrown about, yet you feel her response to the lift of every wave as if with her own delight.^{xxiii}

The selling of the first 5 boats was done at a calculated loss, but did provide the funds they needed to start and the multiple sails and promotion gave the foundation to sell the additional boats that would eventually establish the business.

Wood to Fiberglass: Changes and Modifications

With the help of Muriel Vaughn, the original design and plans were obtained, but it was decided to use BEN herself as a female plug to build the mold for reproduction. The boat was at Ballentine's Boat Shop where the hull had been solidified and maintained while Harding was using her for demonstrations. In addition to significant cosmetic upgrading (to look good for the prospective buyers) a fairly extensive over haul was done to her centerboard trunk and keel area that was found to be inadequate and precarious.

Two weeks ago I got ansy about her increasing tendancy to leak and gave the boat to Steve Ballentine here to repair. The fastenings which were designed to hold the centerboard box log to the batten keel (keelson) were loose-removable by hand- and those into the lead alongside the centerboard slot also. So, the ballast was really only held by the single throughbolts forward and aft of the centerboard. It is a good thing she is being repaired, for that whole piece of construction was in very risky shape.

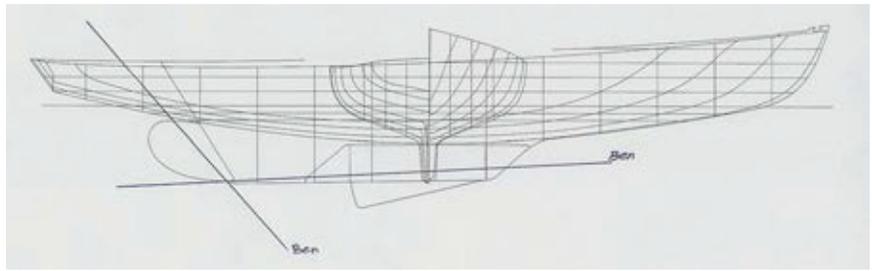


Figure 8) The line drawings showing the difference between the Stuart Knockabout's keel configuration and the original keel shape of BEN.

With how hard Harding was sailing BEN, it is very lucky that the lead held together as long as it did. Once stable, BEN was taken to Edey and Duff of Mattapoisett where they completed the tooling and construction of the mold. Edey and Duff constructed the Doughdish in fiberglass as well, and Harding had a long successful partnership with them.

Harding noted that “We all want to retain as much of her original concept and character as possible, yet outfit her in a practical way reflecting whatever present-day norms seem appropriate.”^{xxiv} No change was made to the hull shape, but because the foam core fiberglass is lighter than the Mahogany, 450 lbs of lead was added to the keel and the hull rested on her designed water line. This addition resulted in a slightly deeper draft on leading edge of keel. Additionally the angle of the rudder shaft was brought more upright. This was primarily to accommodate the use of a traveler for the main sheet, which was Harding’s only complaint in his initial use of BEN.



Figure 9) The rig on BEN is more raked than the position established for the Stuart Knockabout. (Fields)

For the rig, he kept the reduced rake and changed the position of the headstay to between the revised original placement and the fully forward placement he had tested with BEN. He also implemented a club-footed jib replacing the overlapping one. Rather than reproducing the spars in wood, Harding opted to go to painted aluminum spars from Hall Spars in Tiverton, RI.

BEN to BUCCANEER, the Stuart Knockabout

Harding was able to secure the necessary advance purchasers and in 1989 BUCCANEER, SK 1 is built for Harding as a prototype. The new boat is put through her paces to make sure that no changes needed to be made before full production got underway.

Harding again took out Roger Taylor who wrote a piece published in the *Boat Journal* in 1990. Having sailed on BEN he was able to comment on the small changes that had been made in her development into the Stuart Knockabout.

The changes worked well. While the Ben's helm pulls fairly hard reaching in a strong breeze, the Stuart Knockabout tiller never does, and yet never goes beyond neutral to lee helm in light air. The mainsheet traveler lets you flatten the boom in whatever athwartships position you want for driving her to windward in a breeze. With her extra ballast, the Stuart Knockabout is definitely stiffer than the Ben; she'll carry her sail longer in a breeze...^{xv}

As the final part of the funding for the Stuart Knockabout project, BEN is sold. She went first to Marion and then on the North Shore. By 2008 she was getting older and in need of a restoration. Her then owner decided to sell her to someone who would do a complete restoration. He then bought the original Stuart Knockabout, SK 1, BUCCANEER, from Harding, which he still sails today.

BEN was brought to Ballentine's Boat Shop where she lay dormant in a shed for a few years. But finally, she was once again noticed by someone intending to look at something else, and her fate changed. Her current owner had come to look at another boat for sale in the yard. He saw BEN, asked to sit in her, and simply said, "I think this is my boat..." Just as she had captivated Harding, she captured her next savior and her succeeding chapter began.



Figure 10) BEN in Ballentine's shed awaiting a new owner (ABS)

Also at this same time, Harding retired and my father, Steve Ballentine and I acquired the rights and molds to build BEN's fiberglass sisters. In 2010 production of the Stuart Knockabout moved to Ballentine's Boat Shop and we were privileged to work on both the wooden original and her fiberglass prodigy at the same time.

RESURECTION/ RESTORATION OF BEN

The primary goal of BEN's restoration was balancing originality, authenticity and longevity. With her, even more than some other boats we had restored, preservation was key. Not only did we want her to live on and function as she had been originally conceived, we wanted a record, a working archive, which demonstrated the design, construction and use of this pivotal boat.



Figure 11) BEN's rebuild is underway, bracing and templates are used to re-establish her port and starboard symmetry and shape. (ABS)

Originality

The first priority was re-establishing her shape, which was somewhat warped after her long life and broken frames. Cross braces were installed to the ceiling to support the shear and other braces were built from the floor to support and adjust the shape at the hardest turns where some of her shape was lost. With the help of templates, plumb lines and the plans we were able to restore her to her original shape.

For her new owner, originality was especially important, he wanted to be able to refurbish and preserve as much as possible from when she was originally designed and built. This was relatively easy for the rig, the hardware, and much of the mahogany planking, as it was in good condition. The rig and spars of Fir were stripped and refinished with very minimal repair. The original boom was constructed with a groove for the foot of the main sail and fashioned to rotate on the gooseneck for reefing. This was a design that L. Francis had just



Figure 12) The Yellow Pine deadwood and rudder are in great shape and are reused. Here the deadwood is getting fit and fastened to the keelson and the rudder hung. (Fields)



Figure 13) Much of her original mahogany planking was suitable to be reused. However, the garboard and broad planks were replaced. (Fields)



Figure 14) Original hardware is cleaned up and reused. (Fields)

started using at the time of her construction. All was in excellent and working condition. The fresh varnish was all her spars needed to look as they did when they were new.

We were also able to refinish and reuse her pine seats, the Yellow Pine deadwood and rudder, the lead keel and her additional pigs.

We were also able to reuse her original Bronze hardware. Nearly all of her original hardware was still with the boat and the few remaining pieces were sourced from "archives", our stash of good hardware saved from other boats that no longer needed them.

When L. Francis designed KOALA, he hand made much of her hardware: "I have taken a special interest in this boat and, as you know, have made a great many of the fittings with my own hands, and made the patterns for them so that this boat would be unusually finely proportioned and as nearly perfect in its fittings as possible."^{xxvi} Stuart noted: "I am tired of hearing from Harbourne how much better his Herreshoff hand turned bronze plates are, than those on the "Ben" that I am not sure is such a good thing to do to have you make them so well"^{xxvii} I would love to find KOALA and compare her hardware to BEN's to see if he upgraded to the hand made Herreshoff hardware. It would also be interesting to compare PALMETTO's hardware to see if it were made off of the same patterns built for KOALA.



Figure 6) Restoration is underway, the majority of this mahogany planking we were able to reuse. The stem was removed and replaced as to the plans and from recreating the original. (ABS)

Authenticity

Over her existence for nearly 8 decades some work and modifications had been done to her, some of which was in keeping with the boat and others less so. For those things that were modified or that needed to be replaced because of age, the goal was to be as authentic as

possible, following her original plans. This was practical for the deck, deck frames, keelson, trim, sole, stem, bronze fasteners, etc which were all able to be recreated with the same materials and scantlings as designed and built.

With a trip to New England Naval Timbers in Cornwall, Connecticut, we were lucky enough to find a long beautiful piece of White Oak to use for the keelson, along with appropriate pieces for the stem and frames.



Figure 16) The White Oak keelson steamed and fastened in place. (Fields)



Figure 17) A new Keelson is fit then steamed in place. (Fields)

The canvas deck had been replaced before, when Bill Harding took custodianship, but was due again. It was replaced in the same way and with the same materials as originally built and designed. 2 ¼ inch wide White Pine with canvas covering. The breast hook was also replicated in White Oak and the Teak sole was also reconstructed as original.



Figure 18) Deck beams are built in White Oak. They were then covered with pine and canvas as in the original plans. (Fields)

Longevity

However, as she was the one and only of her kind, we felt compelled to upgrade, where appropriate, for longevity. She had lived for 80 years at this point, and we wanted to make sure that she would again. For this, we incorporated refinements to materials, construction techniques and finish details that were time period authentic, but not original to BEN as built or designed.

Partially because she was built in mahogany, her frames needed to be more substantial to be able to handle the more aggressive swelling of mahogany.



Figure 19) Looking forward in BEN before her restoration. All frames were sistered as most of the originals were cracked. (ABS)

All frames had been sistered at some point in her life. To protect her a little better for the future we increased the size of her frames from 1 x 1 1/8", as called in plans, to approximately 1 1/8 x 1 1/4". We also utilized White Oak, also per the plans, replacing the Red Oak and lower quality oak that was used in original construction and in subsequent repairs.



Figure 20) Frames in White Oak were pre cut, labeled with a string for easy handling, and laid in place before being steamed, bent and fastened into the hull. The braces that helped to re-establish her shape also served to provide backing for bending the frames. (ABS)

In addition to enlarging the frames we also spent extra time in their installation, rounding every edge and sealing end grain. This is a good practice for protecting from rot especially in the bilge, but it was not widely used, as it is more tedious and time consuming.



Figure 21) Rounded edges and ends are sealed and help to keep water from wicking into the grain, combating decay. (Fields)



Figure 22) Centerboard log is in locust and is splined with a strip of cedar that is also splined into the keelson.

Another area that was modified for longevity and strength was the centerboard trunk. This is a notorious problem area in many boats, as noted by Hodgdon, and in BEN specifically, as noted by Harding. We therefore adjusted the construction, material and hardware for the centerboard logs. Firstly, the log was rebuilt in Black Locust, which has significantly higher rot resistance and stability than the White Oak as originally specified. Locust was not widely used in yacht construction at the time. But as L. Francis went to Agriculture School (in order to run the family farm) he learned a great deal about the properties of different types of wood, and I am sure had Locust been available to him, he would have utilized it. Rather than the narrow and relatively square structure of the original log, we widened it and added laps and splines for the sides. The additional width gave a greater landing surface and the ability to put in a lap for the pine sides of the centerboard trunk (which were splined and constructed in pine as per the plans). This overlap gave significantly greater fastening area between the log and the trunk and made it more difficult for water to intrude.

Making the logs thicker also gave more space to bolt though the lead keel. In the original plans, the keelbolts by the centerboard slot were lags and relatively short except for one throughbolt fore and aft of the centerboard. We opted to throughbolt all of them.

The other area usually compromised by water is the interface between the keelson and the log. To address

this, we cut a groove in both the log and the keelson and made a cedar spline. The cedar swells and makes an exceptional water-tight barrier. We also fashioned custom L angles in wood patterns then had them cast in Bronze at the Edson Foundry. These were installed tying the centerboard log to the floor frames. This greatly augments the rigidity of the boat and strengthens a habitually weak area of construction. I think even Hodgdon would have approved of this trunk construction.



Figure 23) Custom angles are cast in Bronze to fortify the area around the centerboard. Splined pine makes up the trunk sides and is lapped into the Locust centerboard log. (Fields)

Along the same lines, we fashioned bronze pads to use as large washers for the keel bolts along the keelson. This was not called for in the plans nor done in original construction. However, in the 1980's when Ballentine's reworked her centerboard, the bronze pads were added to help fortify the keel. It spreads the load of the keel and helps to protect the keelson, lengthening its workable life.



Figure 24) Bronze pads that were used in BEN's last refit at Ballentine's and were replaced and enlarged with this restoration. (Fields)

The transom was one of the few areas that had been modified over her life and we returned her to her original design but with slightly more robust materials. This will hopefully protect against the need for future attention. At some point in BEN's career her transom, transom

frames, and stern knee were replaced. Most noticeably the stern knee was shortened, only going partially up the transom. Additionally a lot of rubber bedding and fasteners were used. We replaced all parts per the plans with grown natural crooks of Locust with slightly increased dimensions and very careful joinery to avoid needing extra adhesives. The frames and quarter knees are notched to fit and everything is locked in.

Sails

The sails were built to be authentic in technique and aesthetic, but utilized the modern materials of Dacron instead of cotton, and Posh line instead of hemp. They were beautifully (and painstakingly) executed by Squetueage Sailmakers in Cataumet, MA.



Figure 25) The sails, although made with the modern material of Dacron, are built traditionally with hand sewn bolt rope, narrow panels and cream color. (ABS)



Figure 26) The transom frames are in place as well as the stern knee which now is consistent with the plans. The quarter knees are notched in place. (ABS)

The Dacron was cut in narrow panels, which was the width of the material available at the time of BEN's original launch. The color is a cream "linen" color that is also more reminiscent of the cotton cloth of the past. We worked with Squetueage to dig in both of our "archives" to find and utilize period appropriate hardware so that the sails could be as authentic as possible.



Figure 27) The jib features a hand sewn bolt rope in Posh 3 strand. The bronze hardware is period. The headstay was hand seized and tarred as originally done. (Fields)

As a result, the sails, rigging and hardware are a beautiful compliment to BEN's restoration, looking period appropriate but functioning with the advantages of more modern materials. The Dacron is able to stand up to more sun light and moisture, will hold its shape, and will have much greater longevity.



Figure 29) BEN sailing with one of her sailmakers, demonstrating the period aesthetic Dacron sails. (ABS)

The more raked position of the rig and the use of the larger overlapping jib was returned to a more original configuration than when Bill Harding tested her. While the forestay is not as far aft as dictated in the original plans, it is in the position that was probably used by Stuart early in her sailing career.

Single design to a Class of Stuart Knockabouts

In 2013 when BEN was relaunched, she was 80 years old, and by that time there was 1 SK built for each of those 80 years. She sailed out to meet the class for the 2013 Stuart Knockabout Regatta, an annual meeting of the local boats. The day ended up being quite blustery, so



Figure 7) Raucous Regatta! We opted to stay in the protection of the harbor with BEN for the 2013 SK Regatta, but her fiberglass sisters braved sustained 35 knot winds and standing waves. (Fields)

we thought better of leaving the protection of the necks, and she did not race. But her fiberglass sisters did, and it was a wonderful gathering of the class she begot and an impressive demonstration of her design and capability, a beautiful tribute to her legacy.

Every year since 2010, Stuart Knockabouts have met in Buzzards Bay for a Regatta. It is usually a two-day affair with dinner hosted by a local owner. We have had as many as 12 Stuarts on the line and expect that to expand in years to come.



Figure 30) The Stuart Knockabout Regatta, Buzzards Bay, raced in working sails and commonly sailed with only Skipper and one crew (ABS)

Fleet Racing

In addition to the yearly Stuart Knockabout regatta, there is regular fleet racing out of Buzzard's Yacht Club with a half dozen Saturday races throughout the summer. There is also a Stuart Start for the local Buzzard's Bay PHRF fleet. Between 4, and 7, boats meet to race every Wednesday night. "The Northern Fleet" in Hull and Hingham have also organized and now have 4 boats and regular Thursday night racing.



Figure 31) Wednesday night racing off of Wings Neck, 4-6 boats meet regularly. (ABS)

The guiding principle of the class is the Corinthian Spirit and simplicity derived from her design. Part of the Stuarts' elegance is the absence of things unnecessary. Unlike many other class racers, she does not have multiple strings to tweak while you race. She is commonly and effectively raced single-handed. Yet to have her perform at her best, requires careful attention to sail set.



Figure 32) Racing in the Stuart can be done singlehanded, with one crew or two, but with the simplicity of the rig and her handling the primary job of the skipper and crew is to enjoy themselves.

When Harding was contemplating BEN's reproduction he noted, "This boat has possibilities for one-design class treatment, although it is extremely difficult to get such a thing established. However, we might decide to design, rig and equip the boat in a single, well-chosen manner so as to increase her potential as a Class." This was written to Pratt, even before Harding had sailed the boat. From his first sighting he knew her potential.

Harding's first classic reproduction was the Doughdish, the fiberglass replica of the Herreshoff 12 1/2. The Doughdish was built first and foremost as a performance replica, and secondly as a aesthetic replication. He needed a boat that would race equally and fairly with the wooden originals and their already established fleet. As a result he painstakingly replicated the shape, weight, and balance of the original boat. For the Stuart Knockabout on the other hand, any possible class racing would be of the reproductions as there was only one original wooden boat of Design 53. He therefore, did not adhere to so strict a reproduction as he had with the Doughdish. He did however see the value in keeping the boats consistent so that class racing could develop in the future. We have continued to keep the rig and standard equipment simple and consistent so that all of the boats would conform to one design racing. Ironically a practice not condoned by L. Francis who thought it threatened the available work for designers, and the only ones who might benefit would be builders.

PHRF Racing

In addition to class racing, Stuart's tend to do very

well with in PHRF racing. SK 53, LEGGEIRO, has won The Ocean Race in South Carolina twice and SK 15, QUILL, has claimed victory in the Great Chase in Marblehead. The handicap assigned by PHRF New England is 216 for working sails and 210 for spinnaker, but locally it has been reduced to 206 for working sails.



Figure 33) SK's racing in PHRF, here against our former boat PROCYON, Sidney Herreshoff's Fisher's Island 31. (Fields)

Daysailing and Mega Yachts

Today there are 82 Stuart Knockabouts from BEN's mold. Although not too widely known, the design is getting more recognition and is far from the obscurity of her Island origins. The majority of the boats are not used for racing, instead as the singular daysailer like she was originally designed. They excel as a fast, comfortable, and spacious daysailer that is quick and easy to get underway. Many are sailed (or even raced) singlehanded with the self-tending jib.

In Roger Taylor's first account of BEN and for the upcoming Stuart Knockabout venture he remarks: "I hope these boats will be widespread geographically. How great to see one sailing in Penobscot Bay, in Narragansett Bay, on Shelter Island Sound, on the Eastern Shore of the Chesapeake Bay, in the Back of Cape Hatteras, on Lake Pontchartrain or among the San Juan Islands."^{xxviii} Taylor was right in his suspected suitability of these boats as currently Stuarts are in all of these places, except Louisiana. The largest concentration of boats is in the North East, but there are also Stuarts in TX, CA, OR, MS, MI, MO, SC, FL, Canada, England, Italy, among other areas. There are even three Stuarts aboard mega yachts and traveling the world.



Figure 34) SK 73, MARGUERITE, lives aboard SEA WOLF an expedition tug that travels the world. MARGURITE is rigged in a cradle and can be launched with an onboard crane and enjoyed in any port. (Courtesy Phin Sprague)



Figure 35) PINK SHRIMP a retrofitted Shrimper, was the mother ship of SHRIMP, SK 74 that is launched using deck lifting eyes for use in port. (Courtesy Jack Setton)



Figure 36) BEN MY CHREE sailing in a fresh breeze (ABS)

CONCLUSIONS: LEGACY

We are honored to have been able to carry on the legacy of BEN through her restoration and replication. We aspire to acquaint more people with this wonderful design in fiberglass and we are hoping to build another BEN in wood, for the purists among us. We have also considered doing a PALMETTO Stuart modeled after her 1955 sister, with a keel, small cabin, and head (which, unlike L. Francis, I see the value in).

BEN and the Stuart Knockabout are far from the obscurity of the past, but I believe there are a great many more people who will admire what, I hope, is becoming one of L. Francis' more prolific designs.

ACKNOWLEDGMENTS:

Firstly, I would like to thank Stuart Pratt for the contribution he has made to the preservation of this design and the development of the class, also for his willingness to answer my incessant emails. I would like to thank all of BEN's caretakers past and present, without whom the boat and her potential would have been lost. Most notably Bill Harding who had a vision for the Stuart Knockabout and Brad Baker who had the commitment to save the one and only original. Thanks to Andrew Reeve for contributing the information about PALMETTO. Thank you Tyler Fields who supplies beautiful pictures and videos and shares my nerdy excitement for the boats and their history. I would also like to thank Steve Schaefer for his impeccable work on the restoration of BEN and Eddy Pavao and Fernando Oliveira for building

a beautiful replication. I also appreciate my family, my dad and husband for supporting my interest in boats and for providing information and the childcare I needed to write this paper. Lastly, I would like to thank all Stuart Knockabout owners who have proven themselves to be a really fun group of people, with exquisite taste in boats, and who make my job fun and easy.

ABOUT THE AUTHOR:



Amy Ballentine Stevens is the owner of Doughdish and Stuart Knockabout LLC and works in the family business at Ballentine's Boat Shop on Cape Cod, MA. Having graduated from Earlham College in Indiana and attended The Breadloaf School of English, she taught English at the high school level for 5 years before returning home to Cape Cod and boats. She, her husband, and two small children enjoy cruising in the summer, and waiting for summer in the winter.

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The Classic Yacht Symposium™ 2016

Late 1800's Developments in Yacht Design And The Beginnings Of One-Design Classes

Moderator: David Curtin

- Rating Rules commence in late 1800's in Great Britain and USA on principle of adopting waterline length and sail area as the key controlling parameters for performance handicap.
- Yacht racing becomes a significant growth sport with shift to smaller craft on both sides of the Atlantic – 20-50 foot overall lengths. Large yachts continue in popularity.
- Active interchange of ideas in UK and US through press specializing in outdoor pursuits including in-depth articles on “Yachting” with high levels of insights, technical and social.
- Pace of design developments increases. Prior year design/builds are increasingly outdated.
 - Leads to development of One-Design Classes almost simultaneously on both sides of the Atlantic



The Classic Yacht Symposium™ 2016

Herreshoff's Special 30-Foot Class (Newport 30): The most advanced yacht of the Herreshoff legacy

Author Adam Langerman



Abstract

The 1890's were a time of great advancement in yacht design. Outside of yacht design research, innovations in structural engineering, materials, hydrodynamics, and even the quest for flight were trickling down to the design and construction of racing yachts. Within the yacht racing community, a turning point in the sport was occurring. The concept of one-design racing, in place of the traditional rating-rule system, was being tested with great interest. The draw of turning a race into a test of pure sailing skill by taking the equipment factor out of the equation has proven to become the most popular type of yacht racing in history. The Special 30-ft Class (Newport 30) does not hold the title of being the first in any of these innovations. More importantly, the Newport 30 Class represents the first time all of these advancements were combined into a singular package sizeable yacht of fin-keel, canoe-body hull, light-weight construction, and strict one-design class rules. With the fin-keel falling from the graces of the new rating rules in the 1900's, this advance of a yacht design would not return to the drafting boards of naval architects for over half a century. The full impact of the Newport 30 on the history of yachting has yet to be seen, as new one-designs of similar size and nature continue to be popular and highly contested racing classes. This paper will explore the important attributes of the Newport 30 design, the special qualities of the class, and why the nature of the design has continued to be relevant to yacht racing 125 years since it was developed.



About the Author

Adam Langerman has been following his passion for the water his entire life. Since graduating from Webb Institute with a B.S. in Naval Architecture and Marine Engineering in 2004, he has logged over 25,000 miles racing and cruising classic yachts between the Mediterranean, Caribbean and the US East Coast. Adam's most significant sails have been ocean passages on the 1926 NY40 - RUGOSA and the 163ft Schooner ELEONORA, as well as dozens of races as navigator on the Herreshoff schooners ELEONORA and ELENA. Adam is a partner at Herreshoff Designs Inc., an active firm focused on the design, sales, and management of restorations / refits of classic yachts.



The Classic Yacht Symposium™ 2016

The William Fife III Cork Harbour One Designs

Author Patrick Dorgan



Figure 1 – ELSIE – Cork Harbour One Design

Abstract

Cork Harbour, Ireland, is home to one of the oldest one-design yacht fleets in the world. This paper will retrace the history of the Cork Harbour One-design class, from its design in Scotland and its launch in Cork in 1896, to date. It will outline the social and historical background to the development of the class, why it came about, and why this type of boat was felt to fulfill a need at the time. It will describe the highs and lows of over a century of activity in Cork Harbour and beyond, and give a short biography of each of the surviving yachts. It will give some particulars of the design of the yachts, outline the background to how and why their hull and sail plans developed as they did, and look at the construction methods used originally and today, and the finish of the hull and rigs.



About the Author

Patrick Dorgan is an avid sailor, forced to work for a living as a lawyer. Born and raised in Cork, Ireland, he has raced and cruised extensively. He is the owner of the William Fife III designed ELSIE built in 1896 and restored in 2001/5.

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The William Fife III Cork Harbour One Designs

Patrick Dorgan

ABSTRACT

Cork Harbour, Ireland, is home to one of the oldest one-design yacht fleets in the world. This paper will retrace the history of the Cork Harbour One-design class, from its design in Scotland and its launch in Cork in 1896, to date. It will outline the social and historical background to the development of the class, why it came about, and why this type of boat was felt to fulfill a need at the time. It will describe the highs and lows of over a century of activity in Cork Harbour and beyond, and give a sort biography of each of the surviving yachts. It will give some particulars of the design of the yachts, outline the background to how and why their hull and sail plans developed as they did, and look at the construction methods used originally and today, and the finish of the hull and rigs.

INTRODUCTION

As will be widely known, yachting is believed to have evolved in the Netherlands in the 17th Century. Charles II on his restoration as King of England, had a number of small, richly decorated miniature warships built, and on these, with his friends, they performed naval-like manoeuvres. Subsequently, his courtiers (including O'Brien, the Earl of Inchiquin) followed his example and upon the Earl's return to Cork, he carried on the habit.

Cork Harbour on the south coast of Ireland is one of the finest and most sheltered harbours in the world, and therefore it is no surprise that yachting prospered there and it is likely that yachting was being pursued in Cork Harbour well before 1720, when the Lord Inchiquin's great-grandson, William O'Brien and five of his friends formalised their activities and established The Water Club of the Harbour of Cork.

This had elaborate rules about everything including admission, dress, dining, the amount of wine that could be consumed, and a separate section devoted to sailing orders. These were extremely elaborate, providing for details manoeuvres by the fleet, all signalled by guns, with monetary penalties for breaches, to be expended on gunpowder for the fleet. By 1829, the club was styled the Cork Yacht Club, and in 1831, it was granted the Royal prefix by King William IV.



Figure 1 - the Club fleet at sea 1738 (Pieter Monamy 1681-1749)

By the mid-19th century, the club was blossoming and membership was highly sought after. Racing was now well developed, but certainly in the larger classes, was less Corinthian, and like horse racing, was fought for large cash prizes and wagers, both amongst the participants and the spectators, who would throng the shores of the harbour at various vantage points.

The William Fife III Cork Harbour One Designs by Patrick Dorgan

The names of the owners of these yachts suggested that then, as now, the cost of these great vessels meant that ownership was restricted to those of the aristocracy, the landed gentry and successful businessmen. While early paintings of the club fleet from 1738 show the yachts to have bluff bows and a sailplan reminiscent of a Dutch botter, by a century later, the yachts had evolved to be similar to Revenue vessels, being mostly strongly built cutters, with sharp bows, cutaway forefoot and substantial rigs.



Figure 2 - Paul Pry racing for a wager of £50 against the Knight of Glin's Rienville in 1834 (RCYC archives)

Racing continued over the decades, the highlights being the annual regattas of the various clubs, to which thousands of spectators would come, by railway and steamer, to view the events. Every crack racing yacht of its day came to one or the other regatta, including the likes of the King's BRITANIA, and indeed, one of N. G. Herreshoff's most famous creations, VIGILANT, which raced in Cork Harbour in July 1894.

THE BIRTH OF THE ONE-DESIGNS

Concerns were continuing about the cost of owning and racing these large yachts, and towards the close of the season of 1895, the idea of forming a new class of an inexpensive type of boat was discussed at an informal assembly of yachtsmen at the Imperial Hotel, Monkstown. One Design Classes were being constructed on the Clyde and Belfast Lough at the time, and it was thought that a serviceable class, capable of carrying about four hands all told, could be built at the cost of about £100. A syndicate was formed by five yachtsmen who announced their intention of building, and they communicated with William Fife III, of Fairlie, from whom ultimately a design

was obtained which was considered entirely satisfactory. A contract was entered into with Mr Cummins of the (now long defunct) Carrigaloe Gridiron and Works Company¹ by the five owners for the construction of the yachts, at a cost of £79 ten shillings each, to include a ton of lead. Sails, fittings and rigging were extra. The builders constructed a sixth boat as a speculation.

While the yachts were being built, several of the original promoters dropped out, and others took their place. In June, 1896, the yachts were launched, and a ballot was held to see who would get which yacht. Mr. Gubbins called his boat LITTLE DEVIL, and painted her vermilion; Mr. M.J. O'Sullivan, MAUREEN, painted maroon; Mr. A. Julian, MINX, painted black; Mr. Fowler, QUERIDA, painted blue; Mr. Hallinan, ELSIE, painted green; and Mr. A. Allen, BUNYIP, painted yellow and black.

The first race for the class was on the 11th of June, 1896, under the auspices of the R.C.Y.C., and the whole fleet except MINX started. In the early part of the race the wind was very fluky and light, but strengthened later, and three of the boats lost their masts. From the outset, the six boats were closely matched, and in a race in strong winds the following week, all six finished within a minute, having raced for almost four hours. Later that year, two other yachtsmen applied to join the class, and had COLLEEN and IMP built, joined the following year by JAP, There was discussion as to whether she could in fact join the class, as her owner had altered her cockpit layout.

THE FIRST CENTURY

It is clear from published sources that the class raced enthusiastically over the ensuing seasons. Owners sold to each other, new owners came in and the fleet prospered. BUNYIP, after her paid hand drowned, was laid up for a season, and then re-named SYBIL. MAUREEN changed her colour to white; QUERIDA became yellow, and ELSIE light blue. The colours of the boats became well known, and bets would be placed amongst members of the public viewing the races from the shore.

However, by 1908, "Corinthian", in his history of yachting in the south of Ireland published in that year, noted that SYBIL, MINX and QUERIDA were the only yachts still racing in the class. *"One can but feel the pity of it that the end has been reached, for such evidently is the case...there are eight left, so if some judicious system of handicapping is adopted, they may yet give good sport."*

Corinthian was thankfully too pessimistic, and after a few

¹ This yard also built another Fife design - a 36' linear rater named YUM, for Mr Cummins. This yacht, many years later, ended up as PEN DUICK, the property of Eric Tabarly, and from which he was drowned as she sailed up the Irish Sea to a Clyde regatta to celebrate her hundredth birthday.

The William Fife III Cork Harbour One Designs by Patrick Dorgan

quiet years, there was a sufficient revival of interest (particularly after Sir Thomas Lipton (of America's Cup fame) donated a magnificent cup for the class) for a 10th yacht, BETTY, to be built at the Fishery School in Baltimore, County Cork in 1924. However, the later boats never seemed to have the same success as the original six, and COLLEEN and IMP were repeatedly sold on. Racing continued in the class over the next few decades, and the writer is the proud possessor of a silver cup presented to ELSIE in 1949 as the winner of the "One-design League" of that year. In the 40s and 50s, the One Designs were largely the "only show in town" as far as yacht racing as concerned, and berths were eagerly sought. Every well known sailor in Cork over several generations owned, helmed or crewed on one or other of the boats.

By the 1960s, the hulls were showing signs of distortion - some blamed the big mainsail - almost 400 ft² - others the big seas off Cork Harbour. Additionally, more modern boats, which were easier to handle and maintain, were starting to become available. A move was on to convert the fleet to Bermudan rig, and the regatta in Kinsale in 1956 was the last race under gaff mainsails.

The matter was decided when MAUREEN and SYBIL unilaterally converted to a Bermudan rig, with a smaller sailplan by a third, less lead, and the addition of a coachroof, doghouse and engine. COLLEEN went to the River Shannon, where she was converted to a motor boat, and was subsequently broken up. In 1975, a handicap system was devised for the remaining boats, but only seven raced, and the last official race of the class (as it then was) was held in 1986, to mark the 90th anniversary. BETTY was crushed by a crane, and IMP sank in a storm off the West Coast. The rest of the boats became reasonably successful cruisers, and ventured as far as the UK and France. Eventually, by the centenary of their building, there were only two boats left in commission, and on a blustery September afternoon in 1996, MAUREEN and LITTLE DEVIL (or CYGNET, as she had been re-named) had a race to celebrate their hundredth birthday.

THE TECHNICAL DETAILS

We are fortunate to have quite an amount of information about the detailed designs of the One Designs. Records extant list all or most of the boats that were designed and/or built by the three generations of Fifes, from HEROINE, the first known to have been designed by William Fyfe I, followed by COMET in 1807, DINORAH in 1887, which is the first with a recorded yard number, 186. Yard numbers 350 - 355 are the first six Cork Harbour one-designs.

The design drawings show a gaff cutter of 37 ft LOA, 30 ft LOD, 23 ft LWL, beam of 7 ft 3 inches, draft of 5

feet and a displacement of roughly 4 tons. The design provided for oak frames, moulded at deck level 1¾ inches, at keel, 2½ inches. Floors were of oak, as was the stem and stern post, and ribs were of steamed elm, one between each frame, but doubled at the mast area. Planking and deck were of pine, though on the restored boats, the decks are generally of iroko, with mahogany toerails and coamings. The boats are rigged as gaff cutters, with a mainsail of some 400 ft², a jib of 80 ft² and a staysail of 90 ft². Some accounts suggest that the boats were launched without bowsprits, and that when William Fife was on a visit to Cork, a mast was lost with him on board, which persuaded him to add the bowsprit. I doubt this. All of the drawings and early photographs of the one-designs show them with a cutter rig and bowsprit. The yard drawings include meticulous details of the bowsprit arrangement, including a detailed drawing of the gammon iron.

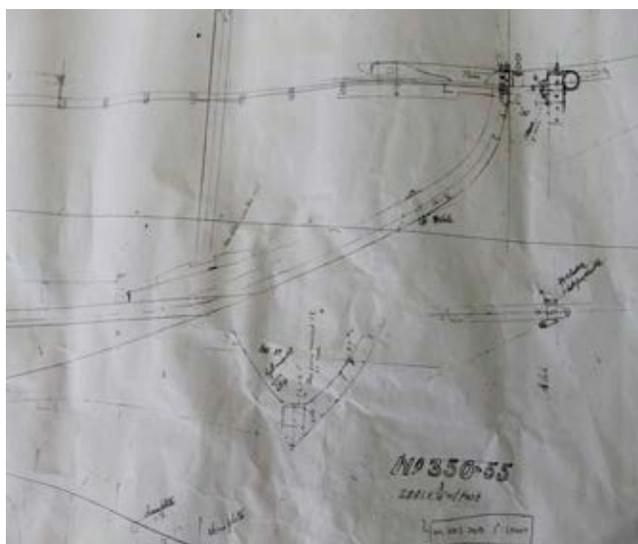


Figure 3 - Detail from the drawings, showing bowsprit arrangement and gammon and crane irons



Figure 4 - The profile from the sternpost towards the bow (MINX).

The William Fife III Cork Harbour One Designs by Patrick Dorgan

THE REVIVAL

Cork did not escape the resurgence in interest in classic boats throughout the world in the last few decades.

George Radley of Cobh, having grown up with the original builder's model of the one designs in his parent's house in Cobh, was intrigued, while visiting Dunmore East in 1997, to see QUERIDA in a wrecked condition. He acquired her, and used the model, which is highly detailed, as the basis upon which to have QUERIDA rebuilt to her original configuration as a gaff cutter. She was re-launched in 1999.



Figure 5a - The original builder's model, painted as QUERIDA



Figure 5b - Rigging detail from the model, accurate in every respect.

MAUREEN, which was in a sailing condition, as we have seen, was run down and sunk by a Cork Harbour pilot boat, her owners, the Horgans, only narrowly escaping with their lives. She was salvaged, and has also fully restored to her gaff configuration by Castlepoint Boatyard in Crosshaven, County Cork.

LITTLE DEVIL was acquired by Dr. Paul Kiely and has been completely rebuilt to a very high standard by Castlepoint Boatyard. Dr. Kiely is currently practising medicine in Boston MA., and on his expected return to these shores, it is hoped that she will join the fleet.

SYBIL sank at her moorings in Kinsale, County Cork a number of years ago. George Radley purchased the wreck for €1. Her position is known and when last dived on, she was found to be somewhat intact, and had become the home of a large and vicious conger eel.

JAP was found in a mud berth in Mylor in Cornwall, in England in 2001 by Cork sailor Clayton Love. He brought her to Fairlie Restorations in Hamble, where she was restored to concours condition. He also had a container especially adapted for her storage and transport, and JAP has travelled widely and established a great reputation in the Mediterranean Classic regattas and is much admired and photographed.



Figure 6 - JAP as discovered in Cornwall in 2001



Figure 7 - JAP after her restoration.

ELSIE had been laid up for a number of years in her original birthplace of Carrigaloe, and was in bad condition, having been vandalised. She was acquired by local shipwright Mark Bushe, who carried out a partial restoration and sold her to the writer in 2005, whereupon she was finished to a high standard, with a new rig, engine, specially manufactured deck gear and various other improvements.



Figure 8 - ELSIE on one of her first outings after restoration.

MINX was acquired by George Radley and the writer, and is now re-converted to her gaff rig, the work being carried out by various shipwrights in George Radley's own yard near Cobh, County Cork, the harbourside town which has witnessed so many great races and regattas over the years. She awaits a new owner to finish her completely, and take her sailing.



Figure 9a - MINX before...



Figure 9b...and after.

The William Fife III Cork Harbour One Designs by Patrick Dorgan

CONCLUSION

We have traced briefly the history of these great yachts, which have now survived to their 120th year. Six yachts are fully or partly restored, and four are sailing regularly. As the tercentenary of the Royal Cork Yacht Club approaches, it is likely that seven of the original ten will hopefully be sailing and racing together, 124 years after their first race. Is this a world record?

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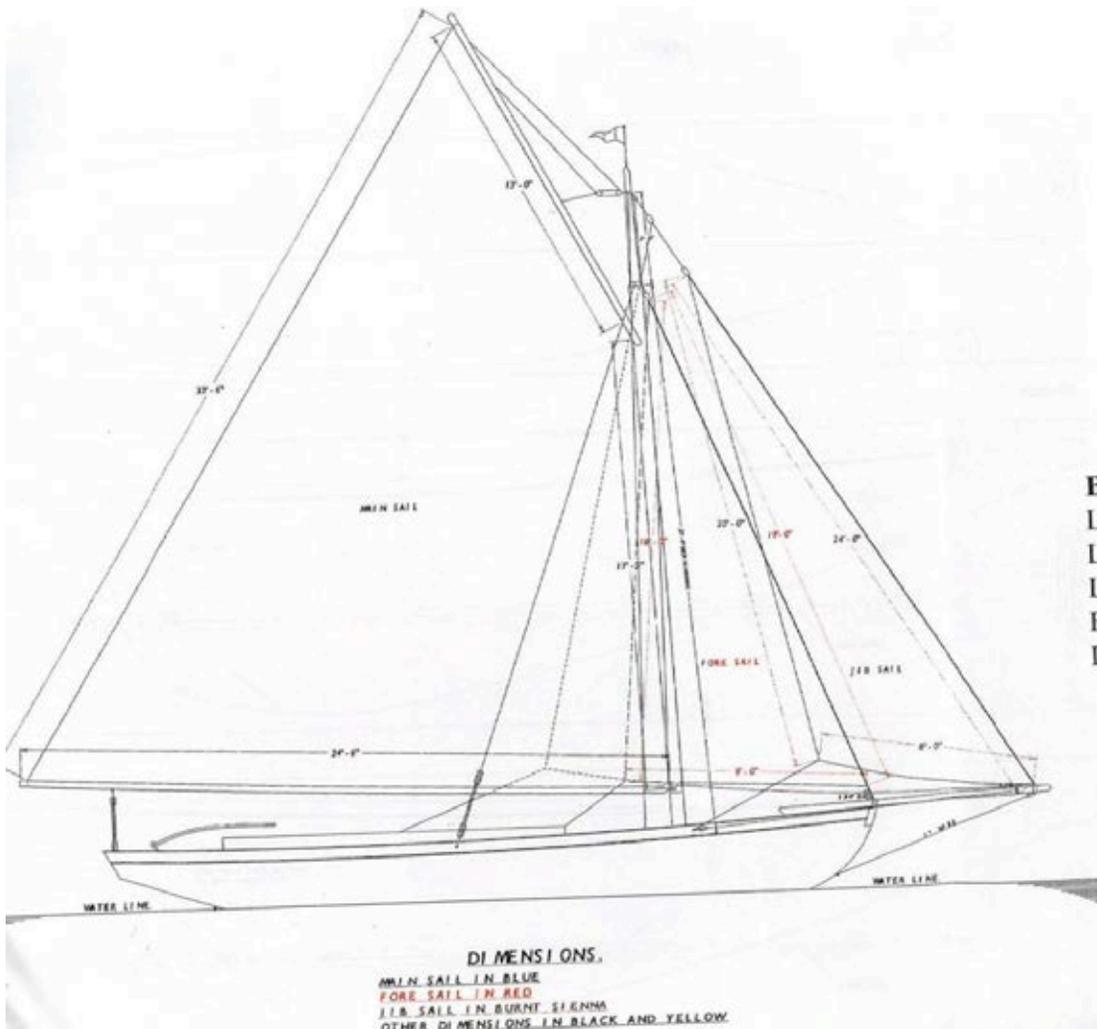
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ABOUT THE AUTHOR:

Patrick Dorgan is an avid sailor, forced to work for a living as a lawyer. Born and raised in Cork, Ireland, he has raced and cruised extensively. He is the owner of the William Fife III designed ELSIE built in 1896 and restored in 2001/5.



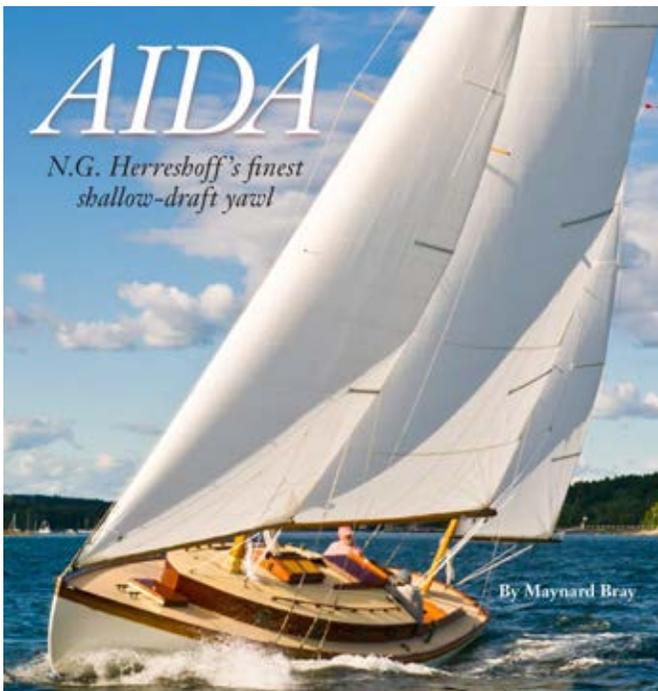


The Classic Yacht Symposium™ 2016

THANIA, HMC_o #248, 1905

*THANIA, now on display in the Hall of Boats,
was the first acquisition of the Herreshoff Marine Museum.*

THANIA, originally named TODDY WAX, was built as a gasoline-powered motor launch. She was built for Mr. W. P. Henszey from the 1888 molds of HMC_o #148 and #149, OUR MARY and JERSEY LILY. THANIA is a nice example of the Herreshoff steam launch designs of the 1880s. She was bequeathed to the Herreshoff Marine Museum in 1970 by Mr. Newhall, prompting the establishment of the Museum in 1971.



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Antique & Classic Motoryachts And Powerboats

Moderator: Jan Davison

- Powercraft are classified as Historic, Antique and Classic when of late 1800's to 1975 in origin. Classic is reserved for the period of 1943 to 1975.
- The type-form is typically strongly influenced by their anticipated operational environment: This varied from sport runabouts, day launches with some cabin facilities, commuter launches for travel and avoidance of shoreside rush and full motoryachts for seagoing.
- Noteworthy designer/builders of the times include : USA Hacker, Garwood, Century, Chris Craft and Hunt.
- Hull design also reflected powerplant development in terms of weight and horse power. The early hulls were very easily driven yacht like, followed by hard chined flattish forms for planing and then high powered deep-vee forms.



The Classic Yacht Symposium™ 2016

The In-Water Fleet of the Antique Boat Museum

Author Brian J. Lawson



Figure 1 – MISS THOUSAND ISLANDS II at speed

Abstract

The Antique Boat Museum (ABM) collects and displays mainly fresh water power boats and motors. The collection includes historically important and iconic vessels of the Thousand Islands region. An in-water fleet is maintained by the ABM to allow museum attendees to experience wood boats first hand. The in-water fleet receives hundreds of hours of service annually and requires significant maintenance. The museum has on site boat shops capable of performing major restorations. The boat shops of the ABM have restored a number of classic and antique boats, mainly through the labor of a volunteer organization, guided by a resident boat builder. The paper will describe the in-water fleet of the ABM and its maintenance program. The paper will describe the on-site boat shops of the ABM, their capabilities, and the people who volunteer their time and skills to maintain and restore ABM boats. The paper will present several large restoration projects performed by the ABM boat shops. The paper will discuss the partnership of the ABM and the Antique and Classic Boat Society to present an annual symposium on restoration topics.

About the Author

Brian J. Lawson grew up around boats on Bayside Island in the Thousand Islands region of New York State. He worked at a local marina throughout high school and college. The last 35 plus years Brian worked for the United States Naval Nuclear Propulsion Program, retiring from Knolls Atomic Power Laboratory in 2014. Brian is currently working at Norfolk Naval Shipyard in Portsmouth, VA as the Corporate Science Advisor. Brian has extensive experience in the restoration of wood and fiberglass boats having brought nearly 30 boats back from the brink. He is the guest editor of the Antique and Classic Boat Society's quarterly publication RUDDER, and is a frequent contributor of articles to the magazine. Brian and his wife Joan are members of the Antique Boat Museum, The Mariners Museum, and the Watermen's Museum. In 2015 Brian and Joan's dream came true when they purchased Bayside Island where Brian grew up. Brian and Joan now split their time between the Thousand Islands and Williamsburg, VA. Their 90 pound Labrador Retriever "Remington" is their constant companion on, and in, the water.

The Classic Yacht Symposium™ 2016



The In-Water Fleet of the Antique Boat Museum

Brian J. Lawson

ABSTRACT

The Antique Boat Museum (ABM) collects and displays mainly fresh water power boats and motors. The collection includes historically important and iconic vessels of the Thousand Islands region. An in-water fleet is maintained by the ABM to allow museum attendees to experience wood boats first hand. The in-water fleet receives hundreds of hours of service annually and requires significant maintenance.

The museum has on site boat shops capable of performing major restorations. The boat shops of the ABM have restored a number of classic and antique boats, mainly through the labor of a volunteer organization, guided by a resident boat builder.

The paper will describe the in-water fleet of the ABM and its maintenance program. The paper will describe the on-site boat shops of the ABM, their capabilities, and the people who volunteer their time and skills to maintain and restore ABM boats. The paper will present several large restoration projects performed by the ABM boat shops. The paper will discuss the partnership of the ABM and the Antique and Classic Boat Society to present an annual symposium on restoration topics.

INTRODUCTION

Many of us know the trials of wood boat ownership. Maintenance and upkeep, while not only expensive, simply takes a lot of time. It also takes expertise. When one considers the Antique Boat Museum (ABM) with its six boats devoted to in-water rides you can begin to understand what's involved to keep those boats looking great, but more importantly, operating well with safety as the key factor. This paper will take you through the in-water fleet of the ABM as well as provide an idea of the level of volunteer support it takes to make the in-water program work.

The ABM is a 501.c.3 not-for-profit organization. The ABM collects and displays historic, antique and classic boats, including race boats. The ABM has over 300 boats in its collection, and the collection is growing. Located on the shores of the St. Lawrence River in Clayton, New York, the ABM is a main attraction in the 1000 Islands region of New York State. The 1000 Islands region runs from the foot of Lake Ontario downriver about 50 miles to Morristown, New York. In this span of 50 miles of River are 1,864 islands; many of them owned privately. With so many islands, only one of which can be reached directly by car, boat ownership and boating are a natural requirement. With interest in the 1000 Islands really taking off after President Grant visited the area in the 1870's, there is a long and rich history of boat building, ownership and now boat restoration on the river.

While museums collect and display artifacts, what makes the ABM a little different is that visitors are able to be immersed (not literally immersed!) in the wood boat experience through the "Ride the River" program. The Ride the River program offers boat rides aboard the ABM in-water fleet boats to the general public for a nominal fee (\$25/person). Two triple cockpits, one a Garwood, the other a Hackercraft, are devoted to the Ride the River program. Having been on these rides several times, it is a wonderful experience that provides the rider a true feel of the river, the homes, the water, and the boats of the area. These rides operate seven days a week and average seven forty-five minute trips daily during the ABM operating season; May 1 to Columbus Day. In 2015 more than 1,800 museum visitors took the opportunity to Ride the River. That ridership brought in about \$45,000 to the museum, less fuel expenses.

The ABM uses the Antique and Classic Boat Society's classification of boats based on age. A historic boat is any craft built up to and including the year 1918. An antique boat is one built from the year 1919 until 1942, inclusive. A classic boat is one built from 1943 to 1975,

inclusive. A late classic boat is one built in 1976 and the year 25 years prior to the current calendar year. A contemporary boat is specifically a wooden boat built in the last 25 years.

MISS THOUSAND ISLANDS II- HACKERCRAFT CONTEMPORARY



Photo – MISS THOUSAND ISLANDS II at speed

The Hackercraft triple cockpit runabout is named MISS THOUSAND ISLANDS II. She is 30' long and as of 2015 sports a big block 502 cubic inch Chevrolet engine. MISS THOUSAND ISLANDS II is a contemporary Hacker reproduction built in 1999 by the late Bill Morgan's company in Silver Bay on Lake George, New York. MISS THOUSAND ISLANDS II is a classic John Hacker design built using modern epoxies and glues. MISS THOUSAND ISLANDS II is double planked plywood inner planking with fore to aft outer mahogany planking bonded together with epoxy resin. The boat was built for the Yarah family who used the boat for a period and then Art Yarah donated it to the ABM in 2005.

TEAL – GAR WOOD CONTEMPORARY



Photo – 28' TEAL port side



Photo – Underway in TEAL

The Gar Wood triple cockpit runabout is named TEAL. She is 28' long and was built in 1988 by the Turcotte Brothers on Brant Lake in the Adirondack Mountains of New York State. TEAL is one of the Turcotte Brothers first reproductions of Gar Wood's 1937 triple cockpit runabout. TEAL's offsets were taken from an original 1937 28' Gar Wood. Being over 25 years old now, TEAL is now classified as a late classic. TEAL, like MISS THOUSAND ISLANDS II, is a classic Gar Wood design, but built using modern epoxies and glues. Her construction is similar to MISS THOUSAND ISLANDS; double planked plywood inner planking with fore to aft outer mahogany planking bonded together with epoxy resin. TEAL was also repowered in 2012 with a big block Chevy engine with a displacement of 454 cubic inches.



Photo – the author's daughter and her husband, Katie and Vic Hudleston enjoying the rumble seat of TEAL. TEAL is between Murray Island on the left and Grindstone Island on the right, headed down river.

The length of the MISS THOUSAND ISLANDS and TEAL together with the hull design makes them smooth riding in pretty much any water the River can muster. A

ride in the rumble seat, which sits behind the motor just ahead of the transom, can be a thrill, if not a little wet. While these boats are what are known as contemporary, they are nearly indistinguishable from a Gar Wood or Hackercraft from the original designer/builders. These contemporary builders have beautifully maintained the details of these new production boats, improving on the strength and durability of the hull, power, etc. but keeping the feel of the 1920s-1940's in place.

M/V ZIPPER- LATE CLASSIC COMMUTER YACHT



ZIPPER is a 41' commuter yacht designed in 1929 by Ned Purdy, but ZIPPER was not built until 1974. Although designed in 1929, her build date makes ZIPPER a late classic boat. ZIPPER was designed as a Great Lakes cruiser with a raked stem, round bilge with skeg, and tumblehome transom stern.

ZIPPER is the flagship of the ABM in-water fleet and is often seen on the river with a load of people skimming down the main channel in the late afternoon or early evening. She is twin engine, and true to her designed purpose, including ample aft deck space, and a cozy cabin for preparing oneself for work as you cruise to your office. ZIPPER was designed for the Stroh family of Detroit brewing fame, but before construction began, the stock market crashed and plans to build the boat were suspended. Fast forward a little more than 40 years, and the grandchildren of Mr. Stroh find the plans for ZIPPER, and to honor their grandfather, have the boat built by Staudacher Boat Building in Michigan. ZIPPER is double planked mahogany with fore to aft outer planking and diagonal inner planking. ZIPPER is framed with steam bent oak on 12" centers. ZIPPER's floor timbers of 11/4" oak. Everything is fastened with bronze screws. ZIPPER is powered by twin Crusader engines (350 cubic inch displacement each). ZIPPER has been repowered several times since being acquired by the ABM, and will be repowered again in 2016 with new twin Crusader 350 engines. ZIPPER's bottom is covered with 10 ounce fiberglass cloth and West System epoxy.

Louise Stroh gifted ZIPPER to the ABM in 1985 in excellent condition with the stipulation that she be used to give people the feeling of what it was like to ride in a commuter yacht, rather than have her dry displayed. Decades later ZIPPER has done just that.

In 2004 ZIPPER was certified by the USCG as a "T" boat (subject to subchapter T of the USCG Code of Federal Regulations). This qualifies ZIPPER to carry 17 passengers and 2 crew. Even though ZIPPER was in good shape, the ABM spent a significant amount of money to bring her up to T boat status. This included rewiring, replacement of some outer planking, through hull fittings, stability testing, and a variety of required safety equipment was purchased.

As a T boat, ZIPPER must undergo annual examinations conducted by the USCG. The inspection is several hours of dockside inspection of all marine systems and required equipment, followed by an on-water segment where all systems are observed underway, and finally an inspection of all documents and files required to be maintained by the ABM including captain's certifications, drug testing, etc.

A 2012 T boat inspection determined there was longitudinal checking of some bottom planks, and soft wood was found under one of the engine shafts. In order to carry more than 6 passengers and retain T boat status, ZIPPER was sent to Rockport Marine in Rockport, ME during the winter of 2013-2014 and a new bottom was installed in the boat. Although expensive, the new bottom guarantees 25 years of operation, and another generation of boaters will get to Ride the River in her.



Photo – ZIPPER underway near Calumet Island

In addition to the contemporary construction of old designs, the ABM has three additional boats in the in-water fleet; one a classic, one antique, and one historic.

1953 CHRIS CRAFT SEMI-ENCLOSED CRUISER

The classic boat of the in-water fleet is a 1953 28' Chris Craft semi-enclosed cruiser. This boat model was frequently used by river guides to take their "sports" fishing. This model, as did many Chris Craft models after World War II, sports a "bull nose", that is a rounded nose.



Photo – 1953 Chris Craft 28’ Semi-enclosed Cruiser

The Chris Craft was an ABM gallery piece for 10 years after being donated by James Brabant. The boat had been used for 25 years on the St. Lawrence River out of Clayton, NY as a river guide boat. Her current power is twin 210 horse power inline 6 cylinder Chrysler engines. Her original power was likely twin Chris Craft engines. Extensive work was done on the boat by the ABM Boatwright and cadre of volunteers to get the boat in condition to carry passengers. This included extensive transom and bottom work.

The Mariners Museum in Newport News, VA holds the archives and production records of the Chris Craft Corporation. The Mariner’s Museum houses these archives in the Tribble Library of Christopher Newport University. Patti Hinson is the director of the archives and receives about 300 inquiries per month regarding Chris Craft boats. For this article I contacted Patti regarding the ABM boat, and without fail Patti produced exacting records from the archives for the design and several build cards for hull numbers of this model that were shipped to Clayton in June 1953 about one week apart. The ABM acquisition records for the Chris Craft indicate the hull number is SE-28-14J. But the J is likely an error as the hull cards all have 3 numbers rather than two numbers and a letter. With the ABM being short staffed over the winter I was not able to confirm a hull number in time for this paper.



Photo – The 28’ Semi-enclosed Cruiser underway

The Cruiser was built mahogany planks on frames, with the sides painted white.

HUTCHINSON BOAT WORKS

The antique and historic boats were built by Hutchinson Boat Works of Alexandria Bay, New York. Hutchinson is a well-known builder of high quality boats on the St. Lawrence.

HISTORIC BOAT - WILD GOOSE



Photo – WILD GOOSE in the ABM bay

The historic boat is named WILD GOOSE; you will see her in the ABM logo. Built in 1915, she is a classic chaffer driven launch, built planks on ribs, and is 40’ long. WILD GOOSE was completely rebuilt in the last 5 years; more on that later.



Photo – Kathy Muller shows how planking should be properly prepared prior to finishing using the recently restored WILD GOOSE as her example

ANTIQUÉ COMMUTER – GADFLY



Photo – GADFLY docked at Frontenac on Big Round Island

Finally, there is another river commuter named GADFLY, an antique boat. 33' long, and built in 1931 by Hutchinson, this style of boat, was common with island owners who wanted to be able to get on and off their island in any weather in style and comfort. She has a fully enclosed cabin for the owners and an open chauffer section forward. GADFLY was built mahogany planks on frame and is powered by a Crusader350 cubic inch engine.



Photo – GADFLY underway
ZIPPER, the Chris Craft, WILD GOOSE and GADFLY are used regularly to take Friends of the Museum on various charter trips on the River at a reasonable hourly rate of \$80-100.

VOLUNTEERISM AT THE ANTIQUE BOAT MUSEUM

If you think about it for a moment, these 6 boats that are the in-water fleet make up 200 feet of antique and classic boats that need to be maintained. That is a lot of wood, varnish, paint, mechanicals, electricals, motors, etc. The cost to maintain just these six boats in top operating condition and finish would break many pocket books. And recognize, any boat taking paying passengers on board must pass stringent US Coast Guard criteria, and be captained by a US Coast Guard licensed captain. This is where the extensive volunteer organization of the ABM comes in to play.

Volunteerism plays a significant role in the success of the ABM. There are individuals who regularly rack up thousands of volunteer hours each summer. These volunteers sell tickets, provide docent tours of buildings and boats, man boat shows, provide security during special events; the list is seemingly endless. But the in-water fleet is particularly significant because of the volunteers that support it.

There are currently 19 US Coast Guard approved captains (Master Mariner) able to pilot the in-water fleet boats. Not only must they be able to pass the examination after a two-week class, but each individual must know the river well as it is famous for rocks and shoals. These captains each paid \$1500 of their own money for their licensing and invested the time (including documenting 360 days of operation on the body of water they plan to operate in) necessary to attend the classes and take the examination. With six boats in the water and a 7 days a week operation, 19 captains is not too many, especially at the height of summer. Consider this fact: these 19 captains racked up 2,600 hours at the wheels of the in-water fleet boats last year. That accounts for about 25% of all volunteer hours for the ABM in 2015. Further consider that if the 2,600 hours is divided equally over the six boats, that's nearly 450 operating hours per craft. That is a lot of wear and tear on motors, shafts, propellers, etc. Those 2,600 hours would require 26 oil changes as the ABM tries to change the oil every 100 hours of operation. And as we all know, there is the inevitable nick or gouge that can occur during these long hours of operation. And things simply break. Marine engines after all are simply automotive engines that have been marinized. But where autos have transmissions to maintain speed at low rpm, marine engines regularly put out 3000-4000 rpm during a cruise.

Where volunteerism at the ABM is particularly evident is inside the two boat shops, one on Mary St. and the other within the grounds of museum in an original old stone building. Led by the resident ABM boat builder what happens inside these buildings is nothing short of magic, thanks to the men and women who donate their time. I think one of the most impressive stories to tell is the restoration of the Wild Goose several years ago. As noted above, she is planks on ribs and with a very long drive draft. Wild Goose was taken apart by a team of volunteers. This means everything came off her and out of her, including the engine, drive train and all deck hardware. The decks were separated and lifted off her. A number of ribs were replaced and new planks were formed and installed. This is 40' of boat that was able to be worked on, turned over as needed, and kept "in-shape" while being worked on. From retired professionals donating their time to people who simply like to work on boats and are self-taught chipping in to

The In-Water Fleet of the Antique Boat Museum by Brian J. Lawson

help as they could, the Wild Goose was completely refurbished on the grounds of the ABM using all volunteer labor. I can't imagine what the cost of this restoration would have been if done by a boat shop, but I'm guessing \$150,000 would not be unreasonable. That is a chunk of change out of a marine museums operating budget.



Photo – Kathy Muller of Muller Boat Works in Sunapee, NH demonstrates finishing techniques at an ACBS Symposium at the ABM. WILD GOOSE is in the background.

Each spring over the past few years the Symposium Committee of the Antique and Classic Boat Society has worked directly with the ABM to put on a restoration symposium. The symposium deals with a number of important topics for restorers and boat owners. Imagine taking a chisel and purposefully making a deep gouge in the deck of a boat. Yes, we did that, although truth be told it was the deck of a derelict boat that had been donated to the cause. But within minutes, the instructor had taught us how to remove the gouge and replace it with a suitable replacement piece, and then sand and fair it. The repair is called a Dutchman, and I am still in awe of how simple it was to do. That happens in real life; things get dropped on decks, the docks seem to come at us faster than we planned, and there's always the rogue wave from a passing boater.



Photo – ACBS Symposium class conducting survey of a Chris Craft on a beautiful May day at the ABM

The in-water fleet of the ABM includes iconic boats of the Thousand Islands and the museum. It is not unusual to see these boats many times a day plying the waters of the river. These boats are a direct way to connect the general public to wooden boats, and importantly, the main supporters of the ABM by way of the Friends of the Museum. But without the many volunteers from the captains to the person holding the varnish brush or the fresh motor oil, it simply couldn't happen.

ACKNOWLEDGEMENTS

The author would like thank captain David Dodge of the ABM. Captain Dodge is the in-water fleet coordinator, a USCG captain, maintenance provider and jack of all trades when it comes to keeping the ABM in-water fleet operating. The detailed information about each of the ABM in-water fleet boats was made available thanks to David's time and interest in this paper.

The author would also like to thank Mr. Duane Chalk for whom the author worked for many years. Duane, I have long said, taught me how to work. Duane, now in his 80's, is said to have been born with a varnish brush in his hand. I know this in fact not to be not true. Duane's mother was a master varnisher; she used her old nylon stockings to apply varnish to wood boats.

Lastly, the author would like to thank Marcia and Harold Greiner, long time members and supporters of the Herreshoff Museum. They are dear friends, who made my wife's and my dream for Bayside Island come true. This paper is dedicated to them.

ABOUT THE AUTHOR

Brian grew up around boats on Bayside Island in the Thousand Islands region of New York State. He worked at a local marina throughout high school and college. The last 35 plus years Brian worked for the United States Naval Nuclear Propulsion Program, retiring from Knolls Atomic Power Laboratory in 2014. Brian is currently working at Norfolk Naval Shipyard in Portsmouth, VA as the Corporate Science Advisor. Brian has extensive experience in the restoration of wood and fiberglass boats having brought nearly 30 boats back from the brink. He is the guest editor of the Antique and Classic Boat Society's quarterly publication RUDDER, and is a frequent contributor of articles to the magazine. Brian and his wife Joan are members of the Antique Boat Museum, The Mariners Museum, and the Watermen's Museum. In 2015 Brian and Joan's dream came true when they purchased Bayside Island where Brian grew up. Brian and Joan now split their time between the Thousand Islands and Williamsburg, VA. Their 90 pound Labrador retriever "Remington" is their constant companion on, and in, the water.



The Classic Yacht Symposium™ 2016

The Restoration of RITA

Authors Tom Adams and Laurie Leiser

Tom Adams Boatbuilder



Figure 1: RITA dockside in Muskoka

Abstract

This paper presents RITA, an elegant, one of a kind, 50' wooden day cruiser designed by H.C. Minett and constructed at the Minett Motor Boat Works. RITA was launched in 1914 and is a product of the early years of Minett's boat building career. RITA has lived her more than 100 years in a boathouse on Cinderwood Island, Lake Muskoka. Restoration work at Tom Adams Boatbuilder in Port Carling involves replacing the bottom in its entirety with new steam bent ribs, floors, stringers, lower portions of planking and transom, keel, stem and forefoot, skeg, stuffing box, and rudder. The shaft will be reworked and the engine rebuilt. Work is being accomplished without the benefit of drawings and unexpected and unique materials, design and construction techniques have been discovered during the necessary deconstruction of portions of the boat lending credibility to the legend of Minett's perfectionist reputation. These findings are presented along with details of the progression of restoration work. Some history of the Minett's arrival in Muskoka at the turn of the 20th century is given leading to discussion of several of Bert Minett's early displacement boats that were built before 1920.

About the Authors

Tom Adams is a boat builder restoring Muskoka classics at his wooden boat restoration business in Port Carling, Ontario. Restoration work is currently in progress on two early boats built by Bert Minett: ARDMORE a 1916, 26' launch and RITA, a 1914, 50' day cruiser. Tom was born and raised around the inland lakes of southern Ontario.

Laurie Leiser studied and earned degrees in Ocean Engineering from Florida Tech and Florida Atlantic University. Following a career of many years in ship design and engineering she is currently an artist working from her studio in Muskoka. Laurie is active in the antique boating community in which she lives.



The Classic Yacht Symposium™ 2016



The Restoration of RITA

Tom Adams and Laurie Leiser
Tom Adams Boatbuilder



1) RITA dockside in Muskoka

ABSTRACT

This paper presents RITA, an elegant, one of a kind, 50' wooden day cruiser designed by H.C. Minnett and constructed at the Minnett Motor Boat Works. RITA was launched in 1914 and is a product of the early years of Minnett's boat building career. RITA has lived her more than 100 years in a boathouse on Cinderwood Island, Lake Muskoka. Restoration work at Tom Adams Boatbuilder in Port Carling involves replacing the bottom in its entirety with new steam bent ribs, floors, stringers, lower portions of planking and transom, keel, stem and forefoot, skeg, stuffing box, and rudder. The shaft will be reworked and the engine rebuilt. Work is being accomplished without the benefit of drawings and unexpected and unique materials, design and construction techniques have been discovered during the necessary deconstruction of portions of the boat lending credibility to the legend of

Minnett's perfectionist reputation. These findings are presented along with details of the progression of restoration work. Some history of the Minnett's arrival in Muskoka at the turn of the 20th century is given leading to discussion of several of Bert Minnett's early displacement boats that were built before 1920.

HISTORY

The Minnett's were early settlers of the Muskoka Region of Ontario arriving in 1869. A brief history of the family, the region and some of the early activities is presented in the following sections to provide a "snapshot" of the environment into which Bert Minnett was born and thrived to become a builder of exceptional wooden boats.

The Minett Family



2) Bert Minett (Courtesy of Jim Minett)

H.C. Minett, called Bert, was born in 1880, the third of four sons to survive the rigors of childbirth and infancy of the eight children born to Fanny White Minett and Charles James Minett in the wilderness of Muskoka, Ontario. The three other sons were Ernest born 1873, Samuel Arthur born 1875, and Cecil born 1884.

Fanny and Charles Minett emigrated from their home in England to Canada arriving in Toronto in May of 1867. Charles traveled with his wood working tools putting them to use in Toronto where he applied his skill as a cabinetmaker. A severe case of bronchitis led Charles' doctors to recommend a higher, drier climate than that found along Lake Ontario in Toronto. He inquired into the Free Grants and Homestead Act of 1868 sponsored by the Province of Ontario to encourage settlement in lands including the Provisional District of Muskoka. Charles traveled to the Muskoka Region in the spring of 1868 and following this initial trip the Minett's made the decision to move to the region. They applied for and were granted affidavits for two 100-acre lots and purchased a third 100-acre lot for \$100 all along the shore of Lake Rosseau, one of three large lakes located on the north side of Port Carling. The couple left Toronto with their belongings for Muskoka as soon in the early spring of 1869 as transportation was available.¹

Muskoka and Clevelands House Beginning

1869

The journey from Toronto to Muskoka was a challenging trip of about 140 miles beginning with a 70 mile train ride to its end in Barrie where travelers boarded a steamboat for a 30 mile transit through lakes Simcoe and Couchiching to the northern terminus at Washago. From Washago to McCabes Landing on Lake Muskoka in Gravenhurst travel was by wagon and on foot for 15 miles along the arduous Muskoka Road. The steamboat WENONAH took them 25 miles from Gravenhurst north on Lake Muskoka into the Indian River arriving at Port Carling where river rapids halted further boat travel. To reach their homesteaded land a further six miles beyond Port Carling in Lake Rosseau with no road or trail and no boat available to take their goods they built a raft of logs from the woods alongside the river and paddled from beyond the rapids to the site of their future home, arriving in June of 1869. A log cabin was soon built for shelter on the property named Cleeve Lands after the village of Charles' birth in England.¹

To verify a claim and gain title to the Land Grants it was stipulated that the settler clear and till a minimum of five acres per year for five consecutive years. The early settlers were faced with a significant challenge.

Lakes Joseph, Rosseau, and Muskoka are three deep and large, island studded, interconnected lakes situated within the granite rocks of the Precambrian shield in the Muskoka Region of Ontario. Over the ages trees have taken precarious hold and prospered in dramatic fashion, roots tangled and grasping among the rocks taking sustenance from the organic matter they themselves shed. The early settlers were greeted by vistas of long waterways interrupted by rocky islands and shorelines mixed with old growth coniferous and deciduous trees. There was little arable land and the Minett's were among those hearty enough to meet the requirements for land development and overcome the difficulties of the terrain to obtain title to their Land Grant claims.

Summer tourists and early settlers seeking a healthy environment were quickly being drawn to the Muskoka region by advertisements describing the natural beauty, wild life, and abundant fresh air and clear, clean water. People traveled from industrial areas such as southern Ontario, Buffalo, Pittsburg, and Cleveland to escape the smog. Travel to the region eased by the mid 1870's with the expansion of a railway directly to Gravenhurst on Lake Muskoka and boat travel between the three lakes of Muskoka, Rosseau and Joseph was made possible with the opening of a lock in Port Carling and a navigation canal at Port Sandfield.

From early in their residency in Muskoka, the Minett's provided rooming for casual summer visitors and over time built buildings and expanded this occupation eventually developing their property into a resort named Clevelands House in the settlement of Minett. The hotel opened officially in May of 1883.¹



3) The Minett's at Clevelands House, 1886 (courtesy of Jim Minett)



4) Clevelands House Waterfront circa 1890 (courtesy of Jim Minett)

Complications resulting from an accident while constructing an addition to the hotel resulted in the death of Charles James Minett on April 14, 1892 at the age of 50. Fanny Minett continued to operate the hotel with the help of her four sons. Seymour Arthur Minett, the second eldest son, married Alice Stout in 1902 and in 1904 they were able to assume sole ownership of the hotel and all the adjoining lands that had been granted to Charles Minett in 1867.¹

In addition to tourists visiting resorts such as Clevelands House, cottages were being built on islands and shorelines in the region with no accessible roads for summer residences. Boat travel was essential for transportation of people, goods and services. Early boat transportation was by steamboat, an industry that prospered with the Muskoka Lakes Navigation

Company operating nine steamboats by 1908 capable of carrying 2,400 people.² The availability of gasoline to the area brought about a new era of boating and boat building.

Bert Minett, born into this family of self reliant, innovative, hard working and determined people began his boatbuilding business aided by his brother Seymour Arthur in a barn on the Clevelands House property.

Bert Minett's Early Boats

Photographs and discussion of a selection of boats built by Bert Minett prior to 1920 and during the era that RITA was built in 1914 are presented in this section. A mixture of both old and new photographs, as available, is shown. Brief historical and technical facts are presented along with the occasional anecdote provided by boat owners and family members.

Further photographs of these boats have been compiled and are presented in the Appendix.

A significant number of one hundred year old wooden motorboats cruise the lakes of Muskoka today and are a lovely sight provoking a smile and descriptive words such as sleek or smooth, richly handsome, or finely crafted. RITA and many of Bert Minett's other early boats are among these lake cruisers. They are representative of a rich heritage of beautiful boats that continues to flourish in Muskoka through the ability of owners and skilled boatbuilders who are able to maintain the boats in pristine condition.

Minett's earliest boats date from the late 1890's and were built in a small barn on the Cleveland's House property. In 1910 Bert established and began building boats at the H.C. Minett Motor Boat Works in Bracebridge. This operation continued until 1925 when Bert Minett began a partnership with Bryson Shields forming Minett-Shields, Ltd.³



5) Builder's plaque, H.C. Minett Motor Boat Works

Prior to 1920 Minett's boats were displacement hulls. It wasn't until the availability of more powerful, lighter weight engines in the 1920's that Bert began to experiment with and build boats having semi-displacement and planing hulls.

MINETA I, a steam launch built at Cleveland's House in 1903 no longer exists.



6) MINETA I, steam launch, c. 1903 (courtesy of Jim Minett)

PIONEER, a 25' launch built at Cleveland's House entirely of locally cut materials was completed around 1903. White pine was used with the exception of oak for the ribs, keel, covering boards, gunnel and coaming. Butternut was used for interior cabinetry, engine cover and ceiling. Peter Stanfield and James Woodruff, the current owner, restored PIONEER as an electric launch in Muskoka in 2008.⁴



7) PIONEER c. 1960, a gasoline powered launch (courtesy of James Woodruff)



8) PIONEER, 2008 (James Woodruff)

ROLO, originally named RAMATOLA is a 32' launch built in 1910 for the Hilliard family of Beaumaris, Lake Muskoka. ROLO was originally powered by a Van Blerck hand cranked engine and according to Tom Hilliard, the son of the original owner, she was always chauffer driven. She was taken from Muskoka under new ownership for Buffalo, NY where for eight years she operated as a marina workboat on Lake Erie. She was drydocked in 1979.

Sadly neglected for the next six years, ROLO was a delightful find for Ross Buzek who purchased and returned her to Muskoka. Restoration work over the next three years returned her to her original beauty. ROLO was launched into the waters of Lake Joseph on July 23, 1988.⁵

Ross Buzek sold ROLO to Carl Herrmann in 2000.



9) ROLO, 2015, (Carl Herrmann)



10) ROLO, 2015 (Carl Herrmann)

NORWOOD II is a 31' launch built entirely of mahogany in 1911 for WL Clause of Pittsburgh, PA and remains in the same family today. Mahogany, though heavy, was selected for its eye-catching beauty. The original engine was a 65 horsepower Van Blerck that was replaced with a 200 horsepower Hall Scott to achieve better performance. Later, a 1960's Chrysler V8, 328 cubic inch, 210 horsepower engine was installed. She was said to be the fastest boat on the lake at the time with reported speeds of 30+ knots.⁶



11) RL Clause in NORWOOD II, circa 1920
(Courtesy of Alex M. Ehrlich and Noni M. Shore)



12) John Trainer in NORWOOD II, 2015 (James Woodruff)

TANGO, a 32' launch was commissioned of Bert Minett by GV Foreman of Lake Joseph. Mr. Foreman wanted the boat to be fast, the fastest boat on the lake and the project was successful. TANGO was delivered for the summer of 1914 and powered by a 6-cylinder Van Blerck marine engine.

The design was a departure from NORWOOD II, the current fastest boat on the lake and modifications for TANGO that resulted in greater speed efficiency included lengthening the boat by one foot and widening the stern. The design made use of lighter weight materials such as a hull built of white cedar and using mahogany only for the deck.

The new, improved design of TANGO resulted in a fast, stable boat, running level at all speeds.

TANGO, NORWOOD II and ROLO were driven with a crew of captain and mechanic. They had a one piece engine hatch cover which was raised up by hand crank to create a little more room for tinkering with the engine. Access to the engine was through a door in the firewall. This hatch cover was modified on each of the boats when newer, smaller engines were installed. The new design was in three sections with two outside sections hinged to an 8" center section. All three sections can also be unbolted and lifted out.⁷

A smaller, more efficient and lighter weight Gray Marine 8-cylinder engine was installed in TANGO some time in the 1930's and the operation and performance of TANGO further improved.

Tom McDonald's grandfather purchased TANGO from the Foreman's in the late 1930's. He describes his part of the rich history of TANGO on Lake Joseph. Tom learned to drive TANGO as a young boy and continued to drive during her years of providing premier taxi service around the lake ferrying passengers from here to there and delivering supplies from the McDonald's store in Foote's Bay. With little road access at the time this was a busy summer job for a teenage boy who now describes picking up a friend for a typical day with stops at twenty or so cottages. The day might include a stop at Cliff Island where he would take a couple of boxes of groceries to the house and stop for a visit with the cook named Alice who greeted the boys with freshly baked tarts or pastries from her kitchen.⁸

TANGO is presently owned and enjoyed by the Walton family of Beaumaris, Lake Muskoka.



13) TANGO, 2015 (Joe Walton, Jr.)



15) ARDMORE, 2015 in Tom Adam's Boat Shop (Tom Adams)



14) TANGO, 2015 (Joe Walton, Jr.)

ARDMORE is a 26' launch built in 1916. Restoration work is currently underway at Tom Adam's Boat Shop alongside RITA. ARDMORE is a fine example of one of Minett's early launches. Although in many respects she is typical of his other displacement launches, she has some features worthy of note.

The deck covering boards are joined with his signature "keyed" joints (Photo 16), but an elegant detail at the bow shows off his woodworking skills and artistic prowess. As the covering boards approach the cutwater casting, a raised ridge has been sculpted into the mahogany that sweeps around the bow of the deck just behind the stem. Not only that, the top of the aluminum cutwater casting has a complicated shape that accepts a stepped joint from the forward covering board pieces (Photo 17). This would clearly have been a challenge to fabricate and fit!



16) ARDMORE, detail of keyed joint (Tom Adams)



17) ARDMORE bow detail (Tom Adams)

MINETA is a 36' long deck launch built in 1917 currently owned by Lee Anderson of Minnesota.



18) MINETA, c. 1917 (Courtesy of Jim Minett)



19) MINETA, '09 ACBS boat show, Gravenhurst, ON (James Woodruff)



20) MINETA, '09 ACBS boat show, Gravenhurst, ON (James Woodruff)

LITTLE ONE, a 21' launch was built on commission in 1918 and later became Bert's nephew Bill Minett's launch. She remains in the Minett family on Lake Joseph now owned by Jim and Eileen Minett.



21) LITTLE ONE, 2015 (Tom Adams)



22) LITTLE ONE, 2015 (Tom Adams)

ORIGINS of RITA



23) RITA, 1977, alongside the wharf at Beaumaris, Lake Muskoka³

RITA is a 50' Day Cruiser launched in 1914, the largest boat to be designed and built by Bert Minett at the Minett Motor Boat Works in Bracebridge, Ontario. She was completed for Carl Borntraeger of Pittsburgh, PA and Cinderwood Island, Lake Muskoka and has been housed in the same island boathouse for more than 100 years. She is currently owned by the McGrath family who has placed the boat in the hands of Tom Adams Boat Shop in Port Carling, Ontario for restoration.

RITA was designed and built by Bert Minett and it is reported that Minett had the help of Bert Hawker, a talented British born shipwright who immigrated to Canada in 1906. Bert Hawker was born in 1885 near Sittingbourne Kent, England where he was apprenticed to a shipwright before the age of 16. Later in his life, after his return from service in the Great War, Hawker joined Ditchburn Boat Works where he produced designs for many significant boats.¹⁰

The Borntraegers, as owners and summer residents of an island property had need of boats for transportation to the mainland. RITA, a 50' day cruiser was more than transportation. She was a stunning, visible statement of a fun and extravagant lifestyle enjoyed by many summer residents as shown for example at a picnic site in Photo 24.



24) Picnickers arrive by seaplane and RITA

DESIGN OF RITA

General Characteristics

Length Over All: 50'

Beam: 10'

Draft: 3'

Floor spacing: 2'

Ribs are on 8" centers

Artistry and Detail of Construction

During the dismantling of the interior components many hidden woodworking joints were discovered that are not often seen in boat construction. Under the seats the rails and stiles were joined with half dovetail joints. Minett didn't like to expose his fasteners so he would sneak them into areas where you couldn't see them making it very difficult to dismantle the boat. Fasteners often had to be sawn out of their position with a reciprocating saw. Minett wanted his boats to look like it wasn't obvious how they were put together - as if by magic. He liked a clean deck and went to the trouble to achieve this simplicity in design. The joinery is visible so joints are exposed instead of hidden behind binders.

Decks were constructed with blind fasteners so each strip had a cross nail drilled through the strip and toe nailed into the deck carling. The finished deck had a clean look with no plugs or screws. Decking material is 7/16" Sitka spruce.

Butt blocks were originally used to join planks together end to end, as was typical construction practice of the time. Butt joints become areas prone to rot. Improvement in marine adhesives allows the use of a more structurally sound half-lap joint.

Bert Minett engineered performance enhancing innovative design ideas into his hulls. Aesthetically his boats are beautiful.

NOTABLE CHARACTERISTICS

Flare and Cutwater

The forward sections of the hull are concave resulting in significant flare as seen in Photo 25. Minett's boats typically utilized a cutwater design with a straight up and down profile as distinguished from the curved shape used by other boatbuilders of the day.



25) RITA on blocks, Cinderwood Island Boathouse, 2014 (Al Crisp)

Boats built in Muskoka have a reputation for using a cast aluminum cutwater. RITA's cutwater is cast aluminum with a dado into which the stem fits and is held in place with threaded stainless rod fit into tapped holes in the cutwater. The planks come forward to the stem and are screwed into the stem such that the face of the plank is flush with the casting. Other manufacturers used brass or in later years, chrome caps over wood.

Transom

Above the waterline the joint where the plank meets the transom is a mitered joint. Below the waterline the transom board covers the end grain of the plank allowing the transom to expand and contract without interfering with the planks.

Keyed Joints on Covering Boards

Covering boards are joined using complex keyed joints to lock in the deck perimeter (see example in Photo 16). Minett's joinery skills can be seen in this detail of workmanship.

Integral Splash Rails

The splash rails on RITA are thick stock sculpted into a raised rail that accommodates a nickel binder rather than a separate rail piece mounted later onto the hull.

Fastenings

Fastenings consist of copper rivets and roves, steel and brass screws, and bolts. Screws are Robertson drive, at the time a recent Canadian invention. Planks are fastened with hand peened copper rivets. This method of fastening is also being used during the restoration work. Copper rivets and roves are permanent, non-corrosive fasteners that work well with shrinking and expanding planks.

Engine and Propulsion History

RITA is single screw powered by a marine gasoline engine, originally, a 1914 Van Blerck. The Van Blerck marine engines, among the earliest available, were called "The Engine of Proven Horsepower" and were popularly used in mahogany boats but they were somewhat unreliable and dirty. In 1932 the Van Blerck was replaced with a 6 cylinder, 200 horsepower Sterling Petrol gasoline marine engine.

Steering System and Rudder

RITA has a cable operated outboard rudder. Minett chose to mount the large rudder outboard of the transom for better turning performance. The steering cables are joined to a quadrant mounted above the deck on top of the rudder shaft. The rudderpost is secured to the transom with two brackets as shown in Photo 26.



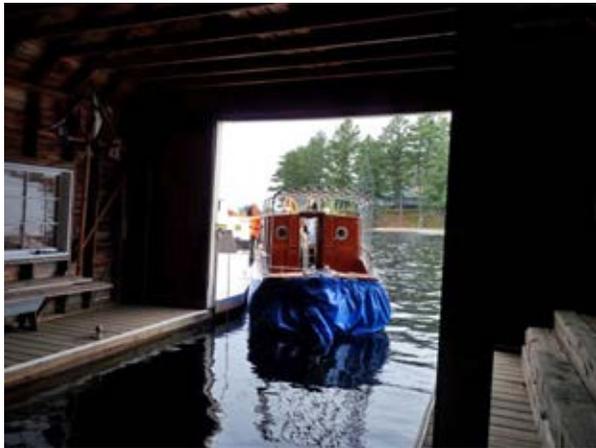
26) Rudder post and brackets

Materials

Minett relied on a variety of different species of wood for his boats and searched for the best available woods. This set his boats apart from other boatbuilders of the time. Typical woods included white oak, mahogany and white cedar. Minett also used yellow cedar. Butternut, a hard wood similar to walnut but lighter in color, was used as a secondary wood on seat bases or backs. The deck of RITA is built of Sitka spruce from the Pacific Northwest that held up very well. The original keel was built of strong and straight old growth white oak with tight, stable annular rings. The new keel is African mahogany as the necessary qualities of white oak are no longer available. African mahogany is harder than American mahogany with grain locking in strength such that it won't split. It is harder to work with but doesn't have issues of swelling and twisting like oak.

MOVING AND STAGING

RITA was moved from her boathouse on Cinderwood Island, Lake Muskoka on a gray and rainy November 4, 2014. Blue shrink wrap had recently been applied to the bottom to stop the water from pouring through the leaky hull. RITA was towed from Cinderwood Island to the wharf in Gravenhurst where she was lifted by crane onto a hydraulic truck trailer and transported to Tom Adams Boat Shop in Port Carling, a distance of 42 kilometers. The move and shop position are shown in Photos 27-31.



27) RITA leaves the Cinderwood Island boathouse



28) RITA was craned out of the lake with slings positioned at strategic points for balance, the same points that had been established in her boathouse 100 years before.



29) RITA in transit nearing the shop in Port Carling



30) The 50' hydraulic trailer is backed into the shop and between the posts of the gantries – a task that required skillful driving.



31) RITA was lifted off the trailer with custom, shop built gantries

RESTORATION OF RITA

RITA is being restored using traditional methods such that the boat will be put back together as close as practical to its original construction.

RITA restoration involves the fabrication of a new bottom essentially replacing everything below the

waterline including lower portion of ribs, floors, stringers, keel, skeg, stem and forefoot, bottom and lower planking, and lower portion of the transom. The rudder and rudderpost will be replaced and the propeller shaft reworked. The Sterling Petrol engine is being rebuilt by Matt Fairbrass, a local marine mechanic. The galley, head, and seating will be reassembled and reinstalled with the original pieces that have been removed, labeled and stored.

The following sections chronologically describe the restoration work through text and photographs.

Engine and Fuel Tank Removal

The Sterling Petrol engine manifolds were removed to allow for clearance through the engine hatch leaving a scant less than 1/2" to spare. The steel fuel tank was emptied, disconnected, and wrestled free. The one hundred year old tank is being assessed for reuse or replacement.



32) Sterling Petrol Engine is removed



33) Fuel Tank is wrestled free

Replacement of Structural Components

Stairs were built to gain easy access to the interior of the boat. Careful deconstruction is required during the process of replacing structural components in order to maintain the shape and integrity of the boat at all times.

Paint was stripped to locate fasteners for the ribs and the copper rivets holding ribs to planking are removed. Four-inch holes were drilled through the planking to allow for clamping of the new white oak ribs sections.



34) Paint is stripped to locate and remove fasteners



35) Four inch holes are drilled in planking that will later be replaced to allow for clamping of the new oak ribs.

Ribs

Decisions on where to cut the ribs are made by examination from the interior of the boat. Ribs are cut in a staggered pattern along the length of the boat. A reverse pattern is used port and starboard so that all the ribs end up being approximately the same length. A scarf cutting guide was used to cut the existing ribs out of the hull as shown in Photo 36. The angle of this cut will match the new rib.



36) Close up photo of scarf jig

New ribs are constructed of green white oak, steamed then clamped to the hull through holes in the planking with F-clamps where they take on the required shape as they dry. New ribs are scarfed to the existing rib. The scarf joint is located in close proximity to the longitudinal stringer to enhance the structural support for the new joint. Ribs are replaced in a staggered sequence of every 4th rib in order to maintain structural integrity of the boat through reconstruction.



37) A new green, white oak rib has been steam-bent into shape, scarfed, scraped and sanded and is ready for sealing and varnishing before installation.



38) Ribs are held in position with F-clamps. Wooden pads are used to cushion the clamp jaws to prevent dimpling in the pliable oak.



41) Terry squeezes in place between the aft deck and bilge where sealed ribs and floors have been successfully installed.



39) New ribs are scarfed to existing ribs and engine beds are refinished and reinstalled.



42) Section of completed floors, ribs, and stringers

Floors

Floors are replaced throughout the boat with new floors of African mahogany.



40) Masonite pattern is used to transfer lines onto mahogany for band sawing to construct a new floor.

Stringers

New stringers are made from 8/4 African mahogany stock.



43) The mahogany board is carefully put into position in the hull to scribe the lines for ribs and floors.



44) Material for new stringer is notched to accommodate the newly installed ribs and floors.



45) Once the stringers are fit, they are removed from the hull, sanded, sealed, and varnished with two more coats before installation.



46) New stringer installation is completed

Keel, Stem and Forefoot

The new lower portion of the stem is made of three interlocking pieces that join to the existing upper portion of the stem. A dado in the cutwater meets the stem where stem and cutwater are joined by threaded rod and secured in tapped holes in the solid aluminum casting.



47) Rob lays out a pattern for new fore foot and stem pieces



48) New keel and stem ready for fore foot installation

Keel, Skeg and Stuffing Box

The 2-1/2" thick keel is built up of two pieces of quarter-sawn African mahogany. There are four longitudinal sections joined by staggered scarf joints. The keel is rabbeted to accept the port and starboard garboard planks. The stuffing box is also made of African mahogany and is fit to the inside of the keel. The stuffing box, keel and skeg are through bolted with 3/8" stainless steel rod at 6" intervals along the length of the stuffing box. The rod is peened at the skeg, countersunk and plugged to leave an uninterrupted surface below the waterline. The other end of the rod is secured with locking nuts on the stuffing box cap. Photo 49 shows the new skeg being fitted to the keel in half sections. The inside of the shaft hole has been sealed and coated prior to final lamination of the two halves.



49) New skag is fit to keel prior to final lamination

Alignment of the hole for the shaft was determined using a laser beam between the predetermined location of the engine coupling and the future location of the main strut. A vertical batten was temporarily fastened to the transom to pick up the laser point as seen in Photo 50. Marking the start and end of the beam established the angle and points marked on the strut halves showed where to router the 2" half round trough for the shaft.



50) Laser point is seen at the stern to establish shaft alignment

The stuffing box was made in a similar fashion as the skag, fit to the top of the keel and preassembled on the bench as shown in Photo 51.



51) Working new stuffing box for installation in the bilge

Sections of keel have a square rabbet cut in using the table saw. Keel and garboards will be worked after installation to achieve a good fit. The scarf joints that join the keel pieces together have been cut at an 8/1 ratio. The two layers of keel have staggered joints.



52) Keel pieces are fabricated and sealed

The keel is assembled and permanently fitted to the hull using a combination of stainless steel screws, bolts and threaded rod. When dismantling the keel sections we noticed areas of structural failure where the keel had been scarfed. We chose to use 3M 5200 adhesive to bind and seal the joints in the keel. This product is very tenacious, remains flexible after curing and makes a watertight bond. The flexible bond will allow for any movement in the hull and swelling or shrinking wood.



53) New stuffing box is seen from above



54) New keel is clamped in place

Planking

RITA is carvel planked and planks are riveted to ribs and screwed to floors. Plank thickness at the keel is 1-1/8" getting progressively thinner as you go up the hull to about 7/8" at the waterline. Planking begins with the garboards where the plank is bedded in the rabbet in the keel and fastened with copper rivets and roves.

Ribs are faired and sealed with varnish prior to fitting the planks. The new mahogany lumber for the planks is surface planed to a thickness that allows for the hollowing out process to accommodate the shape of the ribs. We use 3/16" thick flexible spiling battens about 1" narrower and 2" shorter than the finished plank to mark reference points to the shape of the next plank. Reference points are transferred from the spiling batten onto the prepared mahogany.

To determine the correct lines of the plank we use a drawing batten made of a 14' x 5/8" x 5/8" piece of straight grained cypress. We bend the drawing batten along the surface of the prepared mahogany to guide our pencil line through the marks we've transferred from the spiling batten. We cut the plank on the bandsaw leaving an extra 1/8" outside of the lines to allow for final adjustments.

A template is used after band sawing to determine the contour of the ribs and the planks are hollowed out to match as shown in Photos 55 and 56. The surface is sanded and faired with a curved block. At this point the plank is ready for steaming.



55) Template is used to fit contour of ribs



56) Plank is hollowed out to fit contour of ribs

The plank is steamed in a heated steam box for about an hour then the hot plank is quickly clamped to the ribs adding an extra wedge at one end to over bend the wood to allow for spring-back. After leaving the plank for at least 24 hours we release the clamps and begin the process of fitting to the next plank. This involves several trips on and off the hull until we are satisfied with the fit. At this time we mark out the half lap joint to meet the half lap of the aft plank and fabricate it using a router jig as shown in Photos 57 and 58.



57) Planks aligned for fabrication of half lap



58) Fabrication of half lap joint using router jig

With the plank clamped once more to the hull we extend a long batten down the open side of the plank and establish a fair line that will be hand planed to a flowing shape. Next a small chamfer is made in the outside edge to accept a bead of marine adhesive.

The plank is now ready to be installed with temporary 1-3/4" screws and fender washers to hold things in place while adhesives cure. Later the plank is revisited and permanently riveted.



59) Planks are sealed and given two coats of marine varnish before they are installed. Anywhere wood is touching wood, coats of varnish have been applied.

After the garboard planks and five planks working up and out from the garboard plank on both sides have been installed new cradles are built to support the boat entirely under new sections of bottom planking leaving the rest of the boat accessible to be planked.



60) New skag, keel, garboards and planks are installed with screws and washers, ready for riveting

Planking continues to be replaced beginning at the highest new plank located at the cut-off point where existing wood meets new near the waterline. Screws and washers that are temporarily holding the planks are systematically removed and replaced with hand peened copper rivets.



61) Bow planks were steamed into shape and then fit



64) New starboard side planking in place



62) View from the bow of new planks being fit



63) New port side planking in place

FINISH WORK

Fairing and Painting

After the final planks have been installed and riveted, the labourious job of fairing the bottom on the outside begins. The countersunk holes left in the planks after the riveting has been accomplished are filled with a two-part epoxy mixture containing cabosil and micro balloons. The cabosil is an additive that prevents the epoxy from slumping or running out of the holes, and the micro balloons dilute the hardness of the mixture, bringing it closer to the density of the mahogany.

We load our 20" x 4" fairing boards with 36 and 50 grit sandpaper respectively and begin our journey down the outside of the hull, carefully sanding away our pencil lines to produce a surface that is true and fair. Once this is accomplished the raw mahogany is treated with sealer then marine adhesive is used to fill the thin grooves we chamfered on the exterior seams of the planking. After allowing for plenty of curing time for the adhesive, primer and bottom paint are applied to match the original shade of green.

Rigging

During the deconstruction of the interior the steering system, wiring, exhaust and fuel systems were removed. These systems will be re-installed in the original locations. Cable steering and copper exhaust pipes will be reused but the wiring will be replaced with new braided cloth wire and upgraded fusing.

Accommodations

RITA's original accommodations will be maintained though many have been removed during the restoration work to gain access to the bilge.

RITA has been designed as a day cruiser and has no sleeping accommodations. There is a small galley amidships on the port side and a head with toilet and pump sink on the starboard side. Rich mahogany raised

panels with styles and rails perfectly joined and curved to match the curvature of the crown of the decks show off the interior of these spaces where access is gained through pocket doors.

Aft of the head and galley is a cabin area equipped with operating pull up windows behind bench seats. A removable drop leaf table is centered on the floor.

Down two steps is the covered stern deck furnished with vintage wicker seats and a round table.

A four step staircase forward of the cabin passes between mahogany bench seats on the main deck. The captain stands or sits in a tall wicker chair under the cover of a canvas top.

Varnishing and Finishing

The bright work on decks and topsides is in remarkably good condition, and will benefit from cleaning, prepping and fresh coats of marine varnish. The hull will be prepped and repainted with white to match original.



65) View of Cindy at the wheel from cabin interior



66) Exterior panels match curvature of the crown



67) Interior mahogany panels

ACKNOWLEDGMENTS

The authors acknowledge Muskoka's antique and classic boating community both now and historically with its designers and builders, those who own and operate and those who simply admire the classic craft that grace our lakes.

This industry began of necessity, developed through ingenuity and continues to prosper in a world that recognizes there is no substitute for quality.

We particularly acknowledge Bert Minett, one of the industries founders whose uncompromising standards continue to inspire and delight.

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ABOUT THE AUTHORS



Tom Adams is a boat builder restoring Muskoka classics at his wooden boat restoration business in Port Carling, Ontario. Restoration work is currently in progress on two early boats built by Bert Minett: ARDMORE a 1916, 26' launch and RITA, a 1914, 50' day cruiser. Tom was born and raised around the inland lakes of southern Ontario.



Laurie Leiser studied and earned degrees in Ocean Engineering from Florida Tech and Florida Atlantic University. Following a career of many years in ship design and engineering she is currently an artist working from her studio in Muskoka. Laurie is active in the antique boating community in which she lives.

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MIT photo courtesy of the MIT Museum



The Classic Yacht Symposium™ 2016

Large Restoration Projects: Observations & Considerations

Moderator: Dyer Jones

- Restoration projects of all sizes are commonly characterized by a number of particular challenges:
 - Restoration vs preservation in craft of historic interest.
 - Deconstruction and extent of replacement required: structural and aesthetic.
 - Anticipated project planned versus actual reality can differ dramatically.
 - Choice of materials and technology with impact on overall project purpose and intent.
- Many themes and issues are omnipresent. Some can be articulated, some emotional, both highly interwoven in intricate and very real ways.
- Results, frequently spectacular, extend the life of the craft and especially the important legacy of maritime culture.



The Classic Yacht Symposium™ 2016

Trans-Atlantic Learnings In Restoration Projects: TRADEWIND & ADVENTURESS

Author Sam Chamberlin
Rockport Marine, Inc.



Figure 1 – TRADE WIND



Figure 2 – ADVENTURESS

Abstract

An interesting example and comparison is made between the John Alden designed, US built motorsailer, TRADEWIND and William Fife designed and UK built schooner ADVENTURESS. This paper looks at the varying approaches that Rockport Marine took to successfully complete these two distinct restoration projects. Both yachts were originally built on a balance of quality materials, established engineering and material science and trusted construction techniques that produced top quality yachts. The experiences of our workforce and previous projects put us in good position to tackle the US built TRADEWIND, but the particularities of the Fife and European traditions were a new challenge and learning opportunity during the restoration of ADVENTURESS. Restoration requires a balanced approach to reestablishing structural integrity and the selection of appropriate technology in terms of materials and process. The balance is further complicated by the election of the point in time or era to which the yacht is to be restored. This is all the more so for a yacht that has already undergone many changes in her life such as ADVENTURESS.

About the Author

Sam Chamberlin grew up exploring the islands of Penobscot Bay from his family home on Isle au Haut. These early experiences led to a variety of jobs in Maine’s traditional schooner fleet, on yachts, and commercial fishing. He studied Physics at Bates College and Yacht Design at the Landing School. Prior to joining the design staff at Rockport Marine in 2007, he worked as a boatbuilder and designer for Brooklin, Maine-based builder Brion Rieff.



The Classic Yacht Symposium™ 2016



Trans-Atlantic Learnings in Large Projects - TRADEWIND & ADVENTURESS

Sam Chamberlin
Rockport Marine, Inc.



ABSTRACT

An interesting example and comparison is made between the John Alden designed, US built motorsailer, TRADEWIND and William Fife designed and UK built schooner ADVENTURESS. This paper looks at the varying approaches that Rockport Marine took to successfully complete these two distinct restoration projects. Both yachts were originally built on a balance of quality materials, established engineering and material science, and trusted construction techniques that produced top quality yachts. The experiences of our workforce and previous projects put us in good position to tackle the US built TRADEWIND, but the particularities of the Fife and European traditions were a new challenge and learning opportunity during the restoration of ADVENTURESS. Restoration requires a balanced approach to reestablishing structural integrity and the selection of appropriate technology in terms of materials and process. The balance is further complicated by the election of the point in time or era to which the yacht is to be restored. This is all the more so for a yacht that has already undergone many changes in her life such as ADVENTURESS.

INTRODUCTION

The successful restoration of a wooden yacht requires a balance between many ideals. There is no one specific method that works for all projects. Owner, sailing crew, designers, and builder all bring unique skills and experiences to the project and the boat itself becomes the final team member in a collaborative approach. For every restoration project we must also find the balance between historical accuracy and future use. Furthermore, we must define what historical accuracy means; is the condition of the boat as she was on her original launch day more important than how she was a year later, or five or twenty years later? We believe it is important to let the specifics of each project inform this balance of ideals. Our designers and builders carefully research each project, looking at original plans and methods. The owners' requirements are paramount, and upgrades and changes can be married to accurate period details.

Two recent restorations, TRADEWIND, and ADVENTURESS, illustrate the ways that different approaches can lead to equally successful restorations.

ORIGINS

The original designs and construction of these two yachts are separated 14 years, 1924 and 1938. The two yachts share many characteristics common to yacht building of that era but also differ in ways driven by geography, heritage and intended use. The two yachts are of relatively similar size; TRADEWIND at 56' dwl and 88,000 lbs and ADVENTURESS at 57' dwl and 120,000 lbs. Both are primarily wooden structures with limited use of metal framing for floor timbers and chainplates. ADVENTURESS, the earliest of the two, is framed with double sawn English Oak frames whereas TRADEWIND, the later, has steam bent frames. Both are planked with Teak. Both yachts, at the time they were built, would have been considered modern yachts, although neither pushed the limits of the then current engineering or material science. By the time he built ADVENTURESS, William Fife had been building racing yachts framed completely with metal for over a decade. While John Alden designed TRADEWIND with his typical rugged style derived from the New England fishing fleet, the hull design was tank tested at the Stevens Institute. Both yachts were built on a balance of quality materials, modern engineering and material science, and trusted, known construction techniques that produced top quality yachts that have stood the tests of time. In restoring these yachts, we try to retain this balance and apply this philosophy, if not the original solutions.

THE ATLANTIC DIVIDE

The Atlantic Ocean still presented a significant divide when our three yachts were built. Emigration and international racing provided important cross pollination but regional building styles remained pronounced. Respecting these differences but blending them into the identity, experiences and style of Rockport Marine was an important aspect of the restorations. ADVENTURESS in particular provided challenges in this regard. The experiences of our workforce and previous projects put us in good position to tackle the American built TRADEWIND, but the particularities of the Fife, and European traditions were a new challenge. While in the macro scale the two boat are built in the same manner, many of the details of ADVENTURESS are distinct and not seen in the American boats. These details can be found in the rig, deck structures and interior joinery. Maybe due to the long run of design/build commissions that the Fife yard enjoyed these details that form the basis of the iconic Fife identity are consistent from boat to boat but not preserved in any construction drawings. One can imagine Fife instructing his workers to use the overall dimensions from his drawings but then build the details like they built the previous yacht.



The main companionway and deck house provide a good example of this point. The construction plans the overall dimensions and housetop camber. It is the dovetailed corners, distinctive hatch slide, and skylight construction details that make it distinctively a Fife.



In the rig the gooseneck fittings stand out as distinctively Fife. Amongst numerous details typical to these parts is a swivel mechanism that allows the boom to rotate with the pull of the sail keeping the load on the sail track in line with fasteners. Our first reaction, and probably the natural one, was often to think that our ways were better. Looking at any one particular detail on its own it is easy to argue that the solution that you have experience with is better. So much of yacht engineering is based on empirical evidence. There are few places where one can say the load is X, the mechanical properties of the material are Y and therefore the dimension of the part need to be Z. Almost always there is some aspect of "we have done this before, we have pushed the boat hard, and we know it works". Without that experience and knowledge of what works, new or foreign solutions can be scary. The natural reaction is to revert to what you know. Critical to the success of the ADVENTURESS restoration were relationships built with those for whom Fife yachts were the familiar, not the foreign. Two trips to Europe early in the project, one to work with the Fife archive held at Fairlie Restorations and a second to race on Fife 19 meter sloop Maraquita, drove home the fact the boats, the collection of engineering and design solutions, work. This knowledge, brought back to Rockport and blended with our own experience was critical to the

success of the restoration of Adventuress.

Interestingly the influx of European ideas to the shop also played a role in the unique development of TRADEWIND. TRADEWIND, as she was designed and built, was a distinctly American yacht. TRADEWIND, as she was restored, became a sort of hybrid, owing as much to the European traditions as American. The development of TRADEWIND was primarily driven by her very knowledgeable and experienced European owner, but the presence of ADVENTURESS in the shop alongside TRADEWIND certainly help to guide the development of the new TRADEWIND.

TRADE WIND



TRADE WIND was originally launched in 1938. She was designed by John Alden and built by Jacobs at City Island New York. She was built solidly of teak on steam-bent oak frames. TRADEWIND was visibly in need of a significant work when she came to Rockport. New owners had purchased the boat with the intention of a significant restoration project. TRADEWIND was designed and built within the yachting traditions of the northeastern United States. While she may be considered a large and voluminous yacht for her time, many of her details were noticeably simple. She lacked many of the more ornate details found on European and some earlier American yachts. Both exterior and interior joinery was primarily flat painted surfaces with only a small amount of varnished trim.

Working in collaboration with the new owners a decidedly different style was developed. The TRADEWIND restoration included a significant aspect of creating something new. Structurally the boat remains the same as it has always been but aesthetically she is a new boat. Much of the major structural repair work, backbone, hull framing, planking, deck framing, followed the original Alden plans and specification with the exception of our use of plywood in the deck. In this case we chose to follow the spirit of original boat over the specific construction technique. TRADEWIND was built

as modern yacht of her time. Alden and Jacobs used the best and most reliable materials they had to create a yacht that would bring joy to her owner. If they had had access to proven marine plywood and epoxy they would have most certainly used it. One can definitely take this approach to far and lose the soul of the original boat but here it seems like a sensible balance. We can retain originality of almost all of the construction method and then hopefully preserve that for a longer period with the limited use of a modern material. The deck structures and interior of TRADEWIND were a different story. Working in collaboration with an uncommonly knowledgeable owner we brought many joiner detail from European yachts to TRADEWIND's new deck structures and interior. Much that was originally flat painted surfaces became varnished raised panels.



The three new skylights on her foredeck owe far more to Fife than Alden. TRADEWIND today is unquestionably a classic yacht although not from any specific place in history. Mixed together are original ideas of Alden and Jacobs, ideas from other leading American builders, from the great builder of Europe, and original ideas from the owner and team at Rockport Marine designed to fit smoothly into the classic style. Although this approach might not fit with a museum type focus on the preservation of objects from the past, we believe it works for this boat and this owner. While the object was not preserved exactly as it was, the craft of wooden yacht building was. TRADEWIND sails on for another generation as a great example of the joy that can come from building and sailing wooden yachts.

ADVENTURESS

ADVENTURESS was designed and built by Fife in Fairlie, Scotland in 1924. William Fife III, part of a line of distinguished boat designers and builders, was known for his balanced designs, and his yard is recognized for the quality of their craftsmanship. Fife III designed many racing and cruising boats, which are instantly recognizable by their elegant lines.



ADVENTURESS differs from TRADEWIND in the amount of change she had undergone throughout her life. She has a lively history, including an early life in Scotland before sailing to the Mediterranean sometime before WWII. Her history through the war years is murky but she is thought to have been seized and used by the Germans as a patrol boat before being scuttled at the entrance of Ville Franche sur Mer, where she remained for several years. When raised after the war, she was refit with a Bermudan ketch rig and a new, more modern, interior. With her new rig and arrangement, she traveled back and forth between Europe, the Caribbean, and US finally ending up in Newport RI. A significant refit in Newport around 2000 brought back some of her original Fife details but left considerable structural concerns.

ADVENTURESS sailed to Rockport on her own bottom and like TRADEWIND she came to Rockport under new ownership. The project started as just a new deck but as the old deck came off, it become apparent that the project would be much bigger and more comprehensive. Deck frames and hull frames in both ends of the boat were in bad condition and the iron floor timbers were badly rusted and weakened. At this point with the boat fully opened up and the extent of structural issues evident, the decision was made to completely restore the boat.



With the scope of the project increased to a full restoration a comprehensive restoration philosophy was needed. Coming off the successful completion of the restoration of the Sparkman and Stephens designed 70' yawl BOLERO restoration and mid project on TRADEWIND at this point we developed a plan which is a way a hybrid of those two. Fundamental to the plan was preservation and restoration of the Fife legacy. ADVENTURESS is Fife number 718. The more than 800 boats built by three generations of Fife's carry a remarkable family resemblance and those still sailing today are easily identifiable from a distance. Preserving what was left and restoring what had been lost of this family legacy was central to the project. We decide though that the Fife style was more important than absolute adherence to ADVENTURESS's original state. ADVENTURESS as a specific candidate for restoration had problems. Built in 1924, she came in the middle of decade long run of large cruising yachts from the Fife yard. This was a decade of major changes in yacht design for Fife although progress was not linear. Earlier Fife yachts were primarily gaff rigged sloops and schooner with fitted topmasts. The 1920's saw the introduction of the ketch rig to Fife's designs as well as Bermudian sails and Marconi or pole masts. Various combinations of elements were tried on successive designs until the Bermudian rig ketch became the standard for large cruising yachts by the 1930's. Adventureess was built with a traditional schooner rig, but Bermudian main, and two part (lower and topmast) pole masts. This was a particular set of solutions that Fife did not repeat. Interestingly, in later years American designers developed a version of this Bermudan main, gaff fore schooner that produced some very fast and able cruising boats, but this was not the development that Fife followed. We decided to design a new rig which was in keeping with Fife's work through the 1920's but not hold ourselves to Adventureess's original rig. Despite his evolution away from the traditional gaff schooner in 1931 with a commission for a large yacht intended for world cruising Fife produced the gaff schooner ALTAIR. ALTAIR became the major source of inspiration for ADVENTURESS' new rig with a gaff main and fitted topmasts.



Beyond the beautiful and balanced hulls with their iconic carved dragon cove stripe end, details of the deck and interior joinery form the Fife style. Continuing the philosophy of restoring ADVENTURESS most importantly as a Fife yacht but not specifically as she was originally built, great care was taken to replicate the joiner details as Fife would have built them even as we modified the arrangements.



Modern safety and communications equipment were a central part of the new ADVENTURESS, and fitting them into a boat not designed for them was no small problem. Finding space for a full engine room with modern diesel propulsion engine and generator required redesigning the main deck house and companionway to create more volume below. Fitting a full electrical system required redesigning the galley and captain's cabin, carving out a significant volume from batteries, chargers, inverter and associated equipment. In making these sorts of changes we endeavored to do what Fife would have done himself had he been presented with these same challenges. The goal was that a visitor coming on board for the first time would feel as if they had entered a yacht just as it was when it was launched from the Fife yard.

CONCLUSIONS

It was quite something to see these two yachts side by side in the work bays of our main building. These two boats that started their lives separated by the Atlantic Ocean started their newly restored lives separated by only ten feet. Both projects were built on the strong collaboration between the team at Rockport Marine and the yachts owner. The owners of these two projects had very different styles and personalities, but both were highly knowledgeable in their own right and about the specifics of their particular projects. Both owners were very gracious, and not least, they were wonderful to work for and with. The process of bringing TRADEWIND and ADVENTURESS back to life, learning to blend the American traditions we were familiar with new ideas from Europe, and creating to yachts that bring us joy in today's world was both enjoyable and satisfying. Both yachts have proved themselves in the years since their

restoration. TRADEWIND has cruised the east coast from maritime Canada south to Florida and provided a floating home to her owners. ADVENTURESS, after spending her first year in the Caribbean, has completed three trans-Atlantic voyages and has returned to a home base in Europe.

ABOUT THE AUTHOR:



Sam Chamberlin grew up exploring the islands of Penobscot Bay from his family home on Isle au Haut. These early experiences led to a variety of jobs in Maine's traditional schooner fleet, on yachts, and commercial fishing. He studied Physics at Bates College and Yacht Design at the Landing School. Prior to joining the design staff at Rockport Marine in 2007, he worked as a boatbuilder and designer for Brooklin, Maine-based builder Brion Rieff..



The Classic Yacht Symposium™ 2016

DORIS HMCo #625 – Early Days In A Major Restoration

Author David Snediker, Wade Smith, and Heather Holloway



Figure 1 – DORIS 1905, Photo Credit: MIT Hart Nautical



Figure 2 – DORIS 2015, Photo Credit: Heather Holloway

Abstract

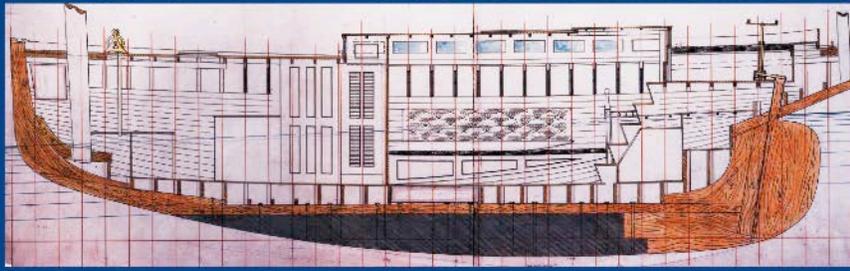
Long known as VAYU, for the past 35 years DORIS has been an almost permanent part of the New London, Connecticut waterfront, slowly deteriorating and biding her time. During these years there have been at least three restoration efforts that were abandoned and many more carefully considered plans to save her that came to nothing. While amounting to little materially, these efforts managed to keep her alive long enough to finally be rescued. In September of 2015 she was moved to the boat shop of Snediker Yacht Restoration in Pawcatuck, Connecticut, where her restoration is underway. Built in the winter of 1904/1905 at the Herreshoff yard in Bristol, RI, and measuring 77'-6" on deck, with a waterline length of 56' she is the largest all wooden vessel ever built by the yard. She also has the distinction of being "the first yacht of any consequence", to use the words of L. Francis Herreshoff, built to the Universal Rule. This presentation will cover the yacht's history, her design and particulars, and the approach that will be employed in her restoration. Subsequent presentations are planned for future Classic Yacht Symposia following the progress of her restoration and her ultimate re-launching.

About the Authors

David Snediker began his involvement with wooden boats aboard a collection of his Dad's leaky old boats on Great South Bay, Long Island. This interest led him to John Gardner's boat building classes at Mystic Seaport. Interest in historic preservation and boat building led to several years as a shipwright at Mystic Seaport's H.B. Dupont Preservation Shipyard. In 1988 along with partner Bill Taylor, he established Taylor and Snediker LLC, now renamed Snediker Yacht Restoration LLC with Bills retirement. This is a boat building and restoration shop specializing in traditional boat building and wooden yacht restoration, located in Pawcatuck, Connecticut. David holds a BA in Anthropology from Connecticut College and resides in Mystic, Connecticut.

Heather Holloway is an Independent Producer, Director and Shooter (a videographer and photographer) who has joined the Doris team as historian and for project documentation. Heather has nearly 20 years in the media documentation and artistic business including works in docudrama and reality productions. She includes amongst her clients most of the major networks (e.g. NBC, CBS, etc.) as well as TV, film and theater productions both in Los Angeles and New England. Her works have been wide ranging and include those from comic to serious theatrical and interrogative works as well as in social issues.

Wade Smith, a keen alumni of the Apprenticeship in Nobleboro ME has an extensive career in boatbuilding and as an instructor. Wade developed his craft in the boat shop at Mystic Seaport, researching, documenting, and replicating historic watercraft from the museum's collection. He subsequently was promoted to Director of the John Gardner Boat Shop where over 11 years he helped to create and oversee an exponential increase in boatbuilding-related courses and programs from Maine to Honduras. Wade was invited to join the crew at Taylor and Snediker Boatbuilding in 2005. He also continues his love of sharing knowledge and expertise as instructor for four weeks per year at the WoodenBoat School in Brooklin ME.



Classic Yacht Symposium 2018

Join the Team!

Preparation for the 2018 Classic Yacht Symposium will commence shortly. Join the team to make it happen. Help to select or preview papers and identify future authors and paper topics. All inputs and perspectives appreciated. Teleconference meetings are available for those from out-of-town.

If interested, email d.curtin@herreshoff.org

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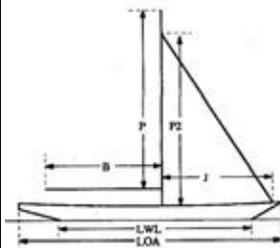


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– See you in 2018 –

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FISH FILE

THE CASTLE
MARBLEHEAD, MASSACHUSETTS

January 13, 1970

Dr. Roy C. Gumpel
The Rye Medical Group
269 Purchase Street
Rye, N. Y.

Dear Doctor:

In answer to your letter of January 7, I will say first: thank you for your kind words about some of my writings.

The Seawanhaka Corinthian Yacht Club Fish Class boats were built for wealthy middle aged-members of this club, many of whom had or had had larger yachts. The gentlemen of those days were very different from the boatmen of today. These Fish Class boats which were ~~designed~~ in 1916 by the Herreshoff Manufacturing Co. in 1916 had a small cabin with short settees on both sides so that a gentleman could keep some sailing clothes or particularly white trousers so that when he came aboard in his city clothes he could make a change of shoes and clothes before enjoying an afternoon sail. These boats were designed by my father, particularly for that purpose and to give as comfortable and pleasant sail as was possible in a lively feeling, dry little craft. Although they were built to the Universal Rule they were in no way rule cheaters but had very comfortable cockpits with seats at just the right angle and the combing angled to make a comfortable backrest.

This may have been the last class that decently dressed ladies and gentlemen who appreciated the beautiful landscape sailed for many years. I only wish I could give a better description of this refined class but I learned to appreciate them in delivering one or two to the above mentioned yacht club from the builders. If these boats had had good care all their life, they should still be in good shape. As for their performance, they were fast in light weather and perhaps the best sea boats of their size which had open cockpits that I for one have ever seen. Enclosed is a copy of a brochure describing the Fish Class.

As to the other boat you spoke of and said was quite wide: If she is planked with mahogany, she is probably a small sail boat that Mr. Morton Plant had built for his son when quite young, I believe the son did not care for her so my uncle, J.B. Herreshoff took her in trade for a larger yacht and this mahogany sailboat was turned over to JB's daughter and granddaughters. This boat was called the DAD and was built in 1906.

Yours truly,

LeFrancis Herreshoff

Fish Class Sloop Donated

Michael J. Pesare

In August, 1989 the Herreshoff Fish Class sloop DOLPHIN was donated to the Museum by Frederick M. Heald of Bristol. Mr. Heald passed away only weeks after the donation.

The Fish Class was introduced at Oyster Bay, New York in 1916 when 23 boats were delivered to members of the Seawanhaka Corinthian Yacht Club, each named for a different species of fish. Their principle dimensions are: LOA 20'9", LWL 16', beam 7'1", ballast 1,400 lbs. and sail area of 270 square feet.

The inception of this class can be traced back to August, 1914 when a member of the Seawanhaka Corinthian Yacht Club suggested that the club consider adopting a new one-design class to replace their Clinton Crane designed sloops. The Crane 15-footers, designed in 1903, were long ended, lightly built boats quite similar to the Herreshoff Buzzards Bay 15 footers/E boats. Having raced hard and often over the previous 11 years they were beginning to show their age.

A One-Design Class Committee was formed to solicit designs from this country's leading yacht designers. Proposals were submitted by John G. Alden, B.B. Crowinshield, William Gardner, Nathanael G. Herreshoff and others.

In October, 1914 the Committee decided that a Herreshoff design similar to that of SADIE (HMCo. #732) would be best for the needs of the club. SADIE was a full keeled improvement of N.G. Herreshoff's own ALERION III of 1912, built for former SCYC commodore E.C. Benedict in 1914. Due primarily to a downturn in the economy, the response to this proposed new design was not as strong as expected and the Committee decided to postpone its decision

for another season. A number of members ordered an inexpensive centerboard sloop known as the Nut Class possibly as a short term substitute.

Finally, in January, 1916, the Committee decided to proceed with the Herreshoff proposal. The resulting design was an expansion of the Buzzards Bay Boys Boat/12½ footer using the same half model. The expansion was 13 to 10 longitudinally and 12 to 10 transversely.

SCYC commodore Daniel Bacon headed the selection committee and having just purchased one of the smaller 12½ footers, may have had an influence in the decision to use this design as the basis for the Fish boats. A March, 1916 article in Rudder Magazine stated: "After long and careful deliberation, the special committee of the SCYC selected the design submitted by Herreshoff for their new one-design class. The boats are intended to be comfortable to sail in, of the knockabout type, in which seaworthiness and safety are looked to more than racing speed."

At the end of the first season, the club printed an informative flyer describing the Fish boats hoping to attract more orders. In it, they even offered: "to have a sailing master on hand to instruct those wishing to learn how to sail the boats." Their promotion produced only three more orders.

About 40 Fish Class sloops were built at the Herreshoff Company between 1916 and 1925. In 1925, a fleet of 7 boats, all named after popular cartoon characters, was delivered to members of the newly organized Warwick Country Club at Warwick Neck, RI. These boats carried the increasingly popular marconi

rig. The Warwick Neck Class was sold to a group in Cold Spring Harbor, NY when their owners moved up to the Burgess designed Atlantic sloops. In 1926, part of the original Seawanhaka fleet went to Mattapoisett where they were actively raced until the 1938 hurricane decimated the fleet.

In 1936-39, the Herreshoff Company built about 6 of the Sidney Herreshoff modified Fish boats known as the Marlin Auxiliary Cruisers. The original cabin house was slightly enlarged to allow for more cruising accommodations. The boats were planked with mahogany rather than the original cedar and the trim was teak. The Marlins were equipped with a small 2½ hp. auxiliary engine.

The Herreshoff Marine Museum received a fine example of the Marlin Auxiliary Cruiser from John Bumstead in 1977 and we are most grateful to now have an example of the earlier Fish Class.

While little is now known of her early history, DOLPHIN is believed to be one of the 1916 Seawanhaka fleet. She came to Narragansett Bay about 1954 and for many years she gave considerable pleasure to the late Philip Green and his family, sailing out of the Barrington River. His daughter, Joan Bartram, vividly remembers the enjoyable daysails in DOLPHIN including an annual fall sail around Prudence Island. She recalls that DOLPHIN was comfortable and had a good turn of speed on all points of sail. Mr. Green never carried more than a long sweep for those rare occasions when the wind would not carry DOLPHIN along.

Awaiting restoration, DOLPHIN is now on display in the Museum's "Hall of Boats."

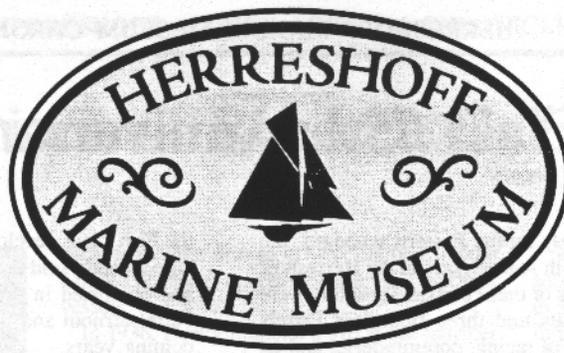
Herreshoff
16-FOOTER
Fish Class



Warwick Neck Class-1925



Marlin Auxiliary Cruiser being launched for delivery c. 1939



CHRONICLE

BRISTOL, R. I.

No. 21 — 1991

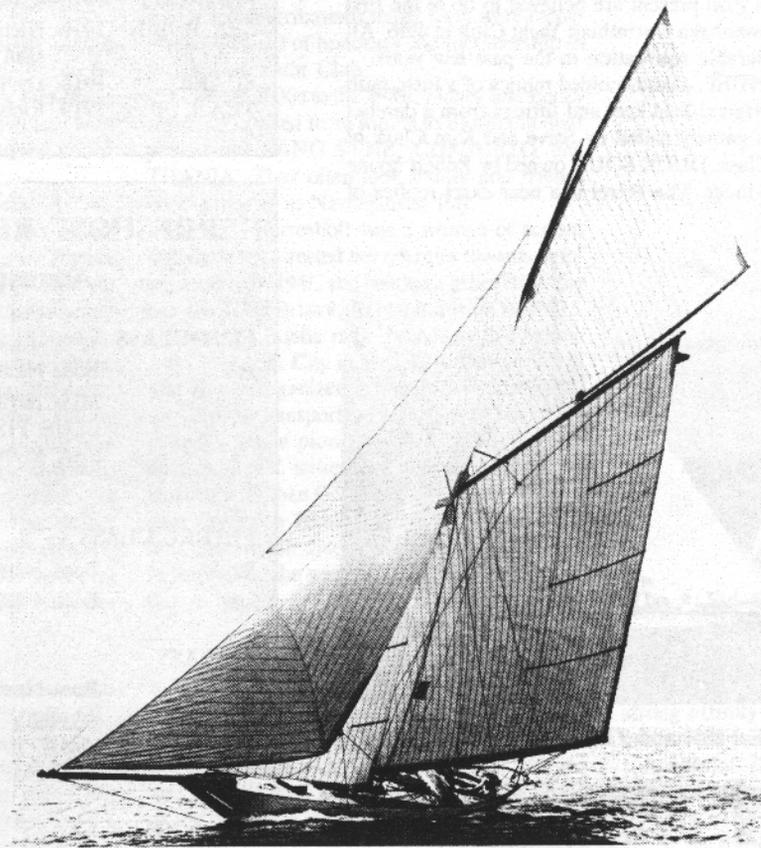
GLORIANA ALONE IN HER CLASS

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

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

When the New York Yacht Club established the 46 Footer Class for 1891, Royal Phelps Carroll, a young yachtsman, was advised by Herreshoff customer E. D. Morgan, Jr. to go to Bristol for a boat. The contract was made, the design completed, and work was about to begin when Mr. Carroll, who was about to be married, decided that he could not afford the yacht. He was released from the contract and the design was put aside. On

February 27, 1891, Mr. Morgan visited the Herreshoff Shop, and after seeing the model made for Carroll and studying the plans, assumed the contract himself. Word soon spread among the yachting fraternity that the new Herreshoff yacht had a radical bow. The skeptics shook their heads, but "Alty" Morgan paid them no heed. He was Vice-Commodore of the New York Yacht Club, and owned a number of yachts ranging from a catboat to a steam yacht of 200 feet. Herreshoff had recently built him a 27 foot steam yacht, and the famous cat-yawls PELICAN (which he gave to his brother-in-law, Percy F. Moran) and GANNET in 1890.



GLORIANA
HMCo. #411 - 1891

Revolutionary in Design and Construction

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

By late March, the newspapers, prying for information on the Herreshoff keel yacht, received this reply from the company: "We have entered into contract with a New York gentleman to build a cutter of the 46 Foot Class, having a waterline length of about 45 feet 3 inches, beam 13 feet, draft of water 10 feet 2 inches, and of 38½ tons displacement. The yacht is designed for a good cruising craft as well as racing in coming regattas. It is to have a main saloon with folding berths, two staterooms and roomy forecabin and galley. Cabin and staterooms to be very commodious, and finished in butternut. The construction is to be composite with double planking, and is to be fitted with a cockpit. It is the intention to have the yacht ready for the early regattas during the coming season."

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

Continued on Page 4

Fish Class 75th Anniversary Regatta

by Michael J. Pesare

While Hurricane Bob worked its way up the Eastern seaboard, the Herreshoff Fish Class celebrated its 75th Anniversary at the Herreshoff Marine Museum. The timeless virtues of these classic daysailers were reaffirmed as nine wooden Fish boats and three fiberglass Petrels gathered at the Museum for two days of racing, commraderie, and an old fashioned New England clambake.

Suiting the seaworthy Fish design, fresh sou'westerly breezes ranging from 15 to 25 knots were the order during the weekend of racing and there was plenty of Narragansett Bay chop to add to the excitement.

Fish owner and class organizer, Rick Meyer of Norwell, MA and the Museum began planning this event about one year ago, after an unusually large number of Fish boats turned out for the Museum's Rendezvous '90. It was clear that this small class was experiencing a resurgence of interest. In order to encourage skippers to bring their boats to Bristol from distant ports, a series of events was planned including a race from Bristol to Newport and a special start in the Museum of Yachting's Classic Yacht Regatta. Moorings and other support were provided to make the visit as enjoyable as possible.

Fully 5 of the 9 wooden Fish present are believed to be of the first group delivered to the Seawanhaka Corinthian Yacht Club in 1916. All nine have received considerable restoration in the past few years.

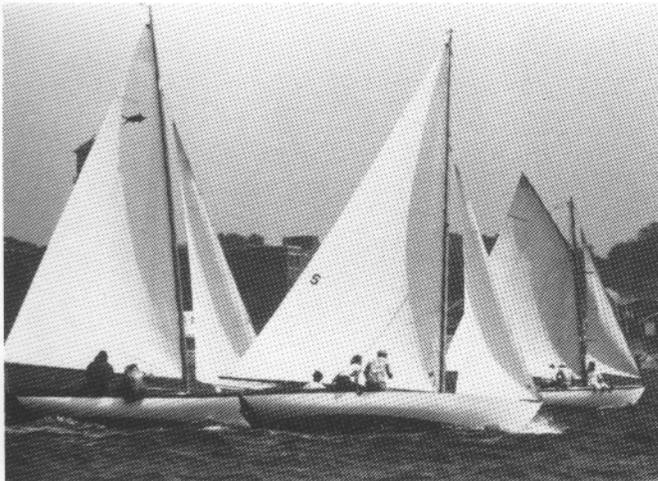
In the race series, MISCHIEF, a cold-molded replica of a Fish, built by Stuart Levi using the original lead keel and fittings from a derelict Fish, dominated. She was gamely sailed by Steve and Kim Clark of Warren, RI. In the Petrel Class, DUCK SOUP, owned by Robert Young of Newport, RI was the winner. The Petrel is a near exact replica of

the Fish Class developed by Justin Camarata of Noank, CT. Camarata, who recently sold the company to Robert Champlain, still owns a Petrel and competed in the weekend events. He was very pleased with the Petrel turnout and predicts an increase in Petrel Class activity in the coming years.

Continued on Page 3

FISH CLASS PARTICIPANTS

Boat Name	Year Built	Owner	Home Port
AUNT EPPY	1925	William Mills	Stonington, CT
BLUE FISH	1916	Milton Merl	Noank, CT
DERVISH	1947	Geoffrey Warner	Wickford, RI
HERRING	1916	Will MacDonald/ Rosalind Schell	Stonington, CT
MISCHIEF	1984	Steve and Kim Clark	Warren, RI
POMPANO	1916	Raynor Warner	Quisset, MA
SEA ROBIN	1916	Nicholas T. Long/ Jaen Whitehead	Little Compton, RI
SHARK	1916	David Smith	Noank, CT
TEA CUP	1919	Richard Meyer	Scituate, MA



MISCHIEF, BLUE FISH and TEA CUP at the Start



Series Winner, MISCHIEF, sailed by Steve and Kim Clark

HERRESHOFF REGATTA PRIZE AWARDS

August 17 & 18, 1991

FISH CLASS

Pos.	Boat Name	Owner
1	MISCHIEF	Steve and Kim Clark
2	BLUE FISH	Milton Merl
3	SEA ROBIN	Nicholas T. Long/ Jaen Whitehead

PETREL CLASS

Pos.	Boat Name	Owner
1	DUCK SOUP	Robert Young

S CLASS

Pos.	Boat Name	Owner
1	OSPREY	Michael McCaffrey
2	LADY LADY	Peter Hallock
3	ARGUMENT	Scott Manchester

12½ FOOTER CLASS

Pos.	Boat Name	Owner
1	NUT HATCH	Chip Lumb
2	POOKA	Geoffrey Davis
3	SHRIMP	Matthew Boyle

12½ FOOTER — JUNIOR SKIPPERS RACE

Pos.	Boat Name	Junior Skipper
1	NUT HATCH	Jonathan Goff
2	LEE LEE	Jessica Rosenfeld
3	ZEPHYR	Sarah Goff
4	POOKA	Angus Davis
5	PEEPER	John Bisset
6	RI RED II	Halsey Fulton
7	SHRIMP	Matthew Kanc

Photos by Paul A. Darling

In Memoriam — Rebecca C. Herreshoff

by Nathanael G. Herreshoff III



Rebecca Chase "Becky" Herreshoff passed away at her home in Bristol, Rhode Island on June 3, 1991 at the age of 96½ years. Her home faces Bristol Harbor and Narragansett Bay with Prudence Island in the distance, places which were so much a part of her life.

Rebecca Herreshoff and her husband, A. Sidney DeW. Herreshoff founded the Herreshoff Marine Museum in 1971 and she was a Trustee until her death. Becky provided constant guidance to the Museum and was instrumental in its development. For many years, she was on hand to greet and talk with the many visitors.

Rebecca Herreshoff was born on Prudence Island, the daughter of the late Captain Halsey Chase and Lizzie Kelly Studley. She was the twin sister of the late Mrs. Rachel Chase Boynton.

Boats and the water played an important role in Becky's life. During her youth, her father established ferry service from Prudence Island to Bristol. She often accompanied her father on board the ferry boat HARVEST and later she

became the first woman in New England to hold a pilot's license to operate commercial passenger vessels.

In 1936, Becky founded a girl scout mariner troop in Bristol so that young women could experience the satisfaction of seagoing life. She regularly led groups on board Captain Irving Johnson's famous schooner, YANKEE.

Becky Herreshoff was an avid sailor and yacht racer in all sorts of boats. She particularly enjoyed frostbite dinghy racing along with her husband Sidney and her son Halsey. In 1938, she acquired the hurricane damaged 12½ footer MINX which Mr. Herreshoff then restored in the family workshop. Then, Becky taught her sons Nat and Halsey to sail on board the MINX, and they had many racing successes together in Narragansett Bay. Becky's sailing accomplishments and contributions to the sport were recognized by award of honorary life membership in the Bristol Yacht Club.

From the 1930s to the 1970s, Sidney and Becky regularly cruised from Maine to Florida in their powerboats LANG SYNE, CONSUELO, and THANIA. They often took family and friends on excursions in Narragansett Bay.

Rebecca Herreshoff was a woman of action, and she often directed her energies towards helping others. In 1941, she headed a relief drive for the people of Bristol, England during the blitz. She made a public radio broadcast to England from New York City in May, 1941. During World War II, she organized a women's auxiliary motor corps to transport patients to area hospitals.

Becky was a pioneer in her involvement in environmental issues. In the late 1940s, she worked with then Governor John O. Pastore, to save Prudence Island from a proposed cattle hoof and mouth disease laboratory. Beginning in the 1950s, she was active in anti-litter activities in Bristol.

With a love for the water, Becky was an accomplished swimmer. She appeared as a stand-in diver for actress Agnes Ayres in a 1920s silent film. A feat that she was particularly proud of was her ability to stand on her husband Sidney's shoulders while they aquaplaned. Without use of support ropes, this was a great feat of balance, much more difficult than waterskiing.

In the 1970s, she played a Russian Countess in a segment of the Masterpiece Theater TV Series, "Adams Chronicles".

Rebecca Herreshoff's life was filled with unique accomplishments. We are indebted to her for having the foresight and conviction that led to establishment of the Herreshoff Marine Museum and its growth to the present day. She is sadly missed and will be fondly remembered.



Sid & Becky Aquaplaning

Continued from Page 2

In addition to Fish Class racing, there was also racing for the Narragansett Bay S and 12½ Footer Classes. The 12½ Footer class sponsored a Junior Skippers Race for those 16 years old and younger. Jonathan Goff, sailing with Chip Lumb aboard NUT HATCH took first while his sister, Sarah Goff, on ZEPHYR took third. Second place finisher was Jessica Rosenfeld sailing with her uncle, Mike Pesare, aboard LEE LEE. Seven skippers participated and it was a wonderful addition to the weekend racing. The Class will sponsor more youth events in future years.

The adult 12½ racing series was won by NUT HATCH owned by Chip Lumb of Bristol, RI. NUT HATCH is the last 12½ footer delivered from the Herreshoff Manufacturing Company in 1943.

The S Class had a particularly strong turnout with 13 boats competing. Michael McCaffrey's newly restored OSPREY won the series with Peter Hallock's LADY LUCK taking second.

LADY LUCK suffered bad luck on Sunday morning when she parted her mooring and washed upon a small beach north of the Museum's waterfront. Quick action by her skipper and crew floated LADY LUCK off the beach as the tide came in and she went on to race that day. Luckily, she was unharmed by the ordeal.

Fred Bisset's beautiful 30' Herreshoff launch, CORSAIR was on hand and she looked spectacular after recent restoration work. CORSAIR shuttled a group of spectators and photographers out to view the races.

On Saturday evening, 175 Museum members and guests were served a delicious clambake under the waterfront tent. The evening's program was devoted to recognizing the Fish Class Anniversary. A number of former Fish boat owners were in attendance.

After opening remarks by Museum President, Halsey C. Herreshoff, Class organizer, Rick Meyer introduced each current and former Fish/Petrel owner and each had a chance to

relate his/her experience with the Class. The strong affinity between Herreshoff boat owners/former owners and their boats was evident.

A special 75th Anniversary keepsake of a mounted photo of N. G. Herreshoff, the boat's designer, sailing a Fish boat c. 1920 was presented to each Fish/Petrel owner. Awards were presented in each class.

Following the racing and events on Sunday, boat owners scurried to secure their boats as Hurricane Bob approached with alarming speed. By noon on Monday the great storm had arrived. Luckily, the track of the storm was such that the east passage of Narragansett Bay was spared major damage.

All participants departed from Bristol with pleasant memories of an exciting weekend of racing and, fortunately, of eluding a major hurricane. Future Herreshoff yacht gatherings at the Museum will include another Rendezvous and the 75th Anniversary of the S Class to be celebrated in 1994.

Continued from Page 1

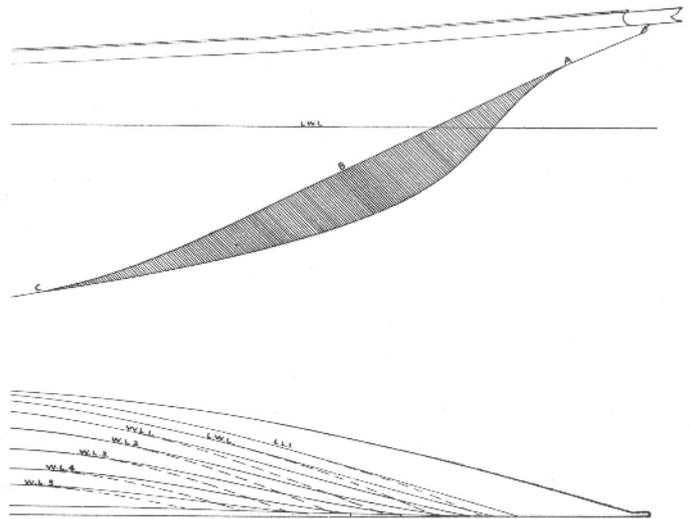
by an increase partly at each end, but mostly forward." He reported that the yacht's unusual form forward and overhangs were different from the other designs and that the Herreshoffs could not be accused of imitating anybody in their design, and "if they are right, the others are all wrong, and vice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

With regard to her construction, N.G. Herreshoff said, "She carries about 23½ tons of ballast. Her frames, as you see, are of steel from stemhead to taffrail, and of course, all the deck beams are 16 inches apart on centers. Her planking is all hard pine, 1 3/8 inches in thickness. The lower courses are single, but about three-fourths of the planking is double, both layers being laid fore and aft, the inner course being one-half inch and the other seven-eighths inch. All the fastenings are copper. Two diagonal plates on each side, extending from deck to keel, strengthen the construction, tying the frames together and doing away with the bilge stringers. One of these starts in the wake of the rigging and the other just forward of the runner plates. Wide steel plates radiate from the partners at the mast and extend diagonally to the rail, strengthening the deck to hold the great strains at the mast. Steel knees tie the frames and the deck beams together, and steel floor timbers secure each pair of frames at the keel, with a strengthening piece running well up the side. Along the frame the deck planking will be white pine about one and one-quarter inches thick, covered with canvas to prevent any possible leakage."

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

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

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



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

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

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

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

CHRONICLE

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FISH CLASS 75TH ANNIVERSARY

1916 - 1991



GREEN DUCK 1963, BY NORMAN FORTIER

Herreshoff 16 Foot Class History

R. Meyer
Jan. 1991

The first 16 footers were designed and built by N. G. Herreshoff in 1916 for the Seawanhaka Corinthian Yacht Club of Oyster Bay, Long Island. These boats were known as the Fish class. A total of twenty three boats were built for the 1916 sailing season, seventy five years ago this year. The first nineteen boats were delivered in January of 1916 at a cost of \$875. The second group of four were delivered April 11, 1916, the last three of which were at a cost of \$925. Three additional boats were delivered for the 1917 season, bringing the fleet to a total of twenty six. All of the Seawanhaka fleet carried fish names, a gaff rig and were trimmed with oak, but were built without the characteristic Herreshoff moulded sheer strake. A half round oak rub rail was used on these boats, likely as a cost savings measure. The top strake was white cedar, the same as the normal planking. The transoms, rub rail, coamings, and toe rail were all oak. The Seawanhaka sail numbers appear to have been consecutive, but not in the sequence of the hull number assignments from the Herreshoff yard. The sail numbers were preceded by the letters "SC".

The Fish boat was designed at the request of the Seawanhaka selection committee "to be a safe and seaworthy boat in varying weather conditions, ideal for teaching children to sail, for pleasure sailing and Saturday racing." The design developed by Nat Herreshoff was an enlarged version of the 1914 Herreshoff 12 footers with a small cuddy cabin forward of a very large cockpit. The longitudinal scaling ratio was thirteen to ten and the transverse was twelve to ten. An additional 3 1/2 inches was added to the bow after scaling accounting for the proportionately longer overhang. Communications from the committee indicate that the decision to purchase the fleet was delayed a year, but then went forward based on a price of \$875.

A single boat, Xiphias, was built in 1919. Xiphias did not join the Seawanhaka fleet, but instead went to Mattapoissett, Ma. The sale price was \$1700. This boat is believed to be the first Fish with a moulded oak sheer strake as well as the last to be gaff rigged.

The next fleet of boats was a group of three built for the Warwick Country Club of Warwick Neck R.I. These boats were delivered for the 1925 sailing season. They sold for \$1750. A fourth boat, Tarpoon II, was built with the group of three for Dr. Halsey DeWolf. Six additional boats joined the WCC fleet in the 1926 season. Once again, the price increased, this time to \$1900. The nine boats of the WCC fleet were marconi rigged, with moulded oak sheer strakes and were

named for cartoon characters. They were trimmed with oak also.

The final two Herreshoff Fish boats were built in June of 1936 and 1937. These boats were likely trimmed with mahogany. The total number of fish boats built was between thirty eight and forty, the uncertainty is due to two incomplete entries in the shop records.

Additional boats were built as auxiliary cruisers called Marlins. It is unclear from the shop records as to whether three or four boats were built. These boats were marconi rigged with enlarged cabins, a head, some with inboard engines. Unlike the fish class, they were planked with mahogany and trimmed with teak. They were built during the years from 1937 to 1939.

In 1926 the Seawanahaka fleet began to shift to Mattapoissett Ma. About eleven boats in total were owned at Mattapoissett between 1926 and 1938. The names of the eleven were; Cackle, Eel, Morrhue, Nautilus, Pompano, Sculpin, Shark, Skate, Tarpon, Wahoo, and Xiphias. Many of the boats were converted to marconi rig for the 1930 season. Three boats which were not converted were Skate, Tarpon, and Xiphias. By 1938 many of the Mattapoissett fleet had been sold and migrate away. About four boats appeared in Padanaram between 1930 and 1963. Their names were Harbinger, Hope, Xiphias (later called Green Duck), and a fourth as yet unidentified.

→ CORRECT TITLE →
The hurricane of Sept. 21, 1938 effectively ended the Fish boat activity in Mattapoissett. All of the remaining four boats are thought to have been wrecked. It is not known if any of the wrecked boats may have been repaired. The Padanaram Harbinger was totally destroyed in a boat yard fire and not repaired. The information pertaining to Mattapoissett was graciously provided by Edward Wood, Jr., author of The Early Days Of Sailing In Mattapoissett, and former Fish sailor. The Fish activities in Padanaram have become known through the help of Norman Fortier, marine photographer, the New Bedford Whaling Museum, the New Bedford Yacht Club, and Llewellyn Howland Jr. Llewellyn is a former Fish sailor, having owned Harbinger from 1933 until about 1937.

The Warwick Neck fleet only sailed actively for about two years before the members decided to replace the boats with the larger and faster Starling Burgess designed Atlantic class. Upon replacement, many of the marconi Warwick Country Club (WCC) boats went to Cold Spring Harbor, Long Island. From that point the boats began to lose their fleet identity and become harder to trace.

Seventy five years after the first boats were introduced more than half of the forty original Herreshoff 16 footers are still lovingly owned and sailed. At least ten of the original fleet of twenty six are still in existence. The known boats are located from Bar Harbor, Me. to Long Island Sound.

More recently, Golden Era Boats of Noank has been producing a fiberglass version of the Fish called Petrel. The Petrel is available as either a gaff or marconi rig, to date only three of the thirty boats sold have been gaff rigged. Two boats are currently under construction for the 1991 season. The Petrels have been found to be very competitive when raced with the original wooden boats of comparable condition.

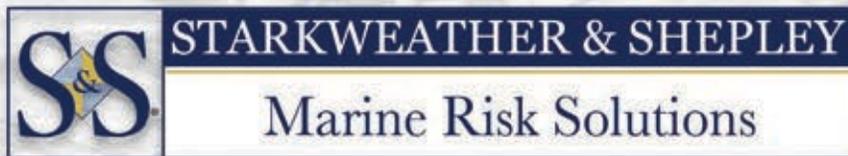
In celebration of seventy five years of sailing pleasure given by the Herreshoff 16 foot design, the Fish, Marlin, and Petrel classes are invited to meet in Bristol during August 1991 to race together once again.

The Herreshoff Marine Museum has arranged to host the 16 foot class August 17 and 18, for two days of racing, with separate classes for the wooden and fiberglass boats. The weekend of August 24, the combined fleet will race to Newport to participate as a special entry in the Classic Yacht Regatta hosted by the Museum of Yachting over the Labor Day weekend.

Insuring Marine Artisans Since 1879...



(Photo Courtesy of MIT Museum)



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